USEFUL FACTS IN RELATION TO

THE MACHINERY DIRECTIVE 98/37/EC

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FOREWORD

The present document brings together useful information to enable a better implementation of the Machinery Directive 98/37/EC[(1)]. This Directive is the compiled version of the four existing texts, relating to the original Directive and its three amendments[(2)]. It is addressed to all parties who may be concerned by the Directive.

This document is an updated version of the 1997 edition, prepared by the Commission services, based on information available in December 1998. It accepts no responsibilities for any inaccuracies or omissions which may occur in this document. In order to improve the following updates, any identified omissions or amendments should be forwarded to the address below.

The information in this publication is subject to continuous modifications, and it has been decided to publish an update on an annual basis. It has also been decided only to publish it in English, to ensure prompt availability. Two sections are available in all official EU languages, and can be obtained by completing the request form on page 4.

A further document related to this topic, entitled 'Community Legislation on Machinery – Comments on Directive 98/37/EC' is also available from the Office for Official Publications of the European Communities.

Send any amendments to:

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(1) Directive 98/37/EC of 22.06.98 (OJ n° L 207 of 23.07.98, p.1)

(2) Directive 89/392/CEE of 14.06.89 (OJ No L 183, 29.06.89, p. 9) as amended by Directives 91/368/EEC (OJ No L 198, 22.07.91, p. 16), 93/44/CEE (OJ No L 175, 19.07.93, p. 12) and 93/68/EEC (OJ No L 220, 31.08.93, p. 1).

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USEFUL FACTS IN RELATION TO THE MACHINERY DIRECTIVE 98/37/EC

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PART 1

QUESTIONS/ANSWERS

Approved by the Working Group Machinery of the Committee 98/37/EC

This section includes all the questions presented to the Working Group that have received an agreed answer. The opinions expressed should therefore be considered as an important guidance. However, they have been provided at different times and it should be taken into consideration that the situation may have evolved.

These questions/answers are available in all official EU languages : if you would like to receive other language versions, please complete the form on page 4, and specify the language version required.

Implementation of Council Directive 98/37/EC

Answers given by the Commission, after consulting the Committee set up by the Directive, to questions relating to the implementation of the Directive.

Note : The missing questions have either been deleted or modified and given a new number.

Q.1. The definition of "machinery" in the Directive ends with the following words: "... for a specific application, in particular for the processing, treatment, moving or packaging of a material". Hence adjustable trans-shipment ramps are not machinery.

A.1. The words "in particular" precede an example but the important words are "a specific application". Allowing the handling of goods between a loading platform and a lorry or railway truck is a specific application. Adjustable ramps are not used for any other purpose and are therefore covered by the Directive on machinery.

Q.2. Do warehouse trolleys come under the first or second amendment to the Directive?

A.2. These amendments are merely additions to the Directive: at the end of the legislative work on Directive 89/392/EEC there will be a single consistent set of essential requirements The designer must carry out a full risk analysis, thereby identifying all the risks which apply to his machinery, and provide a solution for each identified risk.

Q.3. [This question has been transferred for revision to the document "provisional questions & answers"].

Q.4. The moving parts of certain machinery (e.g. weighing machines, refrigerating equipment, scientific equipment connected to vacuum pumps, etc.) are completely enclosed and therefore present no risks. Does machinery of this kind come under the Directive?

A.4. If machinery fits the definition given in Article 1(1) of the Directive and is not on the list of exclusions given in Article 1(3) it must comply with the provisions of the Directive.
Even if totally enclosed, machinery of this kind can still present risks, in particular as regards the strength of casings and guards and during maintenance and repairs, and the essential requirements of the Directive have their raison d'être at least in this case. N.B. the first preliminary observation of Annex I.

Q.5. Can you confirm whether tools suppliers have to comply with harmonised standards even if they are not bound, strictly speaking, by the requirements of the Directive?

A.5. As harmonised standards are not compulsory, nobody, including tools suppliers, can be obliged to conform to them. Tools are explicitly excluded from the Directive and cannot therefore be the subject of harmonised standards, but this does not prevent CEN from making European standards.
The harmonised standards for machinery must indicate precisely which characteristics of the tools the instructions must specify.

Q.6. Is it possible for a body to be notified for part of the Directive only?

A.6. A notified body is responsible for all stages of the certification procedure with regard to the types of machinery for which it has been notified. It may be notified only for a specific family of machinery listed in Annex IV, for example woodworking machinery or lifting machinery. It may subcontract specific tasks (such as carrying out specific tests), but it remains responsible for the overall assessment of the conformity of the machinery for which it has been notified.

Q.7. Does the Commission intend to propose a division in a directive in order to facilitate cooperation between notified bodies and supervision by the national authorities?

A.7. The Commission has neither the intention nor the power to propose divisions to directives and say that bodies must be notified in parts. This is the exclusive responsibility of the national authorities.

Q.8. Are the criteria to be used by the national authorities for the selection of notified bodies minimum criteria? May Member States use other criteria in addition to or instead of EN 45000?

A.8. The criteria to be used by the national authorities to select notified bodies are their responsibility, provided they comply with Annex VII to the Directive. It is for them to decide whether to use the EN 45000 series of standards, with or without other criteria.

However, Council Decision 90/683/EEC of 13 December 1990 specifies at item 1(m) of the Annex:

"Member States having notified bodies unable to prove their conformity with the harmonised standards (EN 45000 series) may be requested to provide the Commission with the appropriate supporting documents on the basis of which notification was carried out".

Q.9. Should the Committee state that the standards drawn up in the context of the Directives provided for in Article 100a of the EC Treaty may contain *inter alia* emission limits for noise or vibrations?

A.9. In principle, NO. If state-of-the-art values are established, they will apply today but will no longer do so in a year's time. There is also the question of how to take account of machine sizes and different technologies. The result of this could also be that a manufacturer who uses a quieter technology than his competitor will make no extra effort to reduce noise levels once the limit has been reached.

If a technical committee thinks that indicative values can be a useful guide for the designer, the standard will have to make it clear that these values are not limits and will also have to indicate the method which may be used to check these values.

Q.10. Can the manufacturer (or seller) and the user agree that the instruction manual will be written only in the language of the manufacturer?

A.10. A private agreement between the manufacturer and the user cannot take the place of legislation. In the event of an accident due to lack of comprehension on the operator's part, the manufacturer or his representative might be liable.

Q.11. What does "instructions needed for the driver and/or operators" mean in the fourth paragraph of point 3.2.1?

A.11. These are the instructions needed to operate the machinery. Maintenance instructions do not have to be kept in the cab, but may be kept in the office of the maintenance department.

Q.12. When a manufacturer sells a sub-assembly to a fitter, he does not know the country of destination of the sub-assembly, particularly when it is stock on hand. What language should be used for the instruction manual?

A.12. A sub-assembly designed to be incorporated into a complex installation is not usually considered to be machinery, i.e. to satisfy both the following criteria:

- that it should be "for a specific application" (Article 1(2));
- that it should be able to "function independently" (Article 4(2)).

The case in point is covered by Article 4(2), and it is not necessary to comply with the procedures for evaluating conformity. The instruction manual will be written by the person who supplies the installation to the end user. The information that person needs will be supplied by the manufacturer of the sub-assembly in a language chosen by mutual agreement.

Q.13. Before machinery is placed on the market, must the translation of the instructions into all Community languages be available, even if the manufacturer has decided not to sell in certain countries?

A.13. The new wording of point 1.7.4 of Annex I, proposed to the Council in the 2nd amendment of Directive 89/392/EEC, answers this question: for machinery to be placed on the market, it is sufficient for the instructions to have been drawn up in a single Community language.

The translation may be made by the authorised representative, or even by the person importing the machinery. This means that when machinery is out of stock in one Member State, machinery may be brought from a neighbouring Member State, the only obligation being to translate the instructions if they have not already been translated.

Q.14. The 11th recital of the Directive states:

"Whereas ... these requirements must be applied with discernment to take account of the state of the art at the time of construction and of technical and economic requirements;".

A Member State has asked the Committee to record that this recital applies to all the essential requirements and preliminary observations of Annex I, and in particular that the "economic requirements" apply to any consideration of the "state of the art".

A.14. The way it is worded, the recital applies to all the essential requirements.

Q.15. Is it permissible for an operating cycle to be triggered by the closing of a protection device?

A.15. In principle no, because of point 1.2.3 of Annex I. However, a type C standard could permit the operating cycle to be triggered by the closing of the protection device, provided other measures are taken to eliminate any risks which might arise.

Q.16. A family of brake motors operates by D.C. injection or polarity inversion. Hence, in the event of an interruption to the power supply, the brakes do not work and the requirements of points 2.3 (c) and 1.2.6 of Annex I cannot be met.

A.16. A distinction must be drawn between an intentional stoppage, which will usually be followed by action relating to the part or tool (point 2.3 (c) of Annex I), for which a rapid stoppage of the tool is necessary, and stoppages due to power loss (point 1.2.6 of Annex I), in which case the time the tool takes to stop completely is not the essential safety factor.

D.C. injection or polarity inversion brake motors are only permissible if the interruption to the power supply and the resulting slowing of the tool do not create any particular risk or if other measures are taken to counter the risk.

Standards will have to provide for these cases.

Q.17. Can fixed guards be hinged but not bolted? (Annex I, point 1.4.2.1).

A.17. In principle, NO, as the Directive states that "... guards must be unable to remain in place without their fixings", i.e. they must not form an integral part of the machine itself. However, these words are preceded by the phrase "where possible", and exemptions in standards may be based on this phrase, but must be justified.

Q.18. In the sixth paragraph of point 3.3.2 and the first paragraph of point 3.3.4 of Annex I, the phrase "movement of self-propelled machinery ..." concerns motorised movement.

A.18. Taking all language versions together there is no doubt, because in French and German, for example, two different words are used:
- déplacement or Verfahrbewegung;
- mouvement or Bewegung.

Thus this requirement clearly refers to movement of the machinery and not to movement of the tool.

Q.19. The last paragraph of point 3.3.4 of Annex I should not apply to lawn mowers.

A.19. The requirements apply only when the risk exists. There is now a draft European standard which seems to deal satisfactorily with the requirement in question.

Q.20. Points 1.4.2.1 and 1.4.2.2.B of Annex I talk of the "use of a tool". Can the Committee clarify?

A.20. The need to use a tool to open or adjust makes this an intentional action. What is involved is an unlocking action where the operator knows what he is doing (the use of a lock key is equivalent to the use of a tool in this sense).

Q.21. Point 1.3.8.A of Annex I states that for transmission parts guards must be:
- **either fixed in accordance with points 1.4.1 and 1.4.2.1;**
- **or moveable in accordance with points 1.4.1 and 1.4.2.2.A.**

Does this mean that each transmission part must be protected by a guard, even if it could be protected in a different way by a device used for other risks? For example, can a protection device used in the way referred to in 1.3.8 B be considered as also protecting the transmission parts?

A.21. The requirement is stated in the first lines of point 1.3.8. Sections A and B then elaborate further. Section A applies where transmission parts are isolated. If they are near to moveable parts involved in the process and a single form of protection can be used, section B applies on condition that the general requirement of 1.3.8 is met. Section A also provides simpler solutions than section B.

Q.22. Point 3.3.3 of Annex I stipulates that the emergency braking device should have fully independent controls. Some public works vehicles have a single control to actuate the main device and the emergency device.

A.22. It is acceptable for a single control, e.g. a pedal, to operate the main brake control circuit and the emergency brake circuit. The control circuits must be independent and information on any failure of the main circuit must in this case be supplied to the operator.

Q.23. In point 2.3(d) of Annex I, the German version of the Directive refers to thickness of turnings, while other versions speak of depth of cut. The German formulation would appear to be less ambiguous even though it refers to an example, not a requirement.

A.23. The Commission agrees with this interpretation. The example was intended to refer to reduction of the thickness of turnings and not reduction of the depth of cut.

Q.24. Must machinery not listed in Annex IV but presenting equivalent risks be subjected to type-examination by a notified body?

A.24. NO. The list given in Annex IV is an exhaustive rather than an indicative list. If the manufacturer has doubts about his own risk analysis he may ask a body, notified or otherwise, to confirm it. The Directive does not impose any obligation in this respect.

Q.25. What procedure will the Commission use to update the list in Annex IV?

A.25. Annex IV is part of the Directive. Only the Council can amend it. The Commission can make proposals to the Council, possibly acting on proposals from the Member States. These must be duly substantiated, for example by accident statistics.

Q.26. Does Article 2(1) mean that the national authorities can influence the putting into service of machinery for non-professional users? Can the "appropriate measures" mentioned be taken at the manufacturing stage?

A.26. The Directive makes no distinction between machinery for professional and non-professional uses. All machinery must meet the Directive's requirements, no matter who the end user may be. The Member States are to take "appropriate measures" in respect of the placing on the market and putting into service of machinery. They cannot take any direct action during the manufacturing process.

Q.27. Can a manufacturer mark his machinery "made in Europe"?

A.27. There is nothing in the Directive to prevent him from doing so.
But nor is there anything in Community law to prevent Member States from limiting the use of this phrase.

Q.30. Can the CE marking be affixed if, during the transitional period, machinery is manufactured in accordance with the old national regulations ?

A.30. NO.

Q.31. Is it sufficient to affix the CE marking on the machinery's packaging or accompanying documents?

A.31. NO. The CE marking must be affixed to the machinery itself. Only in the case of certain lifting accessories does the Directive allow the marking to be affixed to the packaging if it is difficult or impossible to affix it directly.

Q.32. What must the instructions contain?

A.32. Requirement 1.7.4 of Annex I to the Directive is precise. It is difficult to give more detailed general indications.

Q.33. We conclude that although ropes, whether or not used as part of a machine, fall within the scope of the Directive, point 4.3.1 of Annex I does not require the CE marking where the rope is placed on the market without accessories and terminations.

A.33. With regard to trade in and free movement of ropes, a distinction must be drawn between the following cases:

- The rope is supplied for incorporation into a machine or to make a sling. In this case it is often supplied on drums. This is the case referred to in point 4.3.1. The CE marking is not required.
- The rope supplied forms part of an assembly such as a hoist or sling. This is the case referred to in point 4.3.2, and the assembly must bear the CE marking.

Q.34. Working group TC 188/WG 3 "conveyor belts" has asked if conveyors are covered by the Directive and if belts must take account of this.

A.34. In view of the definition of machinery in Article 1(2) of the Directive, conveyors are covered. The questioner makes a fair comparison between belts and the grinding wheels fitted to grinding machines. Neither grinding wheels nor belts fall within the scope of the Directive, but grinding machines and belt conveyors do. Their component parts must accordingly be such as to enable them to comply with the essential requirements.

Q.35. What is a woodworking machine with manual loading, particularly where there is a feeding device?

A.35. A feeding device is considered to be automatic when it fulfils the following two criteria:

- it takes the blank from a nearby pile and brings it automatically to the machine tool;

- it is locked to the machine's control circuit in such a way that the machine cannot be operated with piece-by-piece loading by the operator when the feeding device is out of order or has been deliberately shut down.

All other loading systems are considered to be manual.

Q.36. The stability test laid down in requirement 4.1.2.1 of Annex I cannot be carried out on very large machines, as there are no adequate test facilities. Beyond 15 tonnes the test can be replaced by a calculation. However, if this is accepted, it must also be accepted for smaller machines. Is this the meaning of "similar test"?

A.36. No. The term "similar test" was added in case it proved technically impossible to perform a platform stability test on very large trucks.

The 15 tonne limit generally advocated is based on the capacity of test platforms; it cannot become a fixed limit: if platforms exist which enable tests to be carried out on heavier trucks, the test must be carried out and not a calculation.

Q.37. Does mine winding gear fall within the scope of Directive 89/392/EEC as amended by Directive 91/368/EEC?

A.37. The 2nd amendment to the Directive on machinery excludes mine winding gear.

Q.38. When machinery is imported:
(a) who must sign the declaration of conformity?
(b) where must the technical file referred to in Annex V be kept?

A.38. Only the manufacturer or his authorised representative established in the Community may sign the declaration of conformity. The possibility provided for in Article 8(6) covers a particular exceptional case, discussed elsewhere.

The Directive requires a technical file to exist but does not specify where it is to be kept. There are very many cases in which it is difficult to imagine the file being kept anywhere other than on the premises of the manufacturer, even if those premises are located outside the Community. The declaration of conformity must be sufficiently detailed to give a satisfactory prima facie indication that the machinery complies with the Directive.

Q.39. What connection (and what overlap, if any) exists between Directive 89/392/EEC and Directive 86/594/EEC concerning the labelling of household appliances with regard to noise?

A.39. Directive 86/594/EEC, an optional Directive, does not require information on noise to be supplied but, should this information be required by a Member State, the Directive lays down certain conditions for measuring noise (Article 6).

Directive 89/392/EEC requires information to be given on the sound power level where the equivalent continuous A-weighted sound pressure level at the workstation (in the case in point, where the person using the household appliance would normally be) exceeds 85 dB. Hence, for household appliances with sound power levels above 85 dB (which are very rarely or never found), information on noise must be supplied under the conditions stipulated by Article 1(4) of Directive 86/594/EEC (if a specific Directive covers an essential requirement of Directive 89/392/EEC, the latter Directive no longer applies for the risk in question).

Q.40. Some machinery requires regular maintenance with periodic replacement of worn parts to maintain high safety levels.
Some operators use the services of small firms, not always connected with the manufacturer, which replace used components with parts which are similar, but not identical, to those recommended by the manufacturer in his instructions.
In the event of damage, to what extent is the manufacturer liable?

A.40. Any damage caused by defective components fitted during maintenance should be considered not in the light of Directive 89/392/EEC but in the light of Directive 85/374/EEC on liability for defective products.

Q.41. Are automatic vending machines which give change regarded as machinery?

A.41. If there is a power source other than manual effort, they fit the definition given in the Directive and present some of the risks set out in Annex I. They are therefore machinery.

Q.42. If the manufacturer follows the procedure referred to in the first indent of Article 8(2)(c), the notified body must acknowledge receipt of the file which the manufacturer has sent it.
Must it also ensure that the file is complete?

A.42. The body need take no action: its responsibility is limited to keeping the file it has received; it is therefore not required to check the contents of the file.

Q.43. Are plastics-moulding machines with reaction in the mould, sometimes referred to as reaction-injection moulding machines (RIM), included in point 10 of Annex IV.

A.43. Plastics-moulding machines with reaction in the mould, sometimes referred to as RIM, are not included in Annex IV.
The list set out in Annex IV should be understood in a restrictive sense: it therefore concerns only injection or compression plastics-moulding machines.

Q.44. We interpret requirement 4.2.4 "fitness for purpose" as follows:
- **each prototype is subjected to the static test with a coefficient of 1.5;**
- **one or several samples are submitted to a dynamic test with a coefficient of 1.1;**
- **if, after these tests, there are no permanent deformations or patent defects, the manufacturer may attest that the equipment satisfies requirements 4.1.2.3. and 4.2.4.**

A.44. The question confuses the two requirements.
Requirement 4.1.2.3 concerns mechanical strength and refers to tests which the machinery will undergo during its life, and in particular during the tests referred to in requirement 4.2.4, so that the designer can take account of them in his calculations.
Requirement 4.2.4, on the other hand, applies to all machinery involved in lifting operations: before being placed on the market or put into service for the first time, each machine must undergo the appropriate static and dynamic tests which will show the manufacturer that it has been properly made, so that he can certify it.
As stated in the Directive, the values quoted in the question are given as an indication ("as a general rule") and the manufacturer may choose other values, either because the harmonised standards relating to his machinery give other values (whether higher or lower) or because he has shown that an equivalent safety level has been achieved using other values, perhaps accompanied by other measures.
Tests carried out on a prototype are useful for satisfying requirement 4.1.2.3, but they are not a sufficient means of satisfying requirement 4.2.4.

Q.45. Does point 9 of Annex IV include guillotine-shears and punching machines?

A.45. Guillotine-shears and punching machines are not covered by Annex IV.
Point 9 mentions "presses" and specifies that this includes press-brakes. If the legislator had wanted to include guillotine-shears and punching machines, he would have specified them also.

Q.46. Does requirement 1.5.10 apply also to ionising radiation (or is ionising radiation not covered by the Directive, in which case requirement 1.5.10 does not apply)?

A.46. Article 1(3) of the Directive excludes "radioactive sources forming part of a machine" but not machinery which uses radioactive sources; such machinery must comply with requirement 1.5.10 and be designed to protect exposed persons and constructions from risk during operation, adjustment and maintenance and when not in use.

Q.47. In the case of mass production, must each declaration of conformity be signed by hand?

A.47. The Directive does not require a handwritten signature, but specifies only that the declaration of conformity must be signed by a person empowered to sign on behalf of the manufacturer or his authorised representative established in the Community.

The declaration of conformity is a very important document because by signing it the manufacturer or his authorised representative established in the Community assumes liability for the machinery.

It is therefore in his interest that the declaration should not be easy to reproduce. The use of photocopies is inadvisable because it is for the manufacturer to establish that fraud has been committed, and this becomes virtually impossible if he himself uses photocopies.

Q 48. The last paragraph of requirement 1.7.3 of Annex I states that the interchangeable equipment referred to in Article 1(2) must "bear the same information".
Does this refer to the preceding paragraph, i.e. only to indication of the mass, or to the full marking requirement?

A 48. Article 1(2) assimilates interchangeable equipment with machinery. It must therefore comply with all the requirements of the Directive, including, in particular, the whole of requirement 1.7.3 of Annex I.

Q 49. Must machinery bearing the CE marking be suitable for use under all climatic conditions found in Europe (extreme cold in the North, extreme heat in the South) and is this always possible?

A 49. The manufacturer must define the conditions of use of the machinery precisely in the instructions (he will have taken these conditions of use into account for the purposes of design, calculations and choice of materials). He can accordingly exclude certain climatic conditions or indicate the climatic conditions which he has taken into account; for example, it is not necessary to provide powerful cab heating for mobile machinery intended for use in southern Europe, but this must be indicated in the documents accompanying the machinery. The user is responsible for selecting machinery suitable for use under local conditions (Directive 89/655/EEC).

Q.50. Is a safety valve necessary in order to comply with the 5th paragraph of requirement 1.3.2?

A.50. The risks covered by requirement 1.3.2 are clearly stated: risks linked to the hose itself, whiplash, projection of pressurised liquid, etc. The presence of a valve is not the only way of complying with this requirement and cannot, therefore, be required. Possible alternatives might include guards to prevent the material effects of whiplash or the projection of liquid on exposed persons.

However, requirement 3.4.1 requires a non-return valve on the jack, but only if the fall in pressure caused by rupture of the hose can result in a dangerous movement of the machinery, whereas the risk referred to in requirement 1.3.2 is always present.

Q.51. Is it necessary to affix the CE marking on electrical equipment?

A.51. If the product falls within the scope of Directive 73/23/EEC, use of the CE marking has been possible since 1 January 1995 and obligatory since 1 January 1997.

If the product is machinery within the meaning of Directive 89/392/EEC and has an electric power supply, it must comply with the Directive on machinery and bear the CE marking, unless it is a component referred to in Article 4(2) which is intended to be incorporated into a more complex machine.

Q.52. Can the instructions regarding installation, assembly and dismantling be omitted and replaced by an indication to the effect that these operations must be performed by the manufacturer?

A.52. The reply must make appropriate distinctions.
In all cases the risks associated with dismantling and ways of reducing them must be described in the documents accompanying the machinery. Dismantling may not become necessary until long after any relationship between the manufacturer and the user has ceased.
As regards installation, including assembly and start-up, if these are likely to present risks to non-specialist staff or involve special know-how belonging to the manufacturer, it might be acceptable for the details not to be given in the instructions provided that it is made very clear that the manufacturer takes responsibility. The instructions must, however, contain all the information the customer needs for any work to be done before the manufacturer's team arrives. No instructions are to be communicated only orally between such teams and future operators.

Q.53. Does the Directive on machinery apply to second-hand machinery? What is the situation regarding second-hand machinery coming from an EFTA country after the entry into force of the European Economic Area?

A.53. Directive 89/392/EEC applies only when a product is first placed on the market or put into service in the European Economic Area. It therefore applies to second-hand machinery coming from a country outside the EEA.
Since Directives 89/392/EEC and 89/655/EEC, which cover the question of second-hand machinery, apply in all countries which are signatories of the EEA Agreement, the origin of such machines within the EEA does not affect their treatment.
NB: Switzerland, while a member of EFTA, is not a contracting party to the EEA Agreement and, as a result, second-hand machinery coming from Switzerland is considered as originating outside the EEA.

Q.54. If a ROPS or FOPS structure is supplied separately by the manufacturer of the machinery onto which it is to be mounted, it is not to be treated as a component referred to in Annex IV but as a spare part.

A.54. There are a number of possibilities, in particular:
1. If a manufacturer sells machinery with ROPS and/or FOPS structures fitted, this should be indicated in the description of the machinery (and in the declaration of conformity). The structure is not dealt with separately from the machinery and is not subject to a separate certification procedure.
2. If the machinery is supplied without a ROPS/FOPS structure, which is supplied separately, even if it is supplied by the manufacturer of the base machine, it is a "safety component placed on the market separately" as referred to in Directive 93/44/EEC (2nd Directive amending Directive 89/392/EEC). It must therefore comply with the Directive and, as it is listed in Annex IV, it must either comply with the relevant harmonised standard or have been submitted for EC type-examination, and must be accompanied by an EC declaration of conformity and have a manufacturer's plate **not bearing the CE marking**.

Q.55. Does the Directive contain requirements relating to environmental protection (noise, vibrations, vapour, dust, etc.)?

A.55. The essential requirements of the Directive have not been drawn up with the objective of protecting the environment against the nuisances caused by the use of machinery.
However, the Directive requires the designer, where appropriate, to reduce the phenomena referred to in the question, without imposing limit values (requirements 1.5.8, 1.5.9, 1.7.4 (f) and 3.6.3 of Annex I as regards noise and vibrations).
Requirement 1.5.13 of Annex I refers to the containment of dust, gases, etc., with a view to protecting the user of the machinery, but does not refer to the environmental impact thereof.

Q.56. The owners of trade marks are companies which buy products from the manufacturer, put their own name on them, and sell them as their own products.

Some component manufacturers, known as original equipment manufacturers (OEMs), produce major components but do not mark the products with their name for contractual reasons. This does not satisfy requirement 1.7.3.

The Directive on machinery requires the name of the manufacturer to be indicated. Can the name of the trade mark owner not be accepted, provided the latter takes full responsibility for satisfying the requirements of the Directive?

Otherwise, these traders will be at a disadvantage.

This is often the case with machinery which is incorporated into some kind of installation.

A.56. The Directive requires the name and address of the manufacturer to be marked only on machinery that is finished and ready for use.

So for OEMs there is no problem: it is the party who carried out the certification procedures (the manufacturer of the machinery or of the complex assembly) whose name must be given. The Directive makes no further stipulation.

The owners of trade marks covering finished machinery must take responsibility for all the obligations placed on the manufacturer by the Directive: in particular, they must draw up and sign the EC declaration of conformity, affix the CE marking, draw up the instructions, and be in possession of the technical file referred to in Annex V. This procedure requires the actual manufacturer to provide the trade mark owner with all the information needed for the technical file.

Q.57. Directive 91/368/EEC requires rotary cultivators and power hoes to undergo, by type, the corresponding tests.

(1) What sort of machines are these exactly, and what are the implications of the fact that they are specifically named?

(2) Are towed ploughs included?

A.57. The machines in question are tractor-mounted machines (a small number may be towed): rotary cultivators have cultivating tools rotating in a vertical plane (the tool axis is horizontal); powered hoes have tools rotating in a horizontal plane (the axis is vertical).

The legislator considered long and hard whether or not to include the two machines in question in the list in Annex IV. The final compromise, not to include them in Annex IV, was achieved by referring to them in Annex I. The fact that they are specifically named means that they must be tested, as indicated in essential safety requirement 3.

Machines fixed to a tractor are not specifically included, the remarks of the first paragraph above notwithstanding.

Q.58. Balancers are devices from which working equipment is suspended. The height of the equipment can then be adjusted.

Do they come under the Directive on machinery?

A.58. Balancers are covered by the Directive, either because they are machinery (if they are fitted with moving parts) or because they are lifting accessories defined in point 4.1.1 (a) of Annex I (if they are not fitted with moving parts).

Q 59. Article 5 says that in the absence of harmonised standards, Member States may bring the national technical standards and specifications to the attention of the parties concerned.

Does "bring to the attention" mean that there is an obligation to publish in the Official Journal of the European Communities the references of these technical standards and specifications?

A 59. NO.

These standards have no effect on the application of the Directive. They can only help a manufacturer in his quest for solutions. Their references are not relevant data within the meaning of Article 12.

Q.60. A compressor manufacturer is asked by the user to replace the electric motor of a new compressor with a turbine. Is he obliged to draw up a new technical file?

A.60. Here it is a matter of new machinery. The manufacturer must at least carry out a fresh analysis of the risks associated with the assembly and record the results in the original technical file. If this analysis detects new risks due to the change in motor power, the solutions adopted to remedy the situation must be added to the original technical file. The manufacturer must also supplement or reword the instructions supplied with the machinery in order to take account of the new configuration.

Likewise, the declaration of conformity must be supplemented and redrafted to correspond to the new machinery.

Q.61. Is it necessary to affix the CE marking on machine components?

A.61. The Directive is clear on this point: it applies to complete machines only and the individual components of the machine should not, therefore, bear the CE marking.

However, some components which are covered by a specific Directive requiring the CE marking — this is the case, in particular, with simple pressure vessels (Directive 87/404/EEC) and gas appliances (Directive 90/396/EEC) — can be fitted to a machine. In such cases manufacturers are obliged to comply with the formalities of the relevant Directive(s) and mark the products accordingly. The manufacturer of the machine will indicate in the instructions what marks have been affixed pursuant to other Directives and any obligations they may involve (such as compulsory periodical testing, inspection or replacement).

Interchangeable equipment, as defined in the third subparagraph of Article 1(2), is also considered to be machinery and must therefore comply with the Directive, including the provisions regarding CE marking and the EC declaration of conformity.

Safety components placed on the market separately, as defined in Article 1 of the Directive on machinery (amendment made by Directive 93/44/EEC), do not bear the CE marking pursuant to the Directive on machinery but must be accompanied by an EC declaration of conformity (Article 8(1)).

Q.62. Is it reasonable for a European standard laying down the method of measuring the noise level of machinery to provide for the arbitrary addition of several dB to the measured value, apparently in order to cover uncertainties?

A.62. Requirement 1.7.4 (f) in Annex I states that:

"the instructions must give the following information concerning airborne noise emissions by the machinery, **either the actual value or a value established on the basis of measurements made on identical machinery**".

The manufacturer must indicate in the instructions the noise level he has actually measured, indicating the uncertainty (plus and minus) of the measurement method used. The value given in the instructions must be the same as that in the technical file. Often the technical file will contain nothing more than a copy of the measurement report with the actual value recorded during the test.

Incidentally, a standard, even a harmonised standard, is not compulsory, and an "addition" to cover uncertainties is therefore a matter for the manufacturer.

The text of a European standard, designed to assist the manufacturer, may include references to measurement uncertainties, repeatability and reproducibility values, etc., which are inherent in the act of measurement.

The sole purpose of the values referred to in requirement 1.7.4 (f) in Annex I is to enable the purchaser to choose the quietest machine, having regard to the other characteristics or constraints of his installation; indeed, this is why these values must be reproduced in all commercial documentation presenting the machinery (requirement 1.7.4 (d) in Annex I).

Q.63. The technical file must be presented in two parts:

- **a general part containing all the data needed by the competent authorities to ascertain compliance with the Directive,**
- **a more detailed part containing precise data such as calculation notes, non-compulsory test reports, certificates of origin for certain components or materials, etc. This part need not be written in a Community language.**

A.63. The Directive does not require the technical file to be in two parts. The confusion probably stems from reading the general vade-mecum on the new approach, but this was drawn up in order to make it easier to apply Directives that are vague on one point or another, which is not the case with the Directive on machinery, at least insofar as the technical file is concerned.

The Commission's current position is as follows:

- Annex II to the Directive specifies what the declaration of conformity must contain. The declaration must enable the competent authorities to be reasonably satisfied that the machinery complies. It must be written in the same language as the original instructions (since the Agreement on the European Economic Area entered into force, the language of one of the signatory countries). However, when the machinery is put into service the user must have a translation of the instructions in his or her language.
- The technical file must be supplied only in response to a substantiated request. This implies that the manufacturer is required to supply only the parts relevant to any such request. Annex V states that this file must be supplied in one of the Community languages (since the Agreement on the European Economic Area entered into force, the language of one of the signatory countries).

Q.64. What is the Committee's opinion on the level of health and safety requirements in the Directive on machinery as regards wind-driven generators?

A.64. When the Directive on machinery was drawn up, all involved requested that the level of essential health and safety requirements be high and recognised that this objective was achieved. The Council also recognised that the Directive applied to wind-driven generators.

Q.65. Are internal combustion engines and the turbines used to produce mechanical energy from liquid or gaseous fuels to be regarded as machinery?

A.65. A distinction has to be made between the following:

(1) Engines that are supplied to be connected to another component (compressor, electricity generator, ship or aircraft propeller, etc.) in order to perform a function such as producing compressed air, generating electricity or propelling a ship or an aircraft (engine permanently installed in the machinery).

These engines are to be regarded as machinery within the meaning of Article 4(2). They do not have to bear the CE marking but in order to move freely they must be accompanied by the manufacturer's declaration according to the model in Annex II.B. The complete machine must bear the CE marking and must be accompanied by the documents required by the manufacturer of the assembly.

(2) Engines that are ready for use when placed on the market and bought by the end user, such as outboard motors for boats. They are covered by the Directive and must bear the CE marking and be accompanied by a declaration of conformity.

Q.66. Annex II.A states that the declaration of conformity must contain a description of the machinery and all relevant provisions complied with by the machinery. Is it necessary to:

(a) indicate the serial number of the machinery,

(b) give a complete list of the Directives with which the design of the machinery complies?

A.66. (a) The certification procedures must be followed for **each** machine (Article 8(1)); the information given on the data plate (requirement 1.7.3 in Annex I) must be reproduced in full in the declaration of conformity. There must be no doubt as to the relationship between the declaration of conformity and the machinery concerned; in the case of mass production the declaration could, for example, state the serial numbers concerned as a range from X to Y. The series must be manufactured during a single calendar year, so that the date of manufacture required by the Directive corresponds to the date of manufacture of the series. (Where a single machine is produced, the description of the machine required by Annex II.A serves to identify it.)

(b) It is absolutely essential for the declaration of conformity to include the complete list of the Directives with which the design of the machinery complies:
- during the transitional periods, this indicates the manufacturer's choice (between the new Directive and the old national regulations),
- after the end of the transitional periods, it is important to know that the manufacturer has indeed followed all relevant Community legislation.

The numbers of the Directives as published in the Official Journal of the European Communities must be given, rather than particulars of the national legislation transposing those Directives (Directive 93/68/EEC on CE marking).

Some consider that the "relevant provisions" of the declaration of conformity (Annex II) mean the essential requirements that the machine meets. Although it is useful to mention these in the declaration of conformity, no such list is required by the Directive.

Q.67. What is the situation regarding: nail guns or stunning pistols and the ammunition for them?

A.67. First of all, the problem of ammunition:

Directive 93/15/EEC on explosives for civil uses deals expressly with ammunition for nail guns.

Article 10 of the Directive recognises the obligation to have "undergone a check in accordance with the Convention of 1 July 1969 on the Reciprocal Recognition of Proofmarks on Small Arms".

This Directive entered into force on 1 January 1995 with a transitional period of 8 years (up to 31 December 2002).

As regards the guns themselves, the situation is more complex:

The first amendment (Directive 91/368) excluded them from the Directive on machinery.
- 7 Member States (Belgium, Finland, France, Germany, Italy, Spain and the United Kingdom) are signatories to the Convention;
- the other Member States have national rules.

Consequently, such guns can only effectively move freely among the signatories of the Convention. In the other Member States the national rules currently in force continue to apply. (Article 36 of the EC Treaty can be invoked because there has been no technical harmonisation.)

Q.68. If a manufacturer installs machinery on the premises of a potential customer for him to evaluate it but the machinery is not sold and remains the property of the manufacturer, does it have to bear the CE marking and meet the other requirements applicable to it?

A.68. This is a textbook case because as long as the machinery remains under the manufacturer's control and as long as the operators are the manufacturer's employees the machinery has not been placed on the market. This is the case provided for by Article 2(3). As soon as the satisfied customer takes delivery the machinery has to comply with the Directive, bear the CE marking, etc.

The manufacturer has to make sure that a notice is affixed in the vicinity saying that the machinery is not in conformity with the Directive (Article 2(3)).

If the manufacturer has supplied the machinery for evaluation by the potential customer and the machinery is operated by the future customer's staff, the machinery has to be considered as placed on the market (handed over provisionally but handed over all the same) and put into service within the meaning of Article 2(1) and must be entirely in conformity with the Directive.

Machinery made by the manufacturer for his own use is subject to Article 8(6) of the Directive on machinery.

Q.69. Testing the noise of brushing machines.

The machinery in question is used to wash potatoes and other vegetables. Usually manufactured according to the user's specifications, it is either used on its own or built into a production line.

It is not possible to measure the noise on the manufacturer's premises since he does not have the facilities to operate the machinery (plenty of water, vegetables, steam, etc.).

Where the machinery forms part of a production line, can it be regarded as a component within the meaning of Article 4(2) so that only one overall noise measurement need be carried out on the user's premises?

If the machinery is used on its own, the above solution is not possible. May the manufacturer disregard certain aspects of the Directive, and if so, how should he proceed?

A.69. To take the last question first, the answer is no. A manufacturer may not certify machinery without having taken into account all the essential requirements and provisions of the Directive.

There are, of course, cases where the machinery is so large (complex injection moulding plant, papermaking machinery, rolling mills, etc.) that the measurements cannot be carried out on the manufacturer's premises. There may also be machinery that is smaller than that mentioned in the question, although it is not so clear why measurements cannot be taken in this case.

The Directive does not lay down the measurement method to be used. There are a number of standardised (ISO 3746) or non-standardised (acoustic intensimetry) *in situ* measurement methods which the manufacturer can apply when putting the machinery into service.

If the manufacturer applies Article 4 and considers the delivery to be part of a more complex machine, the manufacturer of the whole assembly must satisfy the requirements of the Directive (CE marking, declaration of conformity, instruction handbook **indicating the noise levels**, technical file, etc.).

Q.70. Are floating cranes means of transport or machinery?

A.70. It is not the main function of floating cranes to transport goods or passengers.

They are not excluded from the scope of the Directive by Article 1(3).

They are machinery.

Q.71. Are the walls of lorries that can be opened or closed by hand, such as those on lorries used for travelling sales, to be regarded as machinery?

A.71. They are accessories to the lorry, which is excluded from the Directive. If they are manually operated they are excluded from the Directive (Article 1(3)).

Q.72. How is requirement 1.7.4 (d) to be understood?

Does it mean that all sales leaflets and catalogues must give the noise level and, in the case of hand-held machinery, the level of vibration?

A.72. The Directive requires no such information in the sales leaflets and catalogues. The only stipulation made is that if the manufacturer does supply this information, it must be identical to that given in the technical documentation accompanying the machinery.

On the other hand, the technical documentation describing the performance of the machinery must give the data required by the Directive on noise and, where appropriate, vibration.

Q.73. If a type C standard is complied with, is there no need to carry out the assessment referred to in the third preliminary observation?

A.73. The manufacturer is always under an obligation to assess the hazards which apply to his machinery.

Then, for some (or all) of these hazards, the manufacturer may use the C standard if one exists. That will entitle him to presume conformity with the Directive for the essential requirements concerned and will make it easier for him to draw up the technical file.

Q.74. Section 3.6.3 (a) should be amended. The vibrations measured do not depend on the manufacturer but on the operator's way of driving. It should be added that "the vibrations are measured during movement of the machinery over a more or less flat surface".

A 74. This addition to the Directive is unnecessary, since if the manufacturer "must indicate the operating conditions of the machinery during measurement", this means that he is free to choose these conditions. If there is a European standard, it will define the conditions.

Q.75. Do roller dynamometers for motorcycles, motor cars, etc. fall within the scope of the Directive?

A.75. Yes. This equipment is made up of a number of parts, some of which move, joined together for a specific application. Although it does not have its own power source, it receives power from the vehicle it is testing and presents clear mechanical risks.

Q 76. 1. What will happen if the Directive is not transposed into national law on time?

2. Can a manufacturer affix the CE marking on his machinery if the Directive has not been transposed into the law of the Member State in which he is established?

A 76. 1. The Directive enters into force on the date fixed by the Council. It imposes obligations on the Member States (in particular, to amend their old rules) but if a Member State has not transposed the Directive into national law the old rules for placing on the market in that State remain in force.

It is, however, sufficient for the Directive to have been transposed in just one Member State for a manufacturer based in another Member State or abroad to be able to use it.

The manufacturer will place the product on the market, possibly fictitiously, in the Member State that has transposed it, after which the product may move freely to any other Member State. In this case the manufacturer is entitled to refuse to conform to the old rules of a Member State that has not yet repealed them.

2. If the Directive is in force and has been transposed into national law in one or more of the other Member States, a manufacturer acting in accordance with the answer to the previous question may affix the CE marking to his machinery.

Q 77. Safety components.

The questions on this point are many and various.

Some concern the general definition, some particular components.

The following is a brief summary.

A.77. 1. Basic concepts

1.1. "Safety components placed on the market separately" were included in the scope of the Directive mainly so that machinery users who have to improve safety (Directive 89/655/EEC) and who are generally less technically competent to choose these components than the machinery designers can obtain parts which give satisfaction.

Apart from the components listed in Annex IV, it is the manufacturer of the component who declares - on the basis of the definition in the Directive - whether the part in question is a safety component within the meaning of the Directive (10th recital) and provides information on its function.

1.2. "Placing on the market" is defined as the first time a particular product is made available on the Community market, against payment or free of charge, for distribution and/or use on the Community market (guide to the new approach).
"Making available" covers the handover of the product, i.e. the transfer of ownership of the product or the physical transfer of the product from the manufacturer (or his representative) to:
- either the person who will be seeing to its distribution on the market
- or the end user (private or professional).

1.3. The safety component must be a complete physical assembly which can be bought ready to fit in machinery and which once it is installed will perform a safety function. The Directive adds that failure of the safety component "endangers the safety or health of exposed persons". Many safety components ("fail-safe" components) can fail without posing a danger to the persons exposed. Consequently, this provision should be interpreted as "failure of which endangers the safety functions of the machine".

1.4 *Statement in the Council minutes of 14 June 1993*: it is understood that this Directive (93/44/EEC) does not affect the free movement, already ensured by Directive 89/392/EEC, of machinery incorporating safety components.

1.5. The CEN set up a working party to find out what had to be standardised. This working party proposes that the standards deal with components selected from among those with the sole purpose of performing a direct safety function as defined in paragraph 3.13.1 of standard EN 292-1 in order to meet the essential requirement expressed in the second indent of paragraph 1.1.2 (b) of Annex I to the Directive:

Direct safety functions:

Those functions of a machine, the malfunction of which would immediately increase the risk of injury or damage to health.

There are two categories of direct safety functions:

(a) ***safety-specific functions****, which are direct safety functions specifically designed to ensure safety.*

EXAMPLES:
- function preventing unintended/unexpected start-up (interlocking device, etc.),
- single-cycle function,
- two-hand control function, etc.

(b) ***safety-related functions****, which are direct safety functions other than safety-specific functions.*

EXAMPLES:
- manual control of a hazardous mechanism during setting phases, with disabled safety devices,
- speed or temperature control keeping the machine within safe operating limits.

An additional criterion could be that the safety component plays no part in the function of the machine. Some have objected to this interpretation on the grounds that some safety components perform both a functional and a safety role as, for example, electrical distributors controlling press clutches. It is hard to imagine a **user** adding such a device to his press on his own without outside advice. This objection is therefore unfounded in practice.

The working party cites the following as examples:

- guards;
- locked guards;
- interlocks;
- fume or toxic dust extractors fitted to machinery;
- soundproof covers;
- anti-fall guards for hoists;
- load monitors for lifting gear;
- emergency stopping devices and/or the associated logic units;
- non-return valves for hydraulic circuits;
- etc.

2. **Consequences**

2.1 A spraying system in a surface-treatment installation is not a safety component. Removing the system actually prevents the machinery from working.

2.2 The following are examples of safety components:
- an emergency stopping device;
- the guards referred to in section 1.4 of Annex I;
- the protection devices referred to in section 1.4.3 of Annex I;
- the safety belts referred to in section 3.2.2;
- the loading control devices referred to in section 4.2.1.4;
- the deadman's control referred to in section 5.5;
- the fall-prevention devices referred to in section 6.4.1;
- etc.

2.3 The situation is not so clear in the case of certain components not designed specifically or exclusively for safety functions:
- latches for doors or covers;
- limit stops;
- devices to prevent derailment referred to in section 4.1.2.2;
- etc.

The manufacturer of the component has to say whether or not these components have a safety function.

2.4 Logic units intended to perform a safety function other than those of two-handed controls (Annex IV) are safety components if they are placed on the market separately, but they are not subject to type-examination.

2.5 The list in brackets in section B.1 of Annex IV is not exhaustive, but rather a list of examples.

2.6 A lifting rope is not a safety component, since the machinery cannot function without a rope.[1] It should not be forgotten, however, that lifting ropes are subject to requirements 4.1.2.4 and 4.3.1.

2.7 When a safety component in Annex IV is supplied direct to a user to replace an identical component of the original machinery, by or on the instructions of the manufacturer of the original machinery, it does not have to undergo the procedures set out in the Directive. On the other hand, if the machine has been delivered without a safety component or with a different safety component and the component is supplied separately, the latter is covered by Directive 93/44/EEC (second amendment of Directive 89/392/EEC). It must therefore comply with the Directive and, if covered by Annex IV, must either comply with the harmonised standard or have undergone an EC type examination, and must be accompanied by an EC declaration of conformity.

Q 78. What are the "analogous materials" to wood or meat referred to in Annex IV?

1 In the past Commission staff have taken the opposite view.

A 78. In the case of wood, essential requirement 2.3 in Annex I is clear: "Materials with physical and technological characteristics similar to those of wood, such as cork, bone, hardened rubber, hardened plastic material ...".
The materials analogous to meat include fish and frozen or deep-frozen food.

Q 79. Should routers be included in point 7 in Annex IV, i.e. "hand-held vertical spindle moulding machines"?

A 79. The list in Annex IV is exhaustive and must not be interpreted. Consequently, routers, including routers with manual template control, are not covered by Annex IV.

Q 80. Point 4 in Annex IV refers to band saws. There are straight-blade saws which do not have an endless band. Are they included in point 4?

A 80. The list in Annex IV must be taken literally. Band saws means endless band saws.

Q 81. What is the exact scope of point 15 in Annex IV, i.e. "vehicle servicing lifts"?

A 81. "Vehicle servicing lifts" means stationary machinery designed to raise vehicles in order to facilitate repair or maintenance operations under the vehicles.
Inter alia, the following are excluded:
- lift trucks used to set vehicles down on a raised, fixed workbench;
- car park elevators;
- jacks;
- vehicle tippers.

Q 82. Some nail guns use the force generated by explosion of an air/propane mixture triggered by a spark. Are such guns covered by the Directive and, if so, which certification procedure?

A 82. Such guns are covered by the Directive on machinery and require self-certification by the manufacturer without examination (module A).

Q 83. Is a technical file required for lifting accessories?
Also, requirement 4.4.1 can pose serious practical problems. In the case of shackles, for example, an instruction handbook complying with the standard would require six pages and, counting the administrative and printing costs, would cost more than the shackle! Current practice is to refer to the catalogue. We consider that if the manufacturer includes all the instructions in his catalogue or in any other document supplied to the user at the time of delivery of the accessories, this requirement is satisfied.

A 83. Lifting accessories are covered by the Directive. The manufacturer must therefore have a technical file on them (it must be remembered that there are very few essential requirements applicable to accessories and that standardisation in this sector is so advanced that, in most cases, the very simplest form of file will suffice).
As regards the instruction handbook which must accompany each batch, it seems exaggerated to claim that it would take six pages to satisfy requirement 4.4.1 in the case of shackles. The standard is not mandatory. Also, one side of an A4 sheet should suffice to indicate the category of use for the shackle (and any compatibilities with other accessories possibly in another category) together with the instructions for assembly, protection against bad weather and regular retesting. The Directive has nothing against providing this information in a catalogue if this is more economic, on condition that each user has access to the catalogue at his or her place of work, that the catalogue is translated, and that there is no risk of confusion between the products in the catalogue and the accessory used.

Q 84. Machinery manufactured in one Member State is used in another Member State. The local authorities have doubts about its conformity with certain essential requirements.

However, rather than prohibiting use of the machinery immediately, can they, under the Directive on machinery, ask the manufacturer for access to the technical file on the essential requirements?

A 84. This option is certainly preferable to immediate application of the safeguard clause.
However, the Member State must indicate the grounds and express doubts about compliance with one or more clearly identified specific essential requirements (see Annex V, point 3, subparagraph 3).
If the Member State in question is still not satisfied (e.g. receives no reply from the manufacturer) it may then apply the safeguard clause and inform the Commission.

Q.85. The Directive indicates that seagoing vessels and mobile offshore units together with the equipment on board such vessels or units are excluded from the scope. What about floating production vessels and other floating units used as permanent positioned installations?

A.85. The Directive on machinery excludes ships and mobile offshore units as these are covered by relevant IMO conventions addressing safety requirements. For floating offshore production vessels the question is to decide if they are permanent (in which case the Directive on machinery will apply) or not. Since the units, when in operation, may be considered as permanently positioned, and since IMO codes do not cover drilling and production equipment, it is suggested that products solely provided for drilling and production operations, which do not serve any function in relation to normal shipboard activities, are included in the scope of the Directive on machinery.

Q.86. Seagoing vessels together with the equipment on board such vessels are excluded from the scope of the Directive. What about flat woven textile slings intended for loading and unloading the vessel?

A.86. Flat woven textile slings are mass-produced products intended for continuous general use and are not specially made for vessels. They may belong to a shipping company and travel with the vessel, but they cannot be considered with respect to safety aspects exactly like the slings of the stevedoring company. "One-way" (single-use) slings, which are placed in position around the load at the point of departure and remain there to the final destination, are part of the shipment and an aid for lifting not limited to the action of loading the vessel. They may therefore be considered as lifting accessories and included in the Directive: the requirements are indicated in Annex I, section 4.
It is however possible that in some cases textile slings are specially manufactured and intended for use exclusively on seagoing vessels, e.g. for loading or unloading the vessel. These product may be excluded, as long as clear indications on the appropriate use of the product are provided.

Q.87. How does the Commission interpret Article 8(6)?

A.87. Article 8(1) states that the manufacturer (or his authorised representative established in the Community) must carry out the procedures laid down in the Directive.
Article 8(6) states that where neither the manufacturer nor his authorised representative fulfils the obligations of the preceding paragraphs, these obligations fall to any person placing the machinery or the safety component on the market.
It is clear from the verb "must" in Article 8(1) and from the order of the various points that there must be a pressing reason for the manufacturer or his authorised representative established in the Community not to fulfil their obligations.
What might these reasons be? It is not possible to give an exhaustive list.
A manufacturer established in the Community or his authorised representative cannot invoke Article 8(6) to evade obligations by transferring responsibility for certification procedures to the user. Only the translation of the instructions and of the various indications on the

machinery may be delegated to the person who places the machinery on the market in the language area in question.

Q.88. [This question has been transferred for revision to the document "provisional questions & answers".]

Q.97. We (European Door and Shutter Federation) think that the Interpretative Document for essential requirement No 4 of the Directive on Construction Products contains all the information necessary to have safe automatic doors.
In our opinion, we do not need to take account of the requirements of Directive 89/392/EEC, which focus more on protection of the equipment.
Can you confirm this interpretation?

A.97. Automatic motorised doors are covered by a number of Directives: 89/106/EEC on construction products, 89/392/EEC on machinery, and possibly 73/23/EEC on low-voltage electrical equipment and 89/336/EEC on electromagnetic compatibility.
Where the risks exist, all the Directives must be applied.
The Directives on machinery and construction products must always be used together; the Commission will ensure that the harmonised standards drafted in the field of construction products and machinery do not contradict each other.

Q.106. Are the support leg systems positioned by compressed air that are used on demountable containers to be regarded as machinery?

A.106. Yes, they fit the definition given in Article 1(2) and their specific application is supporting the container.

Q.109. After 1 January 1997, an electrical component will bear the CE marking (Directive 73/23/EEC as amended by 93/68/EEC). But if it is a safety component within the meaning of the Directive on machinery, it must not bear the CE marking.
What should be done?

A.109. These would be components placed on the market separately with a statement from the manufacturer that they are safety components.
The declaration of conformity must specify that the CE marking is affixed pursuant to the Directive on low-voltage electrical equipment but that the component also complies with the Directive on machinery.

Q.110. What date should be given: the year of design, the year of construction, or the year of placing on the market?

A.110. Directive 93/68/EEC abolished the obligation to put beside the CE marking the first two digits of the year in which the marking was affixed.
Requirement 1.7.3 introduced the obligation to put the year of construction, together with other information concerning the manufacturer.

Q.111. Section 4.2.1.4 of Annex I to the Directive requires there to be a device preventing movements when a maximum load or moment conducive to overturning is reached. It is sometimes safer to warn the driver that he has arrived at a dangerous situation but to let him complete his movement or move to a safer position (e.g. put down the load) than to interrupt the movement and leave the machinery in a dangerous position. Based on the second preliminary observation, TC 151 has prepared standards 474.4 and 474.5 accordingly. Is this acceptable?

A.111. Yes, because this represents the present state of the art. But it should be remembered that the requirement does not ask for the movement to be interrupted but only for dangerous movements to be prevented. A move back to a safe position is permitted. This of course

requires sophisticated equipment capable of identifying permitted movements that may not yet exist, at least at an affordable price.

Two-phase devices, providing a warning first and then, if the operator takes no notice, stopping the movement, are also conceivable.

Q.118. Laundry machines used in hospitals which are not well protected with non-return valves could cause problems for other patients, for example, infection due to bacteria in the laundry. Does the Directive on machinery cover such risks?

A.118. It is up to the user to choose the right machine and, above all, to use it properly (to choose the wash programme suited to the type of laundry, use a machine exclusively for a specific ward, etc.).

It is not possible to require all washing machines to be designed for use in hospitals without any bacteriological risk.

Similarly, possible contamination via the water distribution network is not covered by the Directive.

Users can always request conversions or additions to cover specific risks. Any manufacturer who makes such changes will have to ensure that the machine maintains its current safety standards.

Q.120. Should machinery for blister packaging of medicinal products be considered as agri-foodstuffs machinery covered by requirement 2.1 in Annex I?

A.120. The risks to the consumer referred to in essential requirement 2.1 exist in this particular case. Consequently, requirement 2.1 must be taken into account and additional measures, for example to ensure sterility, may have to be taken.

Q.121. Regarding machinery for underground work, does "machinery running on rails" covered by Annex IV refer only to locomotives and brake-vans?

A.121. The machinery for underground work referred to in Annex IV includes locomotives and brake-vans only, excluding any other machinery running on rails.

The question arises because the various language versions of the Directive differ. The EN, DE, NL, PT, EL and SV versions read:

"Machinery for underground working of the following types: - machinery on rails: locomotives and brake-vans";

while the FR, IT, DA and ES versions read: "Machinery for underground working of the following types: - machinery on rails; locomotives and brake-vans". The FI version has a comma instead of the semicolon.

Since the legislator's intention was to draw up an exhaustive list of machinery running on rails designed for underground working, the first version above is correct.

Q.122. Are machines for bending concrete reinforcing bars including in the "presses" in point A 9 of Annex IV?

A.122. The term "presses" should be read as an abbreviation of "bending presses"; machines for bending concrete reinforcing bars are not in this category and are not therefore subject to an EC type examination.

Q.126. What is a pyrotechnic machine? Is it covered by the Directive on machinery?

A.126. According to the statement in the Council minutes when the Directive was adopted, pyrotechnic machines are solely machines manipulating "pyrotechnic materials", namely a material (or mixture of materials) designed to produce a heat, light, sound, gas or smoke effect, or a combination of such effects, by means of non-detonating self-sustaining exothermic chemical reactions.

These machines should not be confused with those for use in explosive atmospheres, which are covered by the Directive on electrical equipment for use in potentially explosive atmospheres.

Q.127. Are thermoforming machines compression-moulding machines covered by Annex IV?

A.127. Thermoforming machines process heated plastic sheet in a mould, with additional pressure or suction to facilitate the forming of the part.

Although the risks associated with the pressurised closure of moulds are similar to those found in compression moulding machines, thermoforming machines are not covered by Annex IV.

Compression plastics moulding machines are used to make batches of moulded parts from plastics or thermosetting materials loaded into an open mould, using pressure to close the mould and keep the mould shut.

Q.128. Are the woodworking machines referred to in Annex IV covered by that Annex when fitted with additional functions?

A.128. Most woodworking machines listed in Annex IV (notably almost all the combined machines listed in point 5) have equipment providing additional functions which are not indicated in Annex IV (e.g. spindle mortising, drilling, sanding, stapling, gluing, sawing with movable tool, etc.). These additional operations are designed solely to improve the finish of the workpieces.

If equipment additional to the basic machine is not interchangeable, it must all be regarded as a new machine in accordance with Article 1(2) of the Directive: the whole machine is included in Annex IV, and the type-examination will be carried out in accordance with draft question/answer 115.

Q.129. Are rotary universal woodworking machines (such as edge-banders, trimmers, matchers, moulders, shapers, multi-spindle tenoners, etc.) covered by Annex IV?

A.129. These machines, which may be manual loading or unloading, combine several functions of Annex IV but the piece is not manually removed between each operation; they are not therefore combined machines as referred to in point 5 since the definition of combined machines is given in point 1.3.5 of Annex I.

Of all rotary universal woodworking machines, only tenoning machines with several tool holders, hand-fed throughout the work phase, are explicitly listed in point 6 of Annex IV. It must therefore be concluded that if the Council had wished to include other universal woodworking machines in Annex IV, it would have mentioned them also; they are not therefore included in Annex IV.

Q.132. There are diverging interpretations of the definition of woodworking machinery with a mechanical feed device and manual loading and unloading given in Annex IV to the Directive. In particular, the interpretation of the term "band saws with a fixed or mobile bed" used in point 4 of Annex IV has caused problems. What is the correct interpretation of the term in accordance with the intention of the legislator?

[See also the answer to question 35.]

A.132. In general, manual loading/unloading means that the operator places the workpiece directly in the integrated feed device (rotating feed rollers, travelling table, etc.) or removes it directly from such device. In the case of Annex IV point 4, the differing interpretations seem to be due to the fact that the terminology used in the various language versions is not equivalent. The term "bed" used in English has a different meaning from that of the term "table" used in French, Spanish and Swedish. This may lead to the inclusion in Annex IV of different products. Not all band-saws are included in Annex IV. They are included only if they are manually loaded and/or unloaded and fitted with a mobile support for the product (wood, meat) allowing it to be carried to the saw blades.

Q.139. What is the situation regarding the following bakery equipment: ventilated and hearth ovens, freezers, and water-coolers?

A.139. This equipment - particularly large items intended for professional use - is made up of several components, some of which fall within the scope of the Directive. Because of their dimensions and their complex design, these assemblies present mechanical risks, particularly as regards maintenance. They therefore fall within the scope of the Directive on machinery and are not excluded by Article 1(5).

PART 2

STANDARDISATION

This section contains 4 lists relating to :

Harmonised standards and European standards are inserted in the national collection of each Member bodies of CEN and CENELEC; their texts are available in different languages. Draft European standards are normally available in French, English and German.

The list of harmonised standards can be found at the following internet address : http://europa.eu.int/comm/dg03/directs/dg3b/newapproa/eurstd/harmstds/index.html.

In order to obtain the text of these documents, you should contact the Member Bodies of CEN, CENELEC (listed in part 5 of this document) or the standardisation body of your country if you are located outside the territory of CEN/CENELEC members.

2.1. HARMONISED STANDARDS WHICH GIVE PRESUMPTION OF CONFORMITY WITH THE MACHINERY DIRECTIVE

Any machine or safety component constructed by a manufacturer, in accordance with a national standard transposing a harmonised standard, shall be presumed to comply with the relevant essential requirements. Article 5, paragraph 2 of the Directive 98/37/EC states that more than one essential safety requirement may be relevant. A harmonised standard is established by CEN, CENELEC or ETSI, on the basis of a remit from the Commission for which the references are published in the Official Journal of the European Communities.

Attention must be drawn to the fact that conformity with several harmonised standards does not confer the presumption of conformity with all the Directive, unless these standards cover all the essential requirements applicable to the machine.

REFERENCE	YEAR OF RATIFICATION	TITLE	PUBLICATION IN OJEC
EN 115	1995	Safety rules for the construction and installation of escalators and passenger conveyors	C 183 of 13.06.98, p.2
EN 115/A1	1998	Safety rules for the construction and installation of escalators and passenger conveyors	C 317 of 15.10.98, p.5
EN 201	1997	Rubber and plastics machines - Injection moulding machines - Safety requirements	C 183 of 13.06.98, p.2
EN 289	1993	Rubber and plastics machinery - Compression and transfer moulding presses - Safety requirements for the design	C 183 of 13.06.98, p.2
EN 292-1	1991	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology	C 183 of 13.06.98, p.2
EN 292-2	1991	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications	C 183 of 13.06.98, p.2
EN 292-2/A1	1995	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications	C 183 of 13.06.98, p.2
EN 294	1992	Safety of machinery - Safety distance to prevent danger zones being reached by the upper limbs	C 183 of 13.06.98, p.2
EN 349	1993	Safety of machinery - Minimum gaps to avoid crushing of parts of the human body	C 183 of 13.06.98, p.2
EN 415-4	1997	Packaging machines safety - Part 4: Palletisers and depalletisers	C 183 of 13.06.98, p.2
EN 418	1992	Safety of machinery - Emergency stop equipment, functional aspects - Principles for design	C 183 of 13.06.98, p.2
EN 422	1995	Rubber and plastics machines - Safety - Blow moulding machines intended for the production of hollow articles - Requirements for the design and construction	C 183 of 13.06.98, p.2
EN 457	1992	Safety of machinery - Auditory danger signals - General requirements, design and testing (ISO 7731:1986, modified)	C 183 of 13.06.98, p.2
EN 474-1	1994	Earth-moving machinery - Safety - Part 1: General requirements	C 183 of 13.06.98, p.2
En 474-1/A1	1998	Earth-moving machinery - Safety - Part 1: General requirements	C 317 of 15.10.98, p.5
EN 474-2	1996	Earth-moving machinery - Safety - Part 2: Requirements for tractor-dozers	C 183 of 13.06.98, p.2
EN 474-3	1996	Earth-moving machinery - Safety - Part 3: Requirements for loaders	C 183 of 13.06.98, p.2
EN 474-4	1996	Earth-moving machinery - Safety - Part 4: Requirements for backhoe loaders	C 183 of 13.06.98, p.2

EN 474-5	1996	Earth-moving machinery - Safety - Part 5: Requirements for hydraulic excavators	C 183 of 13.06.98, p.2
EN 474-6	1996	Earth-moving machinery - Safety - Part 6: Requirements for dumpers	C 183 of 13.06.98, p.2
EN 474-7	1998	Earth-moving machinery - Safety - Part 7: Requirements for tractor scrapers	C 317 of 15.10.98, p.5
EN 474-8	1998	Earth-moving machinery - Safety - Part 8: Requirements for graders	C 317 of 15.10.98, p.5
EN 474-9	1998	Earth-moving machinery - Safety - Part 9: Requirements for pipelayers	C 317 of 15.10.98, p.5
EN 474-10	1998	Earth-moving machinery - Safety - Part 10: Requirements for trenchers	C 317 of 15.10.98, p.5
EN 474-11	1998	Earth-moving machinery - Safety - Part 11: Requirements for earth and landfill compactors	C 317 of 15.10.98, p.5
EN 500-1	1995	Mobile road construction machinery - Safety - Part 1: Common requirements	C 183 of 13.06.98, p.2
EN 500-2	1995	Mobile road construction machinery - Safety - Part 2: Specific requirements for road-milling machines	C 183 of 13.06.98, p.2
EN 500-3	1995	Mobile road construction machinery - Safety - Part 3: Specific requirements for soil stabilization machines	C 183 of 13.06.98, p.2
EN 500-4	1995	Mobile road construction machinery - Safety - Part 4: Specific requirements for compaction machines	C 183 of 13.06.98, p.2
EN 500-5	1995	Mobile road construction machinery - Safety - Part 5: Specific requirements for joint cutters	C 183 of 13.06.98, p.2
EN 528	1996	Rail dependent storage and retrieval equipment - Safety	C 183 of 13.06.98, p.2
EN 547-1	1996	Safety of machinery - Human body dimensions - Part 1: Principles for determining the dimensions required for openings for whole body access into machinery	C 183 of 13.06.98, p.2
EN 547-2	1996	Safety of machinery - Human body dimensions - Part 2: Principles for determining the dimensions required for access openings	C 183 of 13.06.98, p.2
EN 547-3	1996	Safety of machinery - Human body measurements - Part 3: Anthropometric data	C 183 of 13.06.98, p.2
EN 563	1994	Safety of machinery - Temperatures of touchable surfaces - Ergonomics data to establish temperature limit values for hot surfaces	C 183 of 13.06.98, p.2
EN 574	1996	Safety of machinery - Two-hand control devices - Functional aspects - Principles for design	C 183 of 13.06.98, p.2
EN 608	1994	Agricultural and forestry machinery - Portable chain saws - Safety	C 183 of 13.06.98, p.2
EN 614-1	1995	Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles	C 183 of 13.06.98, p.2

EN 626-1	1994	Safety of machinery - Reduction of risks to health from hazardous substances emitted by machinery - Part 1: Principles and specifications for machinery manufacturers	C 183 of 13.06.98, p.2
EN 626-2	1996	Safety of machinery - Reduction of risk to health from hazardous substances emitted by machinery - Part 2: Methodology leading to verification procedures	C 183 of 13.06.98, p.2
EN 627	1995	Specification for data logging and monitoring of lifts, escalators and passenger conveyors	C 183 of 13.06.98, p.2
EN 632	1995	Agricultural machinery - Combine harvesters and forage harvesters - Safety	C 183 of 13.06.98, p.2
EN 690	1994	Agricultural machinery - Manure spreaders - Safety	C 183 of 13.06.98, p.2
EN 692	1996	Mechanical presses - Safety	C 183 of 13.06.98, p.2
This publication does not concern presses with full-revolution clutches referred to in standard EN 692, in paragraphs 5.2.3, 5.3.2, 5.4.6 and 5.5.2, tables 2, 3, 4 and 5 and Annexes A and B1, in respect of which it grants no presumption of conformity to the provisions of Directive 89/392/EEC.			
EN 703	1995	Agricultural machinery - Silage cutters - Safety	C 183 of 13.06.98, p.2
EN 706	1996	Agricultural machinery - Vine shoot tipping machines - Safety	C 183 of 13.06.98, p.2
EN 708	1996	Agricultural machinery - Soil working machines with powered tools - Safety	C 183 of 13.06.98, p.2
EN 709	1997	Agricultural and forestry machinery - Pedestrian controlled tractors with mounted rotary cultivators, motor hoes and motor hoes with drive wheels - Safety	C 183 of 13.06.98, p.2
EN 710	1997	Safety requirements for foundry moulding and coremaking machinery and plants and associated equipment	C 183 of 13.06.98, p.2
EN 746-1	1997	Industrial thermoprocessing equipment - Part 1: Common safety requirements for industrial thermoprocessing equipment	C 183 of 13.06.98, p.2
EN 746-2	1997	Industrial thermoprocessing equipment - Part 2: Safety requirements for combustion and fuel handling systems	C 183 of 13.06.98, p.2
EN 746-3	1997	Industrial thermoprocessing equipment - Part 3: Safety requirements for the generation and use of atmospheres gases	C 183 of 13.06.98, p.2
EN 774	1996	Garden equipment - Hand held, integrally powered hedge trimmers - Safety	C 183 of 13.06.98, p.2
EN 774/A1	1997	Garden equipment - Hand held, integrally powered hedge trimmers - Safety	C 183 of 13.06.98, p.2
EN 774/A2	1997	Garden equipment - Hand held, integrally powered hedge trimmers - Safety	C 183 of 13.06.98, p.2

EN 775	1992	Manipulating industrial robots - Safety (ISO 10218:1992, modified)	C 183 of 13.06.98, p.2
EN 786	1996	Garden equipment - Electrically powered walk-behind and lawn edge trimmers - Mechanical safety	C 183 of 13.06.98, p.2
EN 791	1995	Drill rigs - Safety	C 183 of 13.06.98, p.2
EN 809	1998	Pumps and pump units for liquids - Common safety requirements	C 317 of 15.10.98, p.5
EN 811	1996	Safety of machinery - Safety distances to prevent danger zones being reached by the lower limbs	C 183 of 13.06.98, p.2
EN 815	1996	Safety of unshielded tunnel boring machines and rodless shaft boring machines for rock	C 183 of 13.06.98, p.2
EN 818-1	1996	Short link chain for lifting purposes - Safety - Part 1: General conditions of acceptance	C 183 of 13.06.98, p.2
EN 818-2	1996	Short link chain for lifting purposes - Safety - Part 2: Medium tolerance chain for chain slings - Grade 8	C 183 of 13.06.98, p.2
EN 818-4	1996	Short link chain for lifting purposes - Safety - Part 4: Chain slings - Grade 8	C 183 of 13.06.98, p.2
EN 836	1997	Garden equipment - Powered lawnmowers - Safety	C 183 of 13.06.98, p.2
EN 836/A1	1997	Garden equipment - Powered lawnmowers - Safety	C 183 of 13.06.98, p.2
EN 842	1996	Safety of machinery - Visual danger signals - General requirements, design and testing	C 183 of 13.06.98, p.2
EN 848-1	1998	Safety of woodworking machines - One side moulding machines with rotating tool - Part 1: Single spindle vertical moulding machines	C 317 of 15.10.98, p.5
EN 848-2	1998	Safety of woodworking machines - One side moulding machines with rotating tool - Part 2: Single spindle handfed/integrated fed routing machines	C 317 of 15.10.98, p.5
EN 859	1997	Safety of woodworking machines - Hand-fed surface planing machines	C 183 of 13.06.98, p.2
EN 860	1997	Safety of woodworking machines - One side thickness planing machines	C 183 of 13.06.98, p.2
EN 861	1997	Safety of woodworking machines - Surface planing and thicknessing machines	C 183 of 13.06.98, p.2
EN 869	1997	Safety requirements for high pressure metal diecasting units	C 183 of 13.06.98, p.2
EN 894-1	1997	Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 1: General principles for human interactions with display and control actuators	C 183 of 13.06.98, p.2

EN 894-2	1997	Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 2: Displays	C 183 of 13.06.98, p.2
EN 907	1997	Agricultural and forestry machinery - Sprayers and liquid fertilizer distributors	C 183 of 13.06.98, p.2
EN 930	1997	Footwear, leather and imitation leather goods manufacturing machines - Roughing, scouring, polishing and trimming machines - Safety requirements	C 183 of 13.06.98, p.2
EN 931	1997	Footwear manufacturing machines - Lasting machines - Safety requirements	C 183 of 13.06.98, p.2
EN 940	1997	Woodworking machines - Safety - Combined woodworking machines	C 183 of 13.06.98, p.2
EN 953	1997	Safety of machinery - General requirements for the design and construction of guards (fixed, movable)	C 183 of 13.06.98, p.2
EN 954-1	1996	Safety of machinery - Safety related parts of control systems - Part 1: General principles for design	C 183 of 13.06.98, p.2
EN 972	1998	Tannery machines - Reciprocating roller machines - Safety requirements	C 317 of 15.10.98, p.5
EN 981	1996	Safety of machinery - System of auditory and visual danger and information signals	C 183 of 13.06.98, p.2
EN 982	1996	Safety of machinery - Safety requirements for fluid power systems and their components - Hydraulics	C 183 of 13.06.98, p.2
EN 983	1996	Safety of machinery - Safety requirements for fluid power systems and their components - Pneumatics	C 183 of 13.06.98, p.2
EN 996	1995	Piling equipment - Safety requirements	C 183 of 13.06.98, p.2
EN 1012-1	1996	Compressors and vacuum pumps - Safety requirements - Part 1: Compressors	C 183 of 13.06.98, p.2
EN 1012-2	1996	Compressors and vacuum pumps - Safety requirements - Part 2: Vacuum pumps	C 183 of 13.06.98, p.2
EN 1032	1996	Mechanical vibration - Testing of mobile machinery in order to determine the whole-body vibration emission value - General	C 183 of 13.06.98, p.2
EN 1033	1995	Hand-arm vibration - Laboratory measurement of vibration at the grip surface of hand-guided machinery - General	C 183 of 13.06.98, p.2
EN 1037	1995	Safety of machinery - Prevention of unexpected start-up	C 183 of 13.06.98, p.2
EN 1050	1996	Safety of machinery - Principles for risk assessment	C 183 of 13.06.98, p.2
EN 1088	1995	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection	C 183 of 13.06.98, p.2
En 1093-1	1998	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods	C 346 of 14.11.98, p.5

EN 1093-3	1996	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 3: Emission rate of a specified pollutant - Bench test method using the real pollutant	C 183 of 13.06.98, p.2
EN 1093-4	1996	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 4: Capture efficiency of an exhaust system - Tracer method	C 183 of 13.06.98, p.2
En 1093-6	1998	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 6: Measurement of the separation efficiency by mass, unducted outlet	C 346 of 14.11.98, p.5
En 1093-7	1998	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 7: Measurement of the separation efficiency by mass, ducted outlet	C 346 of 14.11.98, p.5
En 1093-8	1998	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 8: Pollutant concentration parameter, test bench method	C 346 of 14.11.98, p.5
En 1093-9	1998	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 9: Pollutant concentration parameter, room method	C 346 of 14.11.98, p.5
EN 1114-1	1996	Rubber and plastics machines - Extruders and extrusion lines - Part 1: Safety requirement for extruders	C 183 of 13.06.98, p.2
EN 1114-2	1998	Rubber and plastics machines - Extruders and extrusion lines - Part 2: Safety requirement for die face pelletisers	C 317 of 15.10.98, p.5
EN 1127-1	1997	Explosive atmospheres - Explosion prevention and protection - Part 1 : Basic concepts and methodology	C 183 of 13.06.98, p.2
EN 1152	1994	Tractors and machinery for agriculture and forestry - Guards for power take-off (PTO) drive shafts - Wear and strength tests	C 183 of 13.06.98, p.2
EN 1175-1	1998	Safety of industrial trucks - Electrical requirements for trucks - Part 1 : General requirements for battery powered trucks	C 317 of 15.10.98, p.5
EN 1175-2	1998	Safety of industrial trucks - Electrical requirements for trucks - Part 2 : General requirement for IC engine powered trucks	C 183 of 13.06.98, p.2
EN 1175-3	1998	Safety of industrial trucks - Electrical requirements for trucks - Part 3 : Specific requirements for the electrical power transmission systems of IC engine powered trucks	C 317 of 15.10.98, p.5
EN 1299	1997	Mechanical vibration and shock - Vibration isolation of machines - Information for the application of source isolation	C 183 of 13.06.98, p.2
EN 1398	1997	Dock levellers	C 183 of 13.06.98, p.2

EN 1417	1996	Rubber and plastics machines - Two roll mills - Safety requirements	C 183 of 13.06.98, p.2
EN 1454	1997	Portable, hand-held, internal combustion cutting-off machines - Safety	C 183 of 13.06.98, p.2
EN 1495	1997	Lifting platforms - Mast climbing work platforms	C 183 of 13.06.98, p.2
EN 1501-1	1998	Refuse collection vehicle and their associated lifting devices - General requirements and safety requirements - Part 1 : Rear-end loaded refuse collection vehicle	C 317 of 15.10.98, p.5
En 1525	1997	Safety of industrial trucks - Driverless industrial trucks and their systems	C 183 of 13.06.98, p.2
EN 1526	1997	Safety of machinery - Additional requirements for automated functions on trucks	C 183 of 13.06.98, p.2
EN 1550	1997	Machine-tools safety - Safety requirements for the design and construction of work holding chucks	C 183 of 13.06.98, p.2
EN 1570	1998	Safety requirements for lifting tables	C 317 of 15.10.98, p.5
EN 1612-1	1997	Rubber and plastics machines - Reaction moulding machines - Part 1: Safety requirements for metering and mixing unit	C 183 of 13.06.98, p.2
EN 1672-2	1997	Food processing machinery - Basic concepts - Part 2: Hygiene requirements	C 183 of 13.06.98, p.2
EN 1678	1998	Food processing machinery - Vegetable cutting machines - Safety and hygiene requirements	C 317 of 15.10.98, p.5
EN 1679-1	1998	Safety of industrial trucks - Electrical requirements for trucks - Part 3 : Specific requirements for the electrical power transmission systems of IC engine powered trucks	C 183 of 13.06.98, p.2
EN 1760-1	1997	Safety of machinery - Pressure sensitive protective devices - Part 1: General principles for the design and testing of pressure sensitive mats and pressure sensitive floors	C 183 of 13.06.98, p.2
EN 1953	1998	Atomising and spraying equipment for coating materials - Safety requirements	C 346 of 14.11.98, p.5
EN 1974	1998	Food processing machinery - Slicing machines - Safety and hygiene requirements	C 317 of 15.10.98, p.5
EN ISO 2867	1998	Earth-moving machinery - Access systems (ISO 2867:1994)	C 346 of 14.11.98, p.5
EN ISO 3450	1996	Earth-moving machinery - Braking systems of rubber-tyred machines - Systems and performance requirements and test procedures (ISO 3450:1996)	C 183 of 13.06.98, p.2
EN ISO 3457	1995	Earth-moving machinery - Guards and shields - Definitions and specifications (ISO 3457:1986)	C 183 of 13.06.98, p.2

EN ISO 3743-1	1995	Acoustics - Determination of sound power levels of noise sources - Engineering methods for small, movable sources in reverberant fields - Part 1: Comparison method for hard-walled test rooms (ISO 3743-1:1994)	C 183 of 13.06.98, p.2
EN ISO 3743-2	1996	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering methods for small, movable sources in reverberant fields - Part 2: Methods for special reverberation test rooms (ISO 3743-2:1994)	C 183 of 13.06.98, p.2
EN ISO 3744	1995	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering method in an essentially free field over a reflecting plane (ISO 3744:1994)	C 183 of 13.06.98, p.2
EN ISO 3746	1995	Acoustics - Determination of sound power levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:1995)	C 183 of 13.06.98, p.2
EN ISO 3767-1	1995	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 1: Common symbols (ISO 3767-1:1991)	C 183 of 13.06.98, p.2
EN ISO 3767-2	1995	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 2: Symbols for agricultural tractors and machinery (ISO 3767-2:1991)	C 183 of 13.06.98, p.2
EN ISO 3767-3	1996	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 3: Symbols for powered lawn and garden equiment (ISO 3767-3:1988)	C 183 of 13.06.98, p.2
EN ISO 3767-4	1995	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 4: Symbols for forestry machinery (ISO 3767-4:1993)	C 183 of 13.06.98, p.2
EN ISO 3767-5	1995	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 5: Symbols for manual portable forestry machinery (ISO 3767-5:1992)	C 183 of 13.06.98, p.2
EN ISO 4871	1996	Acoustics - Declaration and verification of noise emission values of machinery and equipment (ISO/DIS 4871:1996)	C 183 of 13.06.98, p.2
EN ISO 6682	1995	Earth-moving machinery - Zones of comfort and reach for controls (ISO 6682:1986 including Amendment 1:1989)	C 183 of 13.06.98, p.2

EN ISO 7235	1995	Acoustics - Measurement procedures for ducted silencers - Insertion loss, flow noise and total pressure loss (ISO 7235:1991)	C 183 of 13.06.98, p.2
EN ISO 7250	1997	Basic human body measurements for technological design (ISO 7250:1996)	C 183 of 13.06.98, p.2
EN ISO 8230	1997	Safety requirements for dry-cleaning machines using perchloroethylene (ISO/DIS 8230:1997)	C 183 of 13.06.98, p.2
EN ISO 8662-4	1995	Hand-held portable power tools - Measurement of vibrations at the handle - Part 4: Grinders (ISO 8662-4:1994)	C 183 of 13.06.98, p.2
EN ISO 8662-6	1995	Hand-held portable power tools - Measurement of vibrations at the handle - Part 6: Impact drills (ISO 8662-6:1994)	C 183 of 13.06.98, p.2
EN ISO 8662-7	1997	Hand-held portable power tools - Measurement of vibrations at the handle - Part 7: Wrenches, screwdrivers and nut runners with impact, impulse or rutchet action (ISO/DIS 8662-7:1997)	C 183 of 13.06.98, p.2
EN ISO 8662-8	1997	Hand-held portable power tools - Measurement of vibrations at the handle - Part 8: Polishers and rotary, orbital and random orbital sanders (ISO/DIS 8662-8:1997)	C 183 of 13.06.98, p.2
EN ISO 8662-9	1996	Hand-held portable power tools - Measurement of vibrations at the handle - Part 9: Rammers (ISO/DIS 8662-9:1996)	C 183 of 13.06.98, p.2
EN ISO 8662-12	1997	Hand-held portable power tools - Measurement of vibrations at the handle - Part 12: Saws and files with oscillating, reciprocating or rotating action (ISO/DIS 8662-12:1997)	C 183 of 13.06.98, p.2
EN ISO 8662-13	1997	Hand-held portable power tools - Measurement of vibrations at the handle - Part 13: Die grinders (ISO/DIS 8662-13:1997)	C 183 of 13.06.98, p.2
EN ISO 8662-14	1996	Hand-held portable power tools - Measurement of vibration at the handle - Part 14: Stone working tools and needle scalers (ISO/DIS 8662-14:1996)	C 183 of 13.06.98, p.2
EN ISO 9614-1	1995	Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurements at discrete points (ISO 9614-1:1993)	C 183 of 13.06.98, p.2
EN ISO 10472-1	1997	Safety requirements for industrial laundry machinery - Part 1 : Common requirements (ISO/FDIS 10472-1:1997)	C 183 of 13.06.98, p.2
EN ISO 10472-2	1997	Safety requirements for industrial laundry machinery - Part 2 : Washing machines and washers extractors (ISO/FDIS 10472-2:1997)	C 183 of 13.06.98, p.2
EN ISO 10472-3	1997	Safety requirements for industrial laundry machinery - Part 3 : Washing tunnel lines including component machines (ISO/FDIS 10472-3:1997)	C 183 of 13.06.98, p.2
EN ISO 10472-4	1997	Safety requirements for industrial laundry machinery - Part 4 : Air dryers (ISO/FDIS 10472-4:1997)	C 183 of 13.06.98, p.2

EN ISO 10472-5	1997	Safety requirements for industrial laundry machinery - Part 5 : Flatwork ironers, feeders and folders (ISO/FDIS 10472-5:1997)	C 183 of 13.06.98, p.2
EN ISO 10472-6	1997	Safety requirements for industrial laundry machinery - Part 6 : Ironing and fusing presses (ISO/FDIS 10472-6:1997)	C 183 of 13.06.98, p.2
EN ISO 11102-1	1997	Reciprocating internal combustion engines - Handle starting equipment - Part 1: Safety requirements and tests (ISO/DIS 11102-1:1997)	C 183 of 13.06.98, p.2
EN ISO 11102-2	1997	Reciprocating internal combustion engines - Handle starting equipment - Part 2: Method of testing the angle of disengagement (ISO/DIS 11101-2:1997)	C 183 of 13.06.98, p.2
EN ISO 11111	1995	Safety requirements for textile machinery (ISO 11111:1995)	C 183 of 13.06.98, p.2
EN ISO 11145	1994	Optics and optical instruments - Lasers and laser related equipment - Vocabulary and symbols (ISO 11145:1994)	C 183 of 13.06.98, p.2
EN ISO 11200	1995	Acoustics - Noise emitted by machinery and equipment - Guidelines for the use of basic standards for the determination of emission sound pressure levels at a work station and other specified positions (ISO 11200:1995)	C 183 of 13.06.98, p.2
EN ISO 11201	1995	Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at a work station and at other specified positions - Engineering method in an essentially free field over a reflecting plane (ISO 11201:1995)	C 183 of 13.06.98, p.2
EN ISO 11202	1995	Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at a work station and at other specified positions - Survey method in situ (ISO 11202:1995)	C 183 of 13.06.98, p.2
EN ISO 11203	1995	Acoustics - Noise emitted by machinery and equipment - Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level (ISO 11203:1995)	C 183 of 13.06.98, p.2
EN ISO 11204	1995	Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at a work station and at other specified positions - Method requiring environmental corrections (ISO 11204:1995)	C 183 of 13.06.98, p.2
EN ISO 11546-1	1995	Acoustics - Determination of sound insulation performances of enclosures - Part 1: Measurements under laboratory conditions (for declaration purposes) (ISO 11546-1:1995)	C 183 of 13.06.98, p.2

EN ISO 11546-2	1995	Acoustics - Determination of sound insulation performances of enclosures - Part 2: Measurements in situ (for acceptance and verification purposes) (ISO 11546-2:1995)	C 183 of 13.06.98, p.2
EN 11681-2	1998	Machinery for forestry - Portable chain-saws - Safety requirement and testing - Part 2 : Chain-saws for tree service	C 317 of 15.10.98, p.5
EN 11688-1	1998	Acoustics - Recommended practice for the design of low-noise machinery and equipment - Part 1 : Planning (ISO/TR 11688-1:1995)	C 317 of 15.10.98, p.5
EN ISO 11691	1995	Acoustics - Measurement of insertion loss of ducted silencers without flow - Laboratory survey method (ISO 11691:1995)	C 183 of 13.06.98, p.2
EN ISO 11806	1997	Agricultural and forestry machinery - Portable hand-held combustion engine driven brush cutters and grass trimmers - Safety requirements	C 183 of 13.06.98, p.2
EN ISO 11957	1996	Acoustics - Determination of sound insulation performance of cabins - Laboraty and in situ measurements (ISO 11957:1996)	C 183 of 13.06.98, p.2
EN ISO 12001	1996	Acoustics - Noise emitted by machinery and equipment - Rules for the drafting and presentation of a noise test code (ISO 12001)	C 183 of 13.06.98, p.2
EN 12626	1997	Safety of machinery - Laser processing machines - Safety requirements (ISO 11533:1996 modified)	C 183 of 13.06.98, p.2
EN 12643	1997	Earth-moving machinery - Rubber-tyred machines - Steering requirements (ISO 5010:1992 modified)	C 183 of 13.06.98, p.2
EN ISO 13753	1998	Mechanical vibration and shock - Hand-arm vibration - Method for measuring the vibration transmissibility of resilient materials when loaded by the hand-arm system (ISO 13753:1998)	C 317 of 15.10.98, p.5
EN ISO 14982	1998	Agricultural and forestry machines - Electromagnetic compatibility - Test methods and acceptance criteria (ISO/FDIS 14982:1998)	C 317 of 15.10.98, p.5
EN 23741	1991	Acoustics - Determination of sound power levels of noise sources - Precision methods for broad-band sources in reverberation rooms (ISO 3741:1988)	C 183 of 13.06.98, p.2
EN 23742	1991	Acoustics - Determination of sound power levels of noise sources - Precision method for discrete-frequency and narrow-band sources in reverberation rooms (ISO 3742:1988)	C 183 of 13.06.98, p.2
EN 25136	1993	Acoustics - Determination of sound power radiated into a duct by fans - In-duct method (ISO 5136:1990 and Technical Corrigendum 1:1993)	C 183 of 13.06.98, p.2
EN 28662-1	1992	Hand-held portable power tools - Measurement of vibrations at the handle - Part 1: General (ISO 8662-1:1988)	C 183 of 13.06.98, p.2

EN 28662-2	1994	Hand-held portable power tools - Measurement of vibrations at the handle - Part 2: Chipping hammers and riveting hammers (ISO 8662-2:1992)	C 183 of 13.06.98, p.2
EN 28662-2/A1	1995	Hand-held portable tools - Measurement of vibrations at the handle - Part 2: Chipping hammers and riveting hammers (ISO 8662-2:1992)	C 183 of 13.06.98, p.2
EN 28662-3	1994	Hand-held portable power tools - Measurement of vibrations at the handle - Part 3: Rock drills and rotary hammers (ISO 8662-3:1992)	C 183 of 13.06.98, p.2
EN 28662-3/A1	1995	Hand-held portable power tools - Measurement of vibrations at the handle - Part 3: Rock drills and rotary hammers (ISO 8662-3:1992)	C 183 of 13.06.98, p.2
EN 28662-5	1994	Hand-held portable power tools - Measurement of vibrations at the handle - Part 5: Pavement breakers and hammers for construction work (ISO 8662-5:1992)	C 183 of 13.06.98, p.2
EN 28662-5/A1	1995	Hand-held portable power tools - Measurement of vibrations at the handle - Part 5: Pavement breakers and hammers for construction work (ISO 8662-5:1992)	C 183 of 13.06.98, p.2
EN 30326-1	1994	Mechanical vibration - Laboratory method for evaluating vehicle seat vibration - Part 1: Basic requirements (ISO 10326-1:1992)	C 183 of 13.06.98, p.2
EN 31252	1994	Lasers and laser-related equipment - Laser device - Minimum requirements for documentation (ISO 11252:1993)	C 183 of 13.06.98, p.2
EN 31253	1994	Laser and laser-related equipment - Laser device - Mechanical interfaces (ISO 11253:1993)	C 183 of 13.06.98, p.2
EN 60204-1	1992	Safety of machinery - Electrical equipment of machines - Part 1 : General requirements	C 183 of 13.06.98, p.2

2.2. EUROPEAN STANDARDS RELATING TO THE MACHINERY DIRECTIVE BUT NOT (YET) PUBLISHED

This list provides information on standards ratified by the European Standardisation Bodies but not yet published in the Official Journal of the European Communities (OJEC), either because the Commission has not received all the elements for publication, or because the standards cannot be published [Test standards (ENV), Technical reports (CR), ISO or CEI standards, standards not providing presumption of conformity to essential requirements (ex.: EN 45000 series)].

We would like to draw your attention to the fact that the use of the following indicated standards does not provide a presumption of conformity: these standards may be used as guidance by manufacturers.

REFERENCE	YEAR OF RATIFICATION	TITLE
EN ISO 389-7	1997	Acoustics - Reference zero for the calibration of audiometric equipment - Part 7 : reference threshold of hearing under free-field and diffuse-field listening conditions (ISO 389-7:1996)
En 441-5	1998	Refrigerated display cabinets - Part 5 : Temperature test
ENV 500-6	1995	Mobile road construction machinery - Safety - Part 6: Specific requirements for paver-finishers
EN 733	1995	End-suction centrifugal pumps, rating with 10 bar with bearing bracket - Nominal duty point, main dimensions, designation system
EN 734	1955	Side channel pumps PN 40 - Nominal duty point, main dimensions, designation system
EN 735	1995	Overall dimensions of rotodynamic pumps - Tolerances
EN 873	1996	Light conveyor belts - Principal characteristics and applications
EN 999	1998	Safety of machinery - The positioning of protective equipment in respect of approach speeds of parts of the human body
CR 1030-1	1993	Hand-arm vibration - Guidelines for vibration hazards reduction - Part 1: Engineering methods by design of machinery
EN 1032/A1	1998	Mechanical vibration - Testing of mobile machinery in order to determine the whole-body vibration emission value - General
ENV 1070	1993	Safety of machinery - Terminology
EN 1083-2	1997	Power-driven brushes - Part 2 : Safety requirements
EN 1493	1998	Vehicle lifts
EN 1726-1	1998	Safety of industrial trucks - Self-propelled trucks up to and including 10 000 kg capacity and industrial tractors with a drawbar pull up to and including 20 000 N - Part 1 : General requirements
EN 1845	1998	Footwear manufacturing machines - Footwear moulding machines - Safety requirements
EN 1846-1	1997	Firefighting and rescue service vehicles - Part 1 : Nomenclature and designation
ISO 3266	1984	Eyebolts for general lifting purposes
EN ISO 5353	1998	Earth-moving machinery, tractors and machinery for ariculture and forestry - Seat index point (ISO5353:1995)
ISO 7000	1989	Graphical symbols for use on equipment - Index and synopsis
EN ISO 8253-2	1998	Acoustics - Audiometric test methods - Part 2 : Sound field audiometry with pure tone and narrow-band test signals (ISO 8253:1992)
EN ISO 8253-3	1998	Acoustics - Audiometric test methods - Part 3 : Speech audiometry (ISO 8253-3:1996)

EN ISO 8662-10	1998	Hand-held portable power tools - Measurement of vibrations at the handle - Part 10: Nibblers and shears (ISO/DIS 8662-10:1995)
EN ISO 9283	1998	Manipulating industrial robots - Performance criteria and related test methods (ISO 9283:1998)
EN ISO 11200/A1	1997	Acoustics - Noise emitted by machinery and equipment - Guidelines for the use of basic standards for the determination of emission sound pressure levels at a work station and other specified positions (ISO 11200:1995)
EN ISO 11201/A1	1997	Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at a work station and at other specified positions - Engineering method in an essentially free field over a reflecting plane (ISO 11201:1995)
EN ISO 11202/A1	1997	Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at a work station and at other specified positions - Survey method in situ (ISO 11202:1995)
EN ISO 11204/A1	1997	Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at a work station and at other specified positions - Method requiring environmental corrections (ISO 11204:1995)
EN ISO 11689	1996	Acoustics - Procedure for the comparison of noise emission data for machinery and equipment (ISO/DIS 11689:1993)
EN 11690-3	1998	Acoustics - Recommended practice for the design of low-noise workplaces containing machinery - Part 3 : Sound propagation and noise prediction in workrooms
EN ISO 11820	1996	Acoustics - Measurements on silencers in situ (ISO/DIS 11820:1996)
EN 12096	1997	Mechanical vibration - Declaration and verification of vibration emission values
EN 12077-2	1998	Cranes safety - Requirements for health and safety - Part 2: Limiting and indicating devices
EN 13090-1	1998	Mechanical vibration and shock - Guidance on safety aspects of tests and experiments with people - Part 1: Exposure to mechanical vibration and repeated shock (ISO 13090-1:1998)
EN 22860	1985	Earth-moving machinery - Minimum access dimensions (ISO 2860:1983, ed. 3) incorporating an agreed common modification
EN 23164	1985	Earth-moving machinery - Laboratory evaluations of roll-over and falling-object protective structures - Specifications for the deflection-limiting volume (ISO 3164:1979, ed. 2 + A1:1980)
EN 23661	1993	End-suction centrifugal pumps - Baseplate and installation dimensions (ISO 3661:1977)
EN 25199	1992	Technical specifications for centrifugal pumps - Class II (ISO 5199:1986)

ENV 25349	1992	Mechanical vibration - Guidelines for the measurement and the assessment of human exposure to hand-transmitted vibration (ISO 5349:1986)
EN 27182	1991	Acoustics - Measurement at the operator's position of airborne noise emitted by chain saws (ISO 7182, ed. 1984)
ENV 28041	1992	Human response to vibration - Measuring instrumentation (ISO 8041:1990)
EN 45001	1989	General criteria for the operation of testing laboratories
EN 45002	1989	General criteria for the assessment of testing laboratories
EN 45003	1995	Calibration and testing laboratory accreditation system - General requirements for operation and recognition
EN 45004	1995	General criteria for the operation of various types of bodies performing inspections
EN 45011	1989	General criteria for certification bodies operating product certification
EN 45012	1989	General criteria for certification bodies operating quality system certification
EN 45013	1989	General criteria for certification bodies operating certification of personnel
EN 45014	1989	General criteria for suppliers' declaration of conformity
EN 45020	1991	General terms and their definitions concernig standardization and related activities
EN 50100	1992	Safety of machinery electro-sensitive devices
EN 50144-1	1995	Safety of hand-held motor operated electric tools - Part 1 : General requirements
EN 50144-2-1	1995	Safety of hand-held motor operated electric tools - Part 2-1 : Particular requirements for drills
EN 50144-2-2	1995	Safety of hand-held motor operated electric tools - Part 2-2 : Particular requirements for screw drivers and impact wrenches
EN 50144-2-4	1995	Safety of hand-held motor operated electric tools - Part 2-4 : Particular requirements for sanders
EN 50144-2-5	1996	Safety of hand-held motor operated electric tools - Part 2-5 : Particular requirements for circular saws
EN 50144-2-6	1996	Safety of hand-held motor operated electric tools - Part 2-6 : Particular requirements for hammers
EN 50144-2-7	1996	Safety of hand-held motor operated electric tools - Part 2-7 : Particular requirements for spray guns
EN 50144-2-8	1996	Safety of hand-held motor operated electric tools - Part 2-8 : Particular requirements for nibblers
EN 50144-2-9	1996	Safety of hand-held motor operated electric tools - Part 2-9 : Particular requirements for tappers
EN 50144-2-10	1996	Safety of hand-held motor operated electric tools - Part 2-10 : Particular requirements for jig saws

EN 50144-2-11	1996	Safety of hand-held motor operated electric tools - Part 2-11 : Particular requirements for double blade reciprocating saws
EN 50144-2-14	1996	Safety of hand-held motor operated electric tools - Part 2-14 : Particular requirements for planers
EN 50144-2-15	1997	Safety of hand-held motor operated electric tools - Part 2-15 : Particular requirements for hedge trimmers
EN 61209-1	1995	Safety of transportable motor-operated electric tools - Part 1 : General requirements
EN 61310-1	1995	Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, auditory and tactile signals
EN 61310-2	1995	Safety of machinery - Indication, marking and actuation - Part 2: Requirements for marking
EN 61496-1	1997	Safety of machinery - Electro-sensitive protective equipment - Part 1 : General requirements and tests

2.3. DRAFT EUROPEAN STANDARDS RELATING TO THE MACHINERY DIRECTIVE

This list provides information on draft standards under preparation in the framework of the Machinery Directive. These standards are either at the stage of public enquiry or, if having passed this stage, still have to be formally adopted as EN standards.

We draw your attention to the fact that the above indicated draft standards can be subject to substantial modifications before their adoption. The manufacturers may consider them as general guidelines, bearing in mind that the solutions proposed by these draft standards may be abandoned or refused at a later stage of the adoption procedure.

The recourse to the draft standards should therefore be carried out with extreme caution.

REFERENCE	TITLE	DATE
prEN ISO 252-1	Textile conveyor belt - Adhesive strength between constitutive elements - Part 1 : Method of tests	Aug. 1997
prEN 280	Mobile elevating work platforms - Design calculations, stability criteria, construction - Safety, examinations and tests	Nov. 1994
prEN 292-1	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology	Jul. 1997
prEN 292-2	Safety of machinery - Basic concepts, general principles for design - Part 2: Basic technical provisions	Jul. 1997
prEN 414	Safety of machinery - Rules for the drafting and presentation of safety standards	Jun. 1997
prEN 415-1	Packaging machines safety - Part 1 : Common requirements	Feb. 1995
prEN 415-2	Packaging machines safety - Part 2 : Pre-formed rigid container packaging machines - Specific requirements	Jun. 1998
prEN 415-3	Safety of packaging machines - Part 3: Form, fill and seal machines - Specific requirements	Sep. 1998
prEN 415-4	Packaging machines safety - Part 4: Wrapping machines - Specific requirements	Nov. 1997
prEN 415-6	Packaging machines safety - Part 6: Unit load securing machines - Specific requirements	Nov. 1997
prEN 415-7	Safety of packaging machines - Group and transit pack machines	Mar. 1998
prEN 441-12	Refrigerated display cabinets - Part 12 : Measurement of the heat extraction rate of the cabinets when the condensing unit is remote from the cabinet	Jan. 1997
prEN 441-13	Refrigerated display cabinets - Part 13 : Air temperature measurement	Feb. 1997
prEN 453	Food processing machinery - Dough mixers - Safety and hygiene requirements	Nov. 1994
prEN 454	Food processing machinery - Planetary mixers - Safety and hygiene requirements	Nov. 1994
EN 474-1/prA1	Earth-moving machinery - Safety - Part 1: General requirements	Sep. 1997
prEN 500-8	Mobile Road Construction Machinery	Feb. 1996
prEN ISO 505	Conveyor belts - Method for the determination of the tear propagation resistance of textile conveyor belts (ISO/DIS 505:1994)	Aug. 1997
prEN 525	Non-domestic direct gas-fired forced convection air heaters not exceeding a net heat input of 300 kW	Nov. 1996
prEN 536	Road construction machines - Machines for the production of building materials - Safety requirements	Aug. 1991
EN 563/prA1	Safety of machinery - Temperatures of touchable surfaces - Ergonomics data to establish temperature limit values for hot surfaces	Nov. 1998

prEN ISO 583-1	Conveyor belts - Part 1 : Method for the determination of the total thickness and thickness of covers of textile carcass conveyor belting (ISO/DIS 583-1:1996)	Aug. 1997
prEN 609-1	Agricultural and forestry machinery - Log splitters - Safety - Part 1 : Wedge splitters	Oct. 1998
prEN 609-2	Agricultural and forestry machinery - Log splitters - Safety - Part 2 : Screw splitters	Sep. 1998
prEN 614-2	Safety of machinery - Ergonomic design principles - Part 2 : Interactions between the design of the machinery and work tasks	Dec. 1997
prEN 617	Continuous handling equipment and systems - Equipment for the storage of bulk materials in silos, bunkers, bins and hoppers - Special safety requirements for design, manufacturing, erection and commissioning stages	May 1996
prEN 618	Continuous handling equipment and systems - Equipment for mechanical handling of bulk materials except fixed belt conveyors (including mobile machines) - Special safety requirements for design, manufacturing, erection and commissioning stages	Feb. 1998
prEN 619	Continuous handling equipment and systems - Equipment for mechanical handling of unit loads - Special safety requirements for design, manufacturing, erection and commissioning stages	May 1996
prEN 620	Continuous handling equipment and systems - Safety requirements for fixed belt conveyors for bulk material	Jun. 1998
prEN 693	Hydraulic presses - Safety	Dec. 1997
prEN 704	Agricultural machinery - Pick-up balers - Safety	Apr. 1998
prEN 707	Agricultural machinery - Slurry tankers - Safety	Nov. 1998
EN 709/prA1	Agricultural and forestry machinery - Pedestrian controlled tractors with mounted rotary cultivators, motor hoes and motor hoes with drive wheels - Safety	Jun. 1998
prEN 741	Continuous handling equipment and systems - Safety requirements for systems and their components for pneumatic handling of bulk materials	Nov. 1998
prEN 745	Agricultural and forestry machinery - Rotary mowers and flail-mowers - Safety	May 1995
prEN 746-4	Industrial thermoprocessing equipment - Part 4: Particular safety requirements for hot dip galvanizing thermoprocessing equipment	Aug. 1994
prEN 746-5	Industrial thermoprocessing equipment - Part 5: Special safety requirements for salt bath thermoprocessing equipment	Aug. 1994
prEN 746-6	Industrial thermoprocessing equipment - Part 6: Particular safety requirements for liquid phase treatment thermoprocessing equipment	Aug. 1994
prEN 746-7	Industrial thermoprocessing equipment - Part 7: Special safety requirements for vacuum thermoprocessing equipment	Jun. 1994
prEN 746-8	Industrial thermoprocessing equipment - Part 8: Particular safety requirements for quenching equipment	Sep. 1994
EN 774/prA3	Garden equipment - Hand held, integrally powered hedge trimmers - Safety	Jun. 1998

EN 786/prA1	Garden equipment - Electrically powered walk-behind and lawn edge trimmers - Mechanical safety - Amendment 1 : Noise and vibration	Jun. 1998
prEN 792-1	Handheld non-electric power tools - Safety requirements - Part 1: Assembly power tools for non-threaded mechanical fasteners	Dec. 1996
prEN 792-2	Handheld non-electric power tools - Safety requirements - Part 2: Cutting-off and crimping power tools	Dec. 1996
prEN 792-3	Hand-held non-electric power tools - Safety requirements - Part 3: Drills and tappers	Dec. 1996
prEN 792-4	Hand-held non-electric power tools - Safety requirements - Part 4: Percussive non-rotary power tools	Dec. 1996
prEN 792-5	Hand-held non-electric power tools - Safety requirements - Part 5: Rotary percussive drills	Dec. 1996
prEN 792-6	Hand-held non-electric power tools - Safety requirements - Part 6: Assembly power tools for threaded fasteners	Dec. 1996
prEN 792-7	Hand-held non-electric power tools - Safety requirements - Part 7: Grinders	Dec. 1996
prEN 792-8	Hand-held non-electric power tools - Safety requirements - Part 8: Polishers and sanders	Dec. 1996
prEN 792-9	Hand-held non-electric power tools - Safety requirements - Part 9: Die grinders	Dec. 1996
prEN 792-10	Hand-held non-electric power tools - Safety requirements - Part 10: Compression power tools	Dec. 1996
prEN 792-11	Hand-held non-electric power tools - Safety requirements - Part 11: Nibblers and shears	Dec. 1996
prEN 792-12	Hand-held non-electric power tools - Safety requirements - Part 12: Small circular, small oscillating and reciprocating saws	Dec. 1996
prEN 792-13	Hand-held non-electric power tools - Safety requirements - Part 13: Fastener driving tools	Jul. 1996
prEN 792-14	Hand-held non-electric power tools - Safety requirements - Part 14: Assembly power tools for non-threaded mechanical fasteners	Jul. 1996
prEN 792-15	Hand-held non-electric power tools - Safety requirements - Part 15: Miscellaneous power tools	Jul. 1996
prEN 808	Conveyor belts - Method for the determination of the transverse flexibility and throughability	Jul. 1992
prEN 809	Pumps and pump units for liquids - General safety requirements	Jul. 1997
prEN 818-3	Short link chain for lifting purposes - Safety - Part 3: Medium tolerance chain for chain slings - Grade 4	Nov. 1997
prEN 818-5	Short link chain for lifting purposes - Safety - Part 5: Chain slings - Grade 4	Nov. 1997
prEN 818-6	Short link chain for lifting purposes - Safety - Part 6: Chains slings - Specification for information for use and maintenance to be provided by the manufacturer	Aug. 1997
prEN 818-7	Short link chain for lifting purposes - Safety - Part 7: Fine tolerance chain for hoists (Types T, DAT and DT)	Dec. 1998

EN 836/prA2	Garden equipment - Powered lawnmowers - Safety - Amendment 2 : Noise and vibration	Apr. 1998
prEN 847-2	Tools for woodworking - Safety requirements - Part 2 : Requirements for the shank of shank mounted miling tools	Aug. 1998
prEN 848-3	Safety of woodworking machines - One side moulding machines with rotating tool - Part 3: NC boring machines and routing machines	Mar. 1996
prEN 894-3	Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 3: Control actuators	Oct. 1992
prEN 908	Agricultural and forestry machinery - Reel machines for irrigation - Safety	Sep. 1998
prEN 909	Agricultural and foresty machinery - Center pivot and moving lateral types irrigation machines - Safety	Jul. 1997
prEN 954-2	Safety of machinery - Safety related parts of control systems - Part 2 : Validation	June 1998
prEN 979	Basic list of definitions of human body dimensions for technical design	Oct. 1995
EN 966/prA1	Piling equipment	May 1998
prEN 1005-1	Safety of machinery - Human physical performance - Part 1: Terms and definitions	1996
prEN 1005-2	Safety of machinery - Human physical performance - Part 2: Manual handling of objects associated to machinery	1996
prEN 1005-3	Safety of machinery - Human physical performance - Part 3: Recommended force limits for machinery operation	1996
prEN 1005-4	Safety of machinery - Human physical performance - Part 4: Evaluation of working postures in relation to machinery	Nov. 1998
prEN 1009-1	Feeding, crushing, milling, sizing and sorting machines for mechanical processing of minerals and similar solid materials - Safety - Part 1 : General	Jul. 1997
prEN 1009-2	Feeding, crushing, milling, sizing and sorting machines for mechanical processing of minerals and similar solid materials - Safety - Part 2 : Feeding machinery	Jul. 1997
prEN 1009-3	Feeding, crushing, milling, sizing and sorting machines for mechanical processing of minerals and similar solid materials - Safety - Part 3 : Crushing and milling machinery	Jul. 1997
prEN 1009-4	Feeding, crushing, milling, sizing and sorting machines for mechanical processing of minerals and similar solid materials - Safety - Part 4 : Sizing and sorting machinery	Jul. 1997
prEN 1010	Safety of machinery - Safety requirements for the design and construction of printing and paper converting machines	Apr. 1994
prEN 1010-1	Safety of machinery - Safety requirements for the design and construction of printing and paper converting machines - Part 1 : Common requirements	Sep. 1996
prEN 1010-2	Safety of machinery - Safety requirements for the design and construction of printing and paper converting machines - Part 2 : Printing and varnishing machines including pre-press machinery	Sep. 1996

prEN 1010-3	Safety of machinery - Safety requirements for the design and construction of printing and paper converting machines - Part 3 : Cutting machines	Sep. 1996
prEN 1010-4	Safety of machinery - Safety requirements for the design and construction of printing and paper converting machines - Part 4 : Bookbinding machines, paper converting and paper finishing machines	Sep. 1996
prEN 1010-5	Safety of machinery - Safety requirements for the design and construction of printing and paper converting machines - Part 5 : Machines for the production of the corrugated board and machines for the conversion of flat and corrugated board	Sep. 1996
prEN 1034	Technical safety requirement for the design and construction of paper making and finishing machines	Jan. 1996
prEN 1034-1	Technical safety requirement for the design and construction of paper making and finishing machines - Part 1 : Common requirements	Dec. 1998
prEN 1034-2	Technical safety requirement for the design and construction of paper making and finishing machines - Part 2 : Barking drums	Jul. 1996
prEN 1034-3	Technical safety requirement for the design and construction of paper making and finishing machines - Part 3 : Winders and slitters, plying machines	Dec. 1998
prEN 1070 rev	Safety of machinery - Terminology	Apr. 1998
prEN 1083-1	Power-driven brushes - Part 1 : Definitions	Oct. 1996
prEN 1093-11	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 11 : Decontamination index	Jul. 1997
prEN 1114-3	Rubber and plastics machines - Extruders and extrusion lines - Part 3: Safety requirement for haul-offs	Sep. 1996
prEN ISO 1120	Conveyor belts - Determination of strength of mechanical fastenings - Static test methods (ISO/DIS 1120:1996)	Aug. 1997
prEN 1218-1	Safety of woodworking machines - Tenoning machines - Part 1: Single end tenoning machines with sliding table	Sep. 1993
prEN 1218-2	Safety of woodworking machines - Tenoning machines - Part 2 : Double end tenoning and/or profiling machines fed by chain or chains	Feb. 1997
prEN 1218-3	Safety of woodworking machines - Tenoning machines - Part 3 : Hand fed machines with sliding table for cutting roof timber frames	Feb. 1997
prEN 1218-4	Safety of woodworking machines - Tenoning machines - Part 4 : Edge banding machines fed by chain(s)	Mar. 1997
prEN 1218-5	Safety of woodworking machines - Tenoning machines - Part 5 : One side profiling machines with fixed table and feed rollers or fed by chain	Mar. 1998
prEN 1247	Foundry machinery - Safety requirements for ladles, pouring equipment, centrifugal casting machines, continuous and semi continuous casting machines	Nov. 1993
prEN 1248	Foundry machinery - Safety requirements for abrasive blasting equipment	Nov. 1993

prEN 1263-1	Safety nets - Part 1 : Common requirements	Oct. 1996
prEN 1263-2	Safety nets - Part 2 : Safety requirements for the erection of safety nets	Sep. 1997
prEN 1265	Noise test code for foundry machines and equipment (grade 2 and 3)	Nov. 1993
prEN 1374	Agricultural machinery - Round silos - Stationary unloaders - Safety	Jul. 1998
prEN 1459	Safety of industrial trucks - Self propelled variable reach trucks	Aug. 1998
prEN 1492-1	Textile slings - Safety - Part 1: Specification for flat woven slings made of man-made fibres, for general purpose use	Oct. 1998
prEN 1492-2	Textile slings - Safety - Part 2: Specification for round slings made of man-made fibres, for general purpose use	Oct. 1998
prEN 1492-4	Textile slings - Safety - Part 4: Lifting slings for general service made from natural and man-made fibre ropes	Dec. 1996
prEN 1494	Mobile or movable jacks and associated lifting equipment	Jun. 1994
prEN 1501-1	Refuse collection vehicles and their associated lifting devices - General requirements and safety requirements - Part 1 : Rear-end loaded refuse collection vehicles	Oct. 1997
prEN 1539	Dryers and ovens in which flammable substances are released from coating materials - Safety requirements	Jul. 1994
prEN 1547	Industrial thermoprocessing equipment - Noise test code for industrial thermoprocessing equipment including its ancillary handling equipment	Aug. 1994
prEN 1551	Safety of industrial trucks - Self-propelled trucks over 10 000 kg capacity	Nov. 1998
prEN 1552	Underground mining machines - Mobile extracting machines at the face - Safety requirements - Shearer loaders, trepanners, jib-type cutters, face opening machines and plough systems	May 1997
prEN 1553	Agricultural machinery - Agricultural self-propelles, mounted, semi-mounted and trailed machines - Common safety requirements	Jul. 1998
prEN 1554	Conveyor belts – Drum friction testing	Jun. 1998
prEN 1612-2	Rubber and plastics machines - Safety - Reaction moulding machines - Requirements for design and construction - Part 2: Reaction moulding plant	Jun. 1995
prEN 1637	Light conveyor belts - Test methods for the measurement of the electrical resistances	Aug. 1998
prEN 1672-1	Food processing machinery - Safety and hygiene requirements - Basic concepts - Part 1: Safety requirements	Dec. 1994
prEN 1673	Food processing machinery - Rotary rack ovens - Safety and hygiene requirements	Nov. 1994
prEN 1674	Food processing machinery - Dough and pastry brakes - Safety and hygiene requirements	Nov. 1994
prEN 1677-1	Components for slings - Safety - Part 1: Forged steel components, Grade 8	Jul. 1997
prEN 1677-2	Components for slings - Safety - Part 2: Forged steel lifting hooks with latch, Grade 8	Jul. 1997

prEN 1677-3	Components for slings - Safety - Part 2: Forged steel self-locking hooks - Grade 8	Jul. 1997
prEN 1677-4	Components for slings - Safety - Part 4: Links, Grade 8	Jul. 1997
prEN 1677-5	Components for slings - Safety - Part 5: Forged steel lifting hooks with latch - Grade 4	Jul. 1997
prEN 1677-6	Components for slings - Safety - Part 6: Links, Grade 4	Jul. 1997
prEN 1709	Safety requirements for cableways for passengers transport. Precommission inspection, maintenance and operational tests	Nov. 1994
prEN 1710	Machines for underground mines - Additional requirements for machines not primarily designed for areas susceptible to firedamp - Safety	Nov. 1994
prEN 1718	Light conveyor belts - Test method for the measurement of the electrostatic field generated by a running light conveyor belt	Jun. 1998
prEN 1722	Light conveyor belts - Determination of the maximum tensile strength	Aug. 1998
prEN 1723	Light conveyor belts - Determination of the relaxed elastic modules	Aug. 1998
prEN 1724	Light conveyor belts - Determination of the coefficient of friction	Jul. 1998
prEN 1726-2	Safety of industrial trucks - Self-propelled trucks up to and including 10 000 kg capacity and tractors with a drawbar pull up to and including 20 000 N - Part 2: Additional requirements for trucks with elevating operator position and trucks specifically	Jul. 1995
prEN 1755	Safety of machinery - Industrial trucks - Operation in potentially explosive atmospheres - Use in flammable gas, vapour, mist and dust	Dec. 1994
prEN 1756-1	Tail lifts - Platform lifts for mounting on wheeled vehicles - Safety requirements - Part 1: Tail lifts for goods	Dec. 1994
prEN 1756-2	Tail lifts - Platform lifts for mounting on wheeled vehicles - Safety requirements - Part 2 : Tail lifts for passengers	Aug. 1997
prEN 1757-1	Safety of machinery - Industrial trucks - Pedestrian controlled manual and semi manual trucks - Part 1: Stacker trucks	Dec. 1994
prEN 1757-2	Safety of machinery - Industrial trucks - Pedestrian controlled manual and semi manual trucks - Part 2: Pallet trucks with lift height up to 300 mm	Dec. 1994
prEN 1757-3	Safety of industrial trucks, pedestrian controlled manual and semi-manual trucks - Part 3 : Platform trucks	Feb. 1997
prEN 1757-4	Safety of industrial trucks, pedestrian controlled manual and semi-manual trucks - Part 4 : Scissor lift pallet-trucks	Feb. 1997
prEN 1760-2	Safety of machinery - Pressure sensitive protective devices - Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars	Jun. 1998
prEN 1760-3	Safety of machinery - Pressure sensitive protective devices - Part 2: General principles for the design and testing of pressure sensitive bumpers for vehicles	Sep. 1996
prEN 1777	Hydraulic platforms (HPs) for fire services - Safety requirements and testing	Dec. 1994

prEN 1804-1	Machines for underground mines - Safety requirements for hydraulic powered roof supports - Part 1: Support units	Jan. 1995
prEN 1804-2	Machines for underground mines - Safety requirements for hydraulic powered roof supports - Part 2: Powered set legs and rams	Dec. 1995
prEN 1807	Safety of woodworking machines - Bandsawing machines	Jan. 1995
prEN 1808	Safety requirements on suspended access equipment - Design, calculations, stability criteria, construction - Tests	Nov. 1998
prEN 1829	High pressure cleaners - High pressure water jet machines - Safety requirements	Feb. 1995
prEN 1834-1	Reciprocating internal combustion engines - Safety requirements for design and construction of engines for use in potentially explosive atmospheres - Part 1: Group II engines for use in flammable gas and vapour atmospheres	Sep. 1996
prEN 1834-2	Reciprocating internal combustion engines - Safety requirements for design and construction of engines for use in potentially explosive atmospheres - Part 2: Group II engines for use in underground workings susceptible to firedamp and/or combustible dust	Sep. 1996
prEN 1834-3	Reciprocating internal combustion engines - Safety requirements for design and construction of engines for use in potentially explosive atmospheres - Part 3: Group II engines for use in flammable dust atmospheres	Sep. 1996
prEN 1837	Safety of machinery - Integral lighting of machines	Oct. 1998
prEN 1846-2	Firefighting and rescue service vehicles - Part 2 : Common requirements - Safety performance	May 1997
prEN 1853	Agricultural machinery - Trailers with tipping body - Safety	Nov. 1998
prEN 1870-1	Safety of woodworking machines - Circular sawing machines - Part 1: Circular saw benches (with and without travelling table) and dimension saws	Aug. 1998
prEN 1870-2	Safety of woodworking machines - Circular sawing machines - Part 2: Horizontal beam panel saws and vertical panel saws	Sep. 1998
prEN 1870-3	Safety of woodworking machines - Circular sawing machines - Part 3: Down cutting cross-cut saws and dual purpose down cutting/circular saw benches	Jun. 1996
prEN 1870-4	Safety of woodworking machines - Circular sawing machines - Part 4: Single and multi-blade rip sawing machines with manual loading and/or unloading	Aug. 1997
prEN 1870-5	Safety of woodworking machines - Circular sawing machines - Part 5: Combined circular sawbench/up cutting cross cut saw	Jul. 1996
prEN 1870-6	Safety of woodworking machines - Circular sawing machines - Part 6 : Firewood sawing machine/circular saw bench with manual loading and/or unloading	Jan. 1997
prEN 1870-7	Safety of woodworking machines - Circular sawing machines - Part 7: Single blade circular log sawing machine with integrated feeding table and manual loading and/or unloading	Aug. 1997

prEN 1870-8	Safety of woodworking machines - Circular sawing machines - Part 8: Edging circular up saws with power driven saw unit	Jun. 1996
prEN 1870-9	Safety of woodworking machines - Circular sawing machines - Part 9: Down cutting twin blade cross cut sawing machines	May 1996
prEN 1870-10	Safety of woodworking machines - Circular sawing machines - Part 10: Single blade up cutting cross cut sawing machines	Jun. 1996
prEN 1870-11	Safety of woodworking machines - Circular sawing machines - Part 11: Horizontal cutting automatic and semi-automatic cross cut machines	Jun. 1996
prEN 1870-12	Safety of woodworking machines - Circular sawing machines - Part 12: Pendulum cross cut sawing machines	May 1996
prEN 1872	Machines for underground mines - Safety requirements for mining ventilation machinery - Electrically driven fans for underground use	Mar. 1995
prEN 1889-1	Machines for underground mines - Mobile machines working underground - Safety - Part 1: Rubber tyred vehicles	Mar. 1995
prEN 1889-2	Machines for underground mines - Mobile machines working underground - Safety - Part 2: Rail locomotives	Apr. 1995
prEN 1921	Industrial automation systems - Safety of integrated manufacturing systems - Basic requirements (ISO 11161:1994 modified)	Jul. 1995
prEN ISO 2860 rev	Earth-moving machinery - Minimum access dimensions (ISO 2860 : 1992)	Aug. 1998
prEN ISO 3164 rev	Earth-moving machinery - Laboratory evaluations of protective strutures - Specifications for deflection-limiting volume (ISO 3164:1995)	Aug. 1998
prEN ISO 3411 rev	Earth-moving machinery - Human physical dimensions of operators and minimum operator space envelope (ISO 3411:1995)	Aug. 1998
prEN ISO 3471	Earth-moving machinery - Roll-over protective structures - Laboratory test and performance requirements (ISO 3471:1994 + Amendment 1:1997)	Aug. 1998
prEN ISO 3741	Acoustics - Determination of sound power levels of noise source using sound pressure - Precision methods for reverberation room (ISO/DIS 3741:1998)	Jan. 1998
prEN ISO 3767-3	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 3: Symbols for powered lawn and garden equipment (ISO 3767-3:1988)	Feb.96
prEN ISO 6165	Earth-moving machinery - Basic types - Vocabulary (ISO 6165:1997)	Aug. 1998
prEN ISO 6683	Earth-moving machinery - Seat belts and seat belt anchorages (ISO 6683:1981 + Amendment 1:1990)	Aug. 1998
prEN ISO 6826	Reciprocating internal combustion engines - Fire protection (ISO/DIS 6826:1994)	Nov. 1994
prEN ISO 8662-11	Hand-held portable power tools - Measurement of vibrations at the handle - Part 11: Fastener driving tools (nailers) (ISO/DIS 8662-11:1996)	Jul. 1996

ISO/DIS 9386-1	Power-operated lifting platforms for persons with impaired mobility - Rules for safety, dimensions and functional operation - Part 1 : Vertical lifting platforms	Oct. 1997
ISO/DIS 9386-2	Power-operated lifting platforms for persons with impaired mobility - Rules for safety, dimensions and functional operation - Part 2 : Powered stairlifts for seated, standing and whellchairs users moving in an inclined plane	Oct. 1997
ISO/CD 9902-1	Textile machinery - Determination of noise emission - Part 1 : Common requirements	Jan. 1998
ISO/CD 9902-2	Textile machinery - Determination of noise emission - Part 2 : Safety requirements for textile machinery	Jan. 1998
ISO/CD 9902-3	Textile machinery - Determination of noise emission - Part 3 : Nonwoven machines	Jan. 1998
ISO/CD 9902-4	Textile machinery - Determination of noise emission - Part 4 : Yarn processing, cordage and rope manufacturing machines	Jan. 1998
ISO/CD 9902-5	Textile machinery - Determination of noise emission - Part 5 : Preparatory machinery to weaving and knitting	Jan. 1998
ISO/CD 9902-6	Textile machinery - Determination of noise emission - Part 6 : Fabric manufacturing machines	Jan. 1998
ISO/CD 9902-7	Textile machinery - Determination of noise emission - Part 7 : Dyeing and finishing machines	Jan. 1998
prEN ISO 9906	Rotodynamic pumps - Code for hydraulic performance tests for acceptance - Grades 1 and 2 (ISO/DIS 9906:1995)	Jul. 1995
prEN ISO 9908	Technical specification for centrifugal pumps - Class III (ISO 9908:1993)	Jul. 1997
ISO/DIS 10085	Fire-fighting vehicles and equipment - Symbols for operator controls and other displays	Mar. 1996
ISO/DIS 10821	Industrial sewing machines - Safety requirements for sewing machines, units and systems (ISO/DIS 10821:1998)	Jun. 1998
prEN 11064-3	Ergonomic design of control centres - Part 3 : Control room layout (ISO/DIS 11064-3:1997)	Feb. 1997
prEN 11151-1	Laser and laser-related equipment - Standard optical components - Part 1 : Components for the ultraviolet, visible and near-infrared spectral range (ISO/DIS 11151-1:1998)	May 1998
prEN 11151-2	Laser and laser-related equipment - Standard optical components - Part 2 : Components for the infrared spectral range (ISO/DIS 11151-2:1998)	May 1998
prEN ISO 11554	Optics and optical instruments - Lasers and laser related equipment - Test methods for laser beam parameters: Power, energy and temporal characteristics (ISO/DIS 11554:1995)	Apr. 1995
prEN ISO 11555	Optics and optical instruments - Lasers and laser related equipment - Test methods for absorptance of optical laser components (ISO/DIS 11551:1997)	Jan. 1997
prEN 11680-1	Machinery of forestry - Powered pole cutters - Safety requirements and testing - Part 1 : Units fitted with an integral combustion engine (ISO/DIS 11680-1:1997)	Oct. 1997

prEN 11680-2	Machinery of forestry - Powered pole cutters - Safety requirements and testing - Part 2 : Units for use with an independant or back power source (ISO/DIS 11680-2:1997)	Oct. 1997
prEN ISO 11690-1	Acoustics - Recommended practice for the design of low-noise workplaces containing machinery - Part 1 : Noise control strategies (ISO/DIS 11690-1:1996)	Nov. 1996
prEN ISO 11690-2	Acoustics - Recommended practice for the design of low-noise workplaces containing machinery - Part 2 : Noise control measures (ISO/DIS 11690-2:1996)	Nov. 1996
prEN ISO 11821	Acoustics - Measurement of the in situ sound attention of a removable screen (ISO/DIS 11821:1996)	Dec. 1996
ISO/WD 11850	Machinery for forestry - Self-propelled machiner - Safety requirements	Oct. 1998
prEN 12001	Conveying, spraying and distributing machines for concrete and mortar - Safety requirements	Jun. 1995
ISO/CD 12003-1	Narrow-track wheeled agriculture and forestry tractors - Part 1 : Front-mounted roll-over protective structures	Oct. 1996
prEN 12012-1	Rubber and plastics machines - Safety - Size reduction machines - Requirements for the design and construction - Part 1: Blade granulators	Jun. 1995
prEN 12013-1	Rubber and plastics machines - Safety - Internal mixers - Requirements for the design and construction - Part 1: Large internal mixers	Jun. 1995
prEN 12015	Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors - Emission	Jan. 1998
prEN 12016	Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors - Immunity	Jan. 1998
prEN 12041	Food processing machinery - Moulders - Safety and hygiene requirements	Jul. 1995
prEN 12042	Food processing machinery - Automatic dividers - Safety and hygiene requirements	Jul. 1995
prEN 12043	Food processing machinery - Intermediate provers - Safety and hygiene requirements	Jul. 1995
prEN 12044	Footwear, leather and imitation leather goods manufacture machines - Cutting and punching machines - Safety requirements	Jul. 1995
prEN 12076	Acoustics - Noise test code for compressors and vacuum pumps - Engineering method (grade 2)	Feb. 1997
prEN 12077-1	Cranes - Safety - Design requirements for health and safety - Part 1: Controls and control station	Sep.96
prEN 12077-3	Cranes - Safety - Design requirements for health and safety - Part 3 : Guarding	Sep. 1998
prEN 12077-5	Cranes - Safety - Design requirements for health and safety - Part 5: Lifting of persons	
prEN 12077-6	Cranes - Safety - Design requirements for health and safety - Part 6 : Access	Oct. 1997
prEN 12110	Tunnelling machines - Air locks - Safety requirements	Aug. 1995

prEN 12111	Tunnelling machines - Road headers, continuous miners and impact rippers - Safety requirements	Aug. 1995
prEN 12151	Machinery and plant for the preparation of concrete and mortar - Safety requirements	Aug. 1995
prEN 12158-1	Builders hoists for the transport of goods - Part 1: Hoists with accessible platforms	Sep. 1995
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prEN 12159	Builders hoists for persons and materials with vertically guided cages	Sep. 1995
prEN 12162	Liquid pumps - Procedure for hydrostatic testing	Oct. 1997
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prEN 12195-3	Load restraint assemblies on road vehicles - Part 3 : Lashing chains	Aug. 1998
prEN 12198-1	Safety of machinery - Assessment and reduction of risks arising from radiation emitted by machinery - Part 1: General principles	Dec. 1997
prEN 12195-1	Load restraint assemblies - Safety - Part 1: Calculation of lashing forces	Oct. 1995
prEN 12195-2	Load restraint assemblies - Safety - Part 2: Web lashing equipment made from man-made fibres	May 1997
prEN 12195-3	Load restraint assemblies - Safety - Part 3 : Lashing chains	Jan. 1997
prEN 12198-1	Safety of machinery - Assessment and reduction of risks arising from radiation emitted by machinery - Part 1: General principles	Nov. 1995
prEN 12203	Footwear, leather and imitation leather goods manufacturing machines - Shoe and leather presses - Safety requirements	Sep. 1996
prEN 12215	Coating plants - Spray booths for application of organic liquid coating materials - Safety requirements	Nov. 1995
prEN 12262	Rotodynamic pumps - Technical documents - Terms, delivery range, layout	Dec. 1995
prEN 12267	Food processing machinery - Circular saw machines - Safety and hygiene specifications	Dec. 1995
prEN 12268	Food processing machinery - Band saw machines - Safety and hygiene requirements	Dec. 1995
prEN 12301	Rubber and plastic machines - Calenders - Safety requirements	Feb. 1996
prEn 12312-1	Aircraft ground support equipment - Specific requirements - Part 1: Passenger stairs	Feb. 1996
prEn 12312-2	Aircraft ground support equipment - Specific requirements - Part 1: Catering vehicles	Feb. 1996
prEN 12312-3	Aircraft ground support equipment - Specific requirements - Part 3: Conveyor belt vehicles	Mar. 1997
prEN 12312-4	Aircraft ground support equipment - Specific requirements - Part 4: Passenger boarding bridges	Mar. 1997
prEN 12319-9	Aircraft ground equipment - Specific requirements - Part 9 : Container/Pallet loaders	Oct. 1998

prEN 12319-12	Aircraft ground equipment - Specific requirements - Part 12 : Potable water service equipment	Oct. 1998
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prEN 12321	Underground mining machinery - Specification for the safety requirements of armoured scraper conveyors	Feb. 1996
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prEN 12324-2	Irrigation techniques - Reel machine systems - Part 2 : Specification of polyethylene tubes	Dec. 1996
prEN 12324-3	Irrigation techniques - Reel machine systems - Part 3 : Presentation of characteristics	Dec. 1996
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prEN 12325-2	Irrigation techniques - Centre pivots and moving lateral systems - Part 2 : Minimum performances and technical characteristics	Jun. 1996
prEN 12325-3	Irrigation techniques - Centre pivots and moving lateral systems - Part 3 : Terminology and classification	Feb. 1997
prEN 12331	Food processing machinery - Mincing machines - Safety and hygiene requirements	Mar. 1996
prEN 12336	Tunnelling machines - Shield machines, horizontal thrustboring machines, lining erection equipment - Safety requirements	Feb. 1996
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prEN 12385-2	Steel wire ropes - Safety - Part 2 : Definitions, designation and classification	Oct. 1997
prEN 12385-5	Steel wire ropes - Safety - Part 5 : Stranded ropes for lifts	Jan. 1998
prEN 12385-5	Steel wire ropes - Safety - Part 5 : Stranded ropes for mine hoists	Jul. 1998
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prEN 12437-1	Safety of machinery - Performant means of access to machines and industrial plants - Part 1 : Choice of fixed means of access between two levels	Jun. 1996
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prEN 12484-2	Irrigation techniques - Automatic turf irrigation systems - Part 2 : Design and definition of typical technical templates	Apr. 1998
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prEN 12581	Coating plants - Dip and electrophoretic coating machinery for application of organic liquid coating materials - Safety requirements	Sep. 1996
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prEN 12629-2	Machines and plants for the manufacture of constructional products from concrete and calcium-silicate - Safety - Part 2 : Block making machines	Dec. 1996
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prEN 12761-2	Agricultural and forestry machinery - Sprayers and fertilizers distributors - Environmental protection - Part 2 : Low crop sprayers	Feb. 1997
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prEN 12866	Machines and plants for mining and tooling of natural stone - Safety requirements for diamond wire saws	Apr. 1997
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prEN 12999	Cranes - Safety - Loader cranes	Aug. 1997
prEN 13000	Cranes - Safety - Mobile cranes	Aug. 1997
prEN 13001-1	Cranes safety - General design -Part 1 : General principles and requirements	Aug. 1997
prEN 13001-2	Cranes safety - General design -Part 2 : Load effects	Aug. 1997
prEN 13015	Maintenance instructions for lifts and escalators	Aug. 1997
prEN 13019	Machines for road surface cleaning - Safety requirements	Oct. 1997
prEN 13020	Road-surface treatment cleaning	Oct. 1997
prEN 13021	Winter service machines	Oct. 1997
prEN 13023	Noise measurement methods for printing, paper converting, paper making machines and auxiliary equi^pment - Accuracy Categories 2 and 3	Nov. 1997
prEN 13035-3	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 4 : Cutting machines	Oct. 1997
prEN 13035-4	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 4 : Tilting tables	Oct. 1997
prEN 13035-5	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 5 : Machines and installations for stacking and destacking	Sep. 1997
prEN 13035-6	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 6 : Machines for break out	Sep. 1997
prEN 13035-7	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 7 : Cutting machines for laminated glass	Oct. 1997
prEN 13035-8	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 8 : Machines and plants for production of insulating glass	Sep. 1997
prEN 13035-9	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 9 : Washing installations	Sep. 1997

prEN 13035-10	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 10 : Grinding and polishing machines	Sep. 1997
prEN 13035-11	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 11 : Drilling machines	Sep. 1997
prEN 13035-13	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 13 : Machines for the production of laminated glass	Sep. 1997
prEN 13035-14	Machines and plants for the manufacture, treatment and processing of flat glass - Safety requirements - Part 14 : Mirror coating plants	Sep. 1997
prEN 13042-1	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 1 : Gob feeder	Sep. 1997
prEN 13042-2	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 2 : Handling machines for feeding	Oct. 1997
prEN 13042-3	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 3 : IS Machines	Sep. 1997
prEN 13042-4	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 4 : Multi-station rotating machines	Sep. 1997
prEN 13042-5	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 5 : Presses	Sep. 1997
prEN 13042-6	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 6 : Multi-station multi-inspection machines	Sep. 1997
prEN 13042-7	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 7 : Travelling head inspection machine	Sep. 1997
prEN 13042-8	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 8 : Fixed head inspection machine	Sep. 1997
prEN 13042-9	Machines and plants for the manufacture, treatment and processing of hollow glass - Safety requirements - Part 9 : Impact testing machines	Sep. 1997
prEN 13059	Safety of industrial trucks - Test methods for measuring vibrations	Nov. 1997
prEN 13064	Ceramic machines - Safety - Setting and dehacking of heavy clay and refractory products	Oct. 1997
prEN 13080	Manure spreaders - Specification for environmental preservation - Requirements and test methods	Dec. 1997
prEN 13102	Ceramic machines - Safety - Setting and dehacking of fine clay tiles	Jan. 1998
prEN 13112	Tannery machines - Splitting and bandknife shearing machines - Safety requirements	Dec. 1997
prEN 13113	Tannery machines - Roller coating machinery - safety requirements	Dec. 1997

prEN 13114	Tannery machines - Rotating process vessels - Safety requirements	Dec. 1997
prEN 13118	Agricultural machinery - Potatoes harvesting equipment - Safety	Jan. 1998
prEN 13128	Machine tools - Safety - Milling machines (including boring machines)	Jan. 1998
prEN 13135-1	Cranes - Safety - Design - Requirements for equipment - Part 1 : Electrotechnical equipment	Mar. 1998
prEN 13140	Agricultural machinery - Sugar beet and fodder beet harvesting equipment - Safety	Jan. 1998
prEN 13155	Cranes - Safety - Non-fixed load lifting attachments	Apr. 1998
prEN 13157	Cranes - Safety - Hand powered cranes	Mar. 1998
prEN 13202	Ergonomics of the thermal environment - Temperatures of touchable hot surfaces - Guidance for establishing surface temperature limit values in production standards with the aid of EN 563	Apr. 1998
prEN 13208	Food processing machinery - Vegetable peelers - Safety and hygiene requirements	Apr. 1998
prEN 13218	Machine tolos - Safety - Stationary grinding machines	May 1998
prEN 13222	Ceramic machines - Cutters and punching machines	Apr. 1998
prEN 13236	Safety requirements for superabrasives	Apr. 1998
prEN 13288	Food processing machinery - Bowl lifting and tilting machines - Safety and hygiene requirements	Jul. 1998
prEN 13386	Liquid pumps - Submersible pumps and pump units - Particular safety requirements	Dec. 1998
prEN 13289	Pasta processing plants - Dryers and coolers - Safety and hygiene requirements	Jul. 1998
prEN 13389	Food processing machinery - Mixers with horizontal shafts - Safety hygiene requirements	Nov. 1998
prEN 13390	Food processing machinery - Pie and tart machines - Safety and hygiene requirements	Nov. 1998
prEN 13355	Coating plants - Combined booths - Safety requirements	Sep. 1998
prEN 13367	Ceramic machines - Safety - Transfer platforms and cars	Sep. 1998
prEN 13378	Pasta processing plants - Pasta presses - Safety and hygiene requirements	Nov. 1998
prEN 13379	Pasta processing plants - Spreader, stripping and cutting machine, stick return conveyor, stick magazine - Safety and hygiene requirements	Nov. 1998
prEN ISO 13564	Test method for measuring visibility from self-propelled trucks (ISO/DIS 13564:1996)	Jan. 1996
ISO/CD 14314	Internal combustion engines - Recoil starting equipment - Safety requirements and test	Nov. 1996
prEN ISO 14738	Safety of machinery - Anthropometric requirements for the design of workstations (ISO/DIS 14738:1997)	Dec. 1997
prEN ISO 14847	Rotary positive displacement pumps - General requirements (ISO/DIS 14847:1995)	Apr. 1995

prEN/DIS 14890	Conveyor belts - Specification for rubber or plastics covered conveyor belts of textile construction for general use	Aug. 1997
prEN ISO 15147	Light conveyor belts - Tolerances on widths and lengths of cut light conveyor belts (ISO/DIS 15147:1998)	Aug. 1998
prEN ISO 15236-1	Steel cord conveyor belts - Part 1 : Design, dimensions and mechanical requirements for conveyor belts for general use (ISO/DIS 15236-1:1996)	Jul. 1997
prEN ISO 15236-2	Steel cord conveyor belts - Part 2 : Type series	Aug. 1998
prEN ISO 15236-4	Steel cord conveyor belts - Part 4 : Vulcanized belt joints - Design, dimensions, requirements, marking	Jul. 1998
prEN ISO 15236-5	Steel cord conveyor belts - Part 5 : Marking	Jul. 1998
prEN ISO 15236-6	Steel wire ropes - Safety - Part 6 : Stranded ropes for mine hoists	Jun. 1998
prEN ISO 15641	Milling cutters for high speed machinery - Safety requirements (ISO/DIS 15641:1998)	Sep. 1998
ISO/CD 15744	Acoustics - Noise test code for hand-held non electric power tools - Engineering method (grade 2)	Jun. 1997
prEN 20252-1	Conveyor belts - Ply adhesion between constitutive elements - Part 1: Test methods and requirements (ISO/DIS 252-1:1994)	Aug. 1994
prEN 20283-1	Conveyor belts - Method for the determination of the full thickness tensile strength and elongation at break of conveyor belts of textile construction (ISO/DIS 283:1994)	Aug. 1994
prEN ISO 27590	Steel cord conveyor belts - Methods for the determination of total thickness and cover thickness	Jul. 1997
prEN 28178-5	Reciprocating internal combustion engines - Exhaust emission measurement - Part 5: Test fuels (ISO/DIS 8178-5:1994)	Dec. 1994
prEN 31806	Safety requirements for agricultural and forestry machinery - Brush cutters and grass trimmers	Dec. 1994
prEN 31957	Acoustics - Determination of sound insulation performance of cabins - Laboratory and in situ measurements (ISO/DIS 11957:1993)	Jun. 1993
prEN 45010	General requirements for assessment and accreditation of certification/registration bodies	Jan. 1995
prEN 45011	General requirements for bodies operating product certification systems (proposed revision of ISO/IEC Guide 40) (ISO/CASCO 228:1995)	May 1995
prEN 45012	General requirements for bodies operating assessment and certification/registration of quality	Jan. 1995
prEN 45019	Guidance on specific aspects of testing and certification	Oct. 1989
prEN 50144-2-3	Safety of hand-held motor operated electric tools - Part 2-3 : Particular requirements for grinders, disk type sanders and polishers	Apr. 1997

prEN 50144-2-13	Safety of hand-held motor operated electric tools - Part 2-13 : Particular requirements for chain saws	Apr. 1997
EN 50144-2-15/ prA1	Safety of hand-held motor operated electric tools - Part 2-15 : Particular requirements for hedge trimmers	Apr. 1997
prEN 50144-2-16	Safety of hand-held motor operated electric tools - Part 2-16 : Particular requirements for tackers	Apr. 1997
prEN 50144-2-17	Safety of hand-held motor operated electric tools - Part 2-17 : Particular requirements for routers	Apr. 1997
prEN 50144-2-18	Safety of hand-held motor operated electric tools - Part 2-18 : Particular requirements for laminate trimmers	Apr. 1997
prEN 50260-1	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 1: General requirements	Jul. 1997
prEN 50260-2-1	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-1: Particular requirements for drills	Jul. 1997
prEN 50260-2-2	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-2: Particular requirements for screwdrivers and impact wrenches	Jul. 1997
prEN 50260-2-4	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-4: Particular requirements for sanders	Jul. 1997
prEN 50260-2-5	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-5: Particular requirements for circular saws and circular knives	Jul. 1997
prEN 50260-2-6	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-6: Particular requirements for hammers	Jul. 1997
prEN 50260-2-7	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-7: Particular requirements for spray guns	Jul. 1997
prEN 50260-2-8	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-8: Particular requirements for sheet metal shears and nibblers	Jul. 1997
prEN 50260-2-10	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-10: Particular requirements for reciprocating saws	Jul. 1997
prEN 50260-2-14	Safety of hand-held battery-powered motor-operated tools and battery packs - Part 2-14: Particular requirements for routers and laminate trimmers	Jul. 1997
prEN 61029-2-1	Safety of transportable motor-operated electric tools - Part 2-1 : Particular requirements for circular saws	Nov. 1994
prEN 61029-2-2	Safety of transportable motor-operated electric tools - Part 2-2 : Particular requirements for radial arm saws	May 1996
prEN 61029-2-3	Safety of transportable motor-operated electric tools - Part 2-3 : Particular requirements for planers and thicknessers	May 1996
prEN 61029-2-4	Safety of transportable motor-operated electric tools - Part 2-4 : Particular requirements for bench grinders	May 1996
prEN 61029-2-5	Safety of transportable motor-operated electric tools - Part 2-5 : Particular requirements for band saws	Nov. 1994

prEN 61029-2-6	Safety of transportable motor-operated electric tools - Part 2-6 : Particular requirements for diamond drills with water supply	Nov. 1994
prEN 61029-2-7	Safety of transportable motor-operated electric tools - Part 2-7 : Particular requirements for diamond saws with water supply	Nov. 1994
prEN 61029-2-8	Safety of transportable motor-operated electric tools - Part 2-8: Particular requirements for single spindle vertical moulders	May 1996
prEN 61029-2-9	Safety of transportable motor-operated electric tools - Part 2-9 : Particular requirements for mitre saws	May 1996
prEN 61029-2-10	Safety of transportable motor-operated electric tools - Part 2 : Particular requirements for cutting-off grinders	Mar. 1996
prEN 61029-2-11	Safety of transportable motor-operated electric tools - Part 2 : Particular requirements for combined mitre/bench saws	May 1996
prEN 61496-2	Safety of machinery - Electrosensitive protective equipment - Part 2: Particular requirements for equipment using active optoelectronic protective devices	Oct. 1997

2.4. EUROPEAN STANDARDS RELATING TO THE MACHINERY FIELD BUT NOT TO THE DIRECTIVE

We would like to draw your attention to the fact that the use of the above indicated standards does not provide a presumption of conformity : these standards may be used as guidance by manufacturers of machinery equipment.

REFERENCE	YEAR OF RATIFICATION	TITLE
EN 281	1988	Self-propelled industrial trucks sit-down rider-controlled - Rules for the construction and layout of pedals
EN 414	1992	Safety of machinery - Rules for the drafting and presentation of safety standards
EN 840-1	1996	Mobile waste containers - Part 1 : Containers with 2 wheels with a capacity from 80 l to 390 l for comb lifting devices - Dimensions and design
EN 840-2	1996	Mobile waste containers - Part 2 : Containers with 4 wheels with a capacity from 500 l to 1200 l with flat lid(s),for trunnion and/or comb lifting devices - Dimensions and design
EN 840-3	1996	Mobile waste containers - Part 3 : Containers with 4 wheels with a capacity from 770 l to 1300 l with dome lid(s),for trunnion and/or comb lifting devices - Dimensions and design
EN 840-4	1996	Mobile waste containers - Part 4 : Containers with 4 wheels with a capacity from 750 l to 1700 l with flat lid(s),for wide trunnion or BG-and/or comb lifting devices - Dimensions and design
EN 840-6	1996	Mobile waste containers - Safety and health requirements
EN 847-1	1997	Tools for woodworking - Safety requirements - Part 1: Milling tools and circular saw blades
EN 1554	1998	Conveyor belts - Drum friction testing
EN 1746	1998	Safety of machinery - Guidance for the drafting of the noise clauses of safety standards
EN ISO 7622-1	1995	Steel cord conveyor belts - Longitudinal traction test - Part 1: Measurement of elongation (ISO 7622-1:1984)
EN ISO 7622-2	1995	Steel cord conveyor belts - Longitudinal traction test - Part 2: Measurement of tensile strength (ISO 7622-2:1984)
EN ISO 7623	1997	Steel cord conveyor belts - Cord-to-coating bond test - Initial test and after thermal treatment (ISO 7623:1997)
EN ISO 9856	1995	Conveyor belts - Determination of elastic modulus (ISO 9856:1989)
EN ISO 10846-1	1998	Acoustics and vibrations - Laboratory measurement of vibro-acoustic transfer properties of resilient elements - Part 1 : Principles and guidelines (ISO 10846-1:1997)
EN ISO 10846-2	1998	Acoustics and vibrations - Laboratory measurement of vibro-acoustic transfer properties of resilient elements - Part 2 : Dynamic stiffness of elastic supports for translatory motion - Direct method (ISO 10846-2:1997)
EN ISO 14163	1998	Acoustics - Guidelines for noise control by silencers (ISO 14163:1998)
EN 20354/A1	1997	Acoustics - Measurement of sound absorption in a reverberation room - Amendment 1 : Test specimen mountings for sound absorption tests (ISO 354:1985/AMD1:1997)
EN 22858	1993	End-suction centrifugal pumps (rating 16 bar) - Designation, nominal duty point and dimensions (ISO 2858:1975)

EN 23411	1988	Earth-moving machinery - Human physical dimensions of operators and minimum operator space envelope (ISO 3411:1982, ed. 2)
EN 23449	1988	Earth-moving machinery - Falling-object protective structures - Laboratory tests and performance requirements (ISO 3449:1984, ed. 3)
EN 25353	1988	Earth-moving machinery and tractors and machinery for agriculture and forestry - Seat index point
EN 27574-1	1988	Acoustics - Statistical methods for determining and verifying stated noise emission values of machinery and equipment - Part 1: General considerations and definitions (ISO 7574-1:1985)
EN 27574-2	1988	Acoustics - Statistical methods for determining and verifying stated noise emission values of machinery and equipment - Part 2: Methods for stated values for individual machines (ISO 7574-2:1985)
EN 27574-3	1988	Acoustics - Statistical methods for determining and verifying stated noise emission values of machinery and equipment - Part 3: Simple (transition) method for stated values for batches of machines (ISO 7574-3:1985)
EN 27574-4	1988	Acoustics - Statistical methods for determining and verifying stated noise emission values of machinery and equipment - Part 4: Methods for stated values for batches of machines (ISO 7574-4:1985)
EN 50091-1-1	1996	Uninterruptible power systems (UPS) – Part 1-1: General and safety requirements for UPS used in operator access areas.
EN 50144-1	1995	Safety of hand-held motor operated electric tools - Part 1 : General requirements
EN 55014-1	1993	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission – Product family standards
EN 55014-1/A1	1997	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission – Product family standards
EN 55014-1/A2	1997	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 2: Immunity product family standards
EN 60034-7	1993	Rotating electrical machines - part 7: classification of types of constructions and mounting arrangements.
EN 60204-1	1997	Safety of machinery – Electrical equipment of machines – Part 1: General requirements.
EN 60439-1/A1	1995	Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and paartially type-tested assemblies; Amendment A1.
EN 60335-1	1994	Safety of household and similar electrical appliances – Part 1: General requirements.
EN 60335-1/A11	1995	Safety of household and similar electrical appliances – Part 1: General requirements; Amendment A11.

EN 60335-1/A56	1995	Safety of household and similar electrical appliances – Part 1: General requirements; Amendment A56.
EN 60825-1	1994	Safety of laser products – part 1: Equipment classification, requirements and user's guide.
EN 60947-1	1997	Low-voltage switchgear and controlgear – Part 1: General rules.
EN 60947-1/A1	1998	Low-voltage switchgear and controlgear – Part 1: General rules; Amendment 1.
EN 60947-1/A2	1998	Low-voltage switchgear and controlgear – Part 1: General rules; Amendment 2.
EN 60947-2	1996	Low-voltage switchgear and controlgear – Part 2: Circuit-breakers.
EN 60947-2/A1	1997	Low-voltage switchgear and controlgear – Part 2: Circuit-breakers; AmendmentA1.
EN 60947-5-1	1997	Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices.
EN 60974-1	1990	Safety requirements for arc welding equipment – part 1: Welding power sources.
EN 61310-1	1995	Safety of machinery – Indication, marking and actuation – Part 2: Requirements for visual, auditory and tactile signals.
EN 61310-2	1995	Safety of machinery – Indication, marking and actuation – Part 2: Requirements for marking.
EN 61800-1	1998	Adjustable speed electrical power drive systems – Part 1: General requirements – Rating specifications for low voltage adjustable speed d.c. power drive systems.

PART 3

"RECOMMENDATION FOR USE"
ESTABLISHED BY THE EUROPEAN CO-ORDINATION OF NOTIFIED BODIES FOR MACHINERY AND SAFETY COMPONENTS

This section contains "fiches", or information sheets, which have been established by the European Co-ordination of Notified Bodies for Machinery and Safety Components in order to assist these bodies in their task of product verification, in accordance with the terms of the Directive.

These information sheets have been discussed by the Member States, who did not raise major comments on them.

All parties should be aware of their existence; however, they shall keep in mind that they can use them only as general reference.

EUROPEAN CO-ORDINATION OF NOTIFIED BODIES FOR MACHINERY AND SAFETY COMPONENTS

LISTS OF TECHNICAL INFORMATION SHEETS "RECOMMENDATIONS FOR USE"

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
00.001 RERev 06	12/08/98		09/12/98		Key addresses
00.101 RERev 01	12/12/95		12/12/95	04/06/96	Content of acknowledgement of receipt
00.102 RERev 01	12/12/95		12/12/95	04/06/96	Presentation of certificate of adequacy
00.103 RERev 02		09/11/95	11/03/97	03/12/96	EC type-examination for the same product to different applicants
00.104 RERev 01	12/12/95		12/12/95	04/06/96	Subcontracting (generalization 11.002 RERev 01 and 05.218 RERev 01)
00.105 RERev 01	12/12/95		12/12/95	03/06/96	EC-type examination for machinery not listed in Annex IV, voluntary examination
00.106 RERev 01	12/12/95		12/12/95	04/06/96	Test reports (generalization 11.005 RERev 01)
00.201 RERev 01	17/10/96		19/09/96	04/06/96	Check of conformity with other applicable directives
00.202 RERev 01	17/10/96		19/09/96	04/06/96	Technical file (when N.B. acknowledge reception)
00.203 RERev 02		10/06/96	11/03/97	25/03/97	National and harmonised standards, transposition
00.204 RERev 01	17/10/96		19/09/96	04/06/96	Deviation from a standard
00.206 RERev 01	17/10/96		19/09/96	04/06/96	EC type-examination - Confirmation form (generalization 11.001 RERev 01)
00.209 RERev 03			11/03/97	03/12/96	Standards, deficiencies
00.210 RERev 01			11/03/97	27/05/97	Retention technical file, liability
00.220 RERev 04			11/03/97	03/12/96	EC type examination certificate, modification of products
00.221 RERev 01			11/03/97	27/05/97	Certification, variant product
00.230 RERev 01			11/03/97	27/05/97	To what extend can a NB accept certificates for electromechanical components of machinery
00.240 RERev 02	30/09/96		19/09/96	08/06/98	Internal arrangements, series production, quality assurance (generalization 03.003 RERev 03)
00.301 RERev 02			11/03/97	08/06/98	Criteria for component transported by hand
00.302 RERev 03	27/06/95		19/09/96	08/06/98	Machinery, Errors of fitting
00.402 RERev 02	17/04/96		19/09/96	08/06/98	Supplementary options to machinery (generalization 03.012 RERev 02)
00.404 RERev 01	17/04/96		19/09/96	04/06/96	Safety of control systems, kind of faults (generalization 11.008 RERev 01)
00.501 RERev 02	17/04/96		19/09/96	08/06/98	Noise, machines
00.502 RERev 02			18/09/97		Electromagnetic effects in the context of the machinery directive

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
01.002 RERev 02	21/07/95	21/07/95	12/12/95	04/06/96	Braking system, braking time, sanding machine, abrasive tool
01.004 RERev 02	21/07/95	21/07/95	12/12/95	04/06/96	Manual loading, unmanual loading, manual feed
01.005 RERev 02	07/02/96	07/02/96	19/09/96	08/06/98	Guards
01.006 RERev 01	29/06/95	21/07/95	12/12/95	04/06/96	Combined woodworking machines - Annex IV
01.007 RERev 02	21/07/95	21/07/95	12/12/95	04/06/96	Band-saws machines
01.012 RERev 02	07/02/96	07/02/96	19/09/96	08/06/98	EC type-examination, state of the art
01.017 RERev 03		21/10/96	11/03/97	08/06/98	EC type examination/annex II A, annex II B
01.019 RERev 03		21/10/96	11/03/97	08/06/98	Combined woodworking machines with tenoning-sawing mode-movement
01.020 RERev 03		21/10/96	11/03/97	08/06/98	Combined woodworking machines with surfacing planing / thicknesser/mortising/circular saw elements...- upper guard
01.022 RERev 03		21/10/96	11/03/97	08/06/98	Bandsawing machines/Guards/Non cutting area

(1) Indicative date which can corrrespond to the date of creation of the sheet or to a date of modification of the sheet

EUROPEAN CO-ORDINATION OF NOTIFIED BODIES FOR MACHINERY AND SAFETY COMPONENTS

LISTS OF TECHNICAL INFORMATION SHEETS "RECOMMENDATIONS FOR USE"

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
03.002 RERev 05	13/12/95	11/12/95	12/12/95	04/06/96	Presses - Annex IV (field of application)
03.004 RERev 05	13/12/95	12/12/95	12/12/95	04/06/96	Content of technical file for a press
03.005 RERev 02	22/05/95	22/05/95	17/04/96	08/06/98	Platform, ladders
03.007 RERev 02	14/12/95	14/12/95	17/04/96	08/06/98	Safety components, safety valves
03.009 RERev 04	13/12/95	13/12/95	12/12/95	04/06/96	Families - series
03.013 RERev 04		13/12/95	13/12/95	04/06/96	Acceptability of components of type examined presses
03.014 RERev 03	22/05/95	22/05/95	17/04/96	08/06/98	Harmonized B standards
03.019 RERev 04		18/09/95	18/09/97	08/06/98	Kind of safeguarding (Annex IV-B3)
03.022 RERev 05		13/12/95	18/09/97	08/06/98	Intrinsically safe pneumatic valve failures
03.023 RERev 04	13/12/95	11/12/95	12/12/95	08/06/98	Back gauges
03.026 RERev 04	13/12/95	11/12/95	17/04/96	08/06/98	Foot switches for press brakes
03.027 RERev 05	10/06/96	04/03/96	19/09/96	08/06/98	Light curtains on large press
03.028 RERev 05	18/09/95	18/09/95	18/09/97	08/06/98	Failing spring in the brake
03.029 RERev 03	18/09/95	18/09/95	13/12/95	04/06/96	Reach over, under and around the detection zone
03.030 RERev 04	13/12/95	13/12/95	17/04/96	08/06/98	Redundant monitored control syst. on press brake
03.032 RERev 03	18/09/95	18/09/95	13/12/95	08/06/98	Fixing of tools, failure of one component
03.033 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Control syst. category dealing with cushions, ejectors
03.034 RERev 04	13/12/95	13/12/95	13/12/95	04/06/96	Safety distances for small hydraulic presses (bars and cams)
03.035 RERev 03	13/12/95	11/12/95	12/12/95	04/06/96	Safety distances for small hydraulic presses (frames and rams)
03.037 RERev 04	13/12/95	11/12/95	13/12/95	04/06/96	Electromechanical position switches, equivalent devices
03.038 RERev 06	18/09/95	15/04/97	18/09/97	08/06/98	Are there fault exclusions possible dealing with hydraulic directional valves ?
03.039 RERev 04	13/12/95	11/12/95	13/12/95	04/06/96	Permissible gap between light curtain and press table
03.041 RERev 03	13/12/95	13/12/95	13/12/95	04/06/96	Stop function, emergency function
03.042 RERev 02	13/12/95	11/12/95	13/12/95	04/06/96	Travel and speed of movable working parts
03.043 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Rotary cam gear
03.044 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Compensation of masses
03.046 RERev 06	10/06/96	10/06/96	11/03/97	08/06/98	Leakage speed
03.049 RERev 02	13/12/95	13/12/95	17/04/96	08/06/98	Gaps on light curtains and ergonomic
03.050 RERev 04	10/06/96	10/06/96	19/09/96	08/06/98	Mechanical restraint device
03.051 RERev 04		04/03/96	11/03/97	08/06/98	Accessibility using control guards
03.054 RERev 05		04/03/96	11/03/97	08/06/98	Active Opto-electronic Protective Devices used for cycle initiation
03.055 RERev 04	10/06/96	10/06/96	19/09/96	08/06/98	Start and stop functions with PES/PPS
03.057 RERev 03	10/06/96	10/06/96	19/09/96	08/06/98	Travel and gap**)**
03.058 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Presses with feeding rotary table
03.060 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Two hand control device on the pneumatic presses
03.062 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Small pneumatic presses
03.065 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Muting on press brakes
03.066 RERev 05	10/06/96	10/06/96	19/09/96	08/06/98	Muting on hydraulic presses
03.067 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Actuators contacts on THCD
03.069 RERev 02	13/12/95	13/12/95	17/04/96	08/06/98	Proportional and servovalves on press brakes
03.070 RERev 03	13/12/95	13/12/95	17/04/96	08/06/98	Presses fitted with separate actuators
03.071 RERev 02	13/12/95	13/12/95	17/04/96	08/06/98	Restraint device on hydraulic presses
03.073 RERev 04	10/06/96	10/06/96	19/09/96	08/06/98	Testing procedure for brake
03.074 RERev 04	10/06/96	10/06/96	19/09/96	08/06/98	Flexible piping, connection joints
03.075 RERev 03	10/06/96	10/06/96	19/09/96	08/06/98	Defeat blocking actuators
03.095 RERev 03	10/06/96	10/06/96	19/09/96	08/06/98	Guards safety distances

(1) Indicative date which can corrrespond to the date of creation of the sheet or to a date of modification of the sheet

EUROPEAN CO-ORDINATION OF NOTIFIED BODIES FOR MACHINERY AND SAFETY COMPONENTS

LISTS OF TECHNICAL INFORMATION SHEETS "RECOMMENDATIONS FOR USE"

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
04.004 RERev 03		14/10/96	11/03/97	08/06/98	Special equipment and accessories for adjustment, servicing
04.005 RERev 03		14/10/96	11/03/97	08/06/98	Materials used during the construction of these machines
04.007 RERev 03		06/03/97	18/09/97	08/06/98	ESPS used for the protection
04.008 RERev 03		06/03/97	18/09/97	08/06/98	Moving parts involved in the process, protected by a two-hand control
04.010 RERev 04		14/10/96	11/03/97	08/06/98	Flexible hoses carrying high pressure fluids
04.011 RERev 03		06/03/97	18/09/97	08/06/98	Light curtains/movable guards/mould protection
04.018 RERev 03		07/03/97	18/09/97	08/06/98	Restart the mould closing movement by closing guard gate

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
05.201 RERev 02	30/05/95	30/05/95	13/12/95	04/06/96	Hydraulic powered roof support (HPRS)
05.202 RERev 01	30/05/95	30/05/95	13/12/95	04/06/96	HPRS. Safety components
05.203 RERev 01	30/05/95	30/05/95	13/12/95	04/06/96	HPRS. Technical rules
05.208 RERev 02	30/05/95	30/05/95	12/12/95	04/06/96	Placing on the market of HPRS
05.217 RERev 01	30/05/95	30/05/95	13/12/95	04/06/96	Types of interchangeable equipment in HPRS
05.801 RERev 01		30/05/95	12/12/95	25/03/97	Machines underground during the construction and machines underground after completion of the tunnel

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
06.002 RERev 03		18/11/94	11/03/97	08/06/98	Footboards
06.003 RERev 03		01/03/95	11/03/97	08/06/98	Modified RCV
06.005 RERev 03		02/03/95	11/03/97	08/06/98	EC type-examination : calculations
06.008 RERev 03		01/06/95	11/03/97	08/06/98	Handling of spare parts substituted during maintenance and repair
06.011 RERev 03		30/04/96	11/03/97	08/06/98	Automatic lifting device-switching device for monitoring the correct position of waste container
06.013 RERev 03		30/04/96	11/03/97	08/06/98	Automatic lifting device-sensor switches monitoring position of waste container (which category?)
06.015 RERev 03		30/04/96	11/03/97	08/06/98	Falls of waste container and tailgate, ejection of waste out of the hopper
06.016 RERev 03		30/04/96	11/03/97	08/06/98	Energy source separation
06.017 RERev 03		30/04/96	11/03/97	08/06/98	Operating elements-pictograms

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
07.001 RERev 02	16/11/95	14/11/95	13/12/95	04/06/96	Error of fitting
07.002 RERev 01	16/11/95	14/11/95	13/12/95	04/06/96	Indelible marking
07.003 RERev 01	16/11/95	14/11/95	13/12/95	04/06/96	Effect of ultraviolet rays on the plastic guards
07.007 RERev 02	07/05/96	05/07/96	19/09/96	08/06/98	Guards, removable transmission shafts, EC type-examination, extension

(1) Indicative date which can corrrespond to the date of creation of the sheet or to a date of modification of the sheet

EUROPEAN CO-ORDINATION OF NOTIFIED BODIES FOR MACHINERY AND SAFETY COMPONENTS

LISTS OF TECHNICAL INFORMATION SHEETS "RECOMMENDATIONS FOR USE"

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
08.001 RERev 03	25/10/96	27/01/95	13/12/95	04/06/96	Materials for screw drives
08.004 RERev 02	25/10/96	27/01/95	17/04/96	08/06/98	Measures against unintentional desyncrhonisation during operation
08.007 RERev 02	25/10/96	27/01/95	17/04/96	08/06/98	Horizontal forces, loading system for motor bikes lifts
08.008 RERev 02	25/10/96	27/01/95	17/04/96	08/06/98	Auxiliary lifting systems
08.010 RERev 02	25/10/96	18/05/95	17/04/96	08/06/98	EC type-examination of vehicle lifts. Extension
08.011 RERev 02	25/10/96	18/05/95	17/04/96	08/06/98	Short stroke lifts
08.013 RERev 02	25/10/96	27/01/95	17/04/96	08/06/98	Pinching and shearing hazards

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
09.106 RERev 02	11/06/96	11/06/96	19/09/96	08/06/98	Documentation language instruction

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
11.009 RERev 04	15/06/95	15/06/95	17/04/96	08/06/98	PLC as a B2 component
11.012 RERev 02	15/06/95	15/06/95	13/12/95	04/06/96	Testing order (prEN 954-1)
11.013 RERev 02	15/06/95	15/06/95	13/12/95	04/06/96	Performance test ESPD
11.014 RERev 03	15/06/95	15/06/95	13/12/95	04/06/96	Possibility to deliver EC type-certificate to interface
11.015 RERev 02	15/06/95	15/06/95	13/12/95	04/06/96	Possibility to carry out EC type-examination for safety component
11.019 RERev 03	09/11/95	09/11/95	13/12/95	04/06/96	ESPD where safety performances can be modified
11.021 RERev 03	09/11/95	09/11/95	13/12/95	04/06/96	Logic unit for two hand control
11.023 RERev 03		29/03/96	11/03/97	08/06/98	Documents, diffusion
11.024 RERev 03		29/03/96	11/03/97	08/06/98	Relationship between the categories of EN 954-1 and the Safety Integrity Levels of draft IEC 1508
11.025 RERev 04		23/09/96	11/03/97	08/06/98	EC type-examination certificate, conformity to 89/392/CEE

Reference of Data Sheet CNB/M/xx.xxx	Date of sheet(1)	Approval Vertical Group	Approval Horizont. Com.	Approval Standing Com.	Subject
12.003 RERev 02	30/01/96	30/01/96	11/03/97	27/05/97	Harmonized standards, normative references
12.005 RERev 02	28/12/95	30/01/96	19/09/96	08/06/98	Charpy Test
12.007 RERev 02	28/12/95	30/01/96	19/09/96	08/06/98	DLV
12.008 RERev 02	07/05/96	16/01/96	19/09/96	08/06/98	DLV, feet
12.009 RERev 02	07/05/96	02/05/96	19/09/96	08/06/98	Minor modification
12.010 RERev 02	27/12/95	30/01/96	17/04/96	08/06/98	Fops, Standing operator

(1) Indicative date which can corrrespond to the date of creation of the sheet or to a date of modification of the sheet

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.001 Revision 06 Language : E

Number of pages : 4	Date : 09/12//98	To be approved by :	Approved on :
Origin : Horizontal Committee		☐ Vertical Group..... ☑ Horizontal Committee .....09/12/98 ☐ Standing Committee.....	

Question related to :	EN/prEN :	Other :
Annex : ESR (1) :	Clause :	

Key words : Coordination, address.

Question :

What are the key addresses of the European coordination of the notified bodies for machinery and safety components?

Recommended solution :

The key addresses of the European coordination of the notified bodiesfor machinery and safety components are given in the following pages.

Sent for information to: ☐ members of the VG ☐other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

European Co-ordination for machinery and safety components
Convenors and secretary of the co-ordination

V.G.or H.C N°	Group Title	Convenor	Secretary	Organisation	Address
0	Horizontal committee	**JACQUES**		0026 AIB Vinçotte INTER	27-29 avenue A. Drouart B-1160 BRUSSELS – BELGIUM Tel : +32 26 74 57 11 ou 58 47 FAX : +32 26 74 59 59 E-Mail : guy.jacques@euronet.be
			BLANDIN BIENVEIGNANT GATEAU	EUROGIP Technical secretariat	55 rue de la Fédération 75015 PARIS – FRANCE Tel : +33 1 40 56 30 40 FAX : +33 1 40 56 36 66 E-Mail : eurogip@wanadoo.fr
			GHEYSEN	EOTC Administrative secretariat	15, rue d'Egmont B-1000 BRUSSELS – BELGIUM Tel : +32 2 502 41 41 FAX : +32 2 502 42 39 E-Mail : manue.gheysen@eotc.be
1	Woodworking-machines	**TRIVIN**		0070 INRS	BP 27 - F-54501 VANDOEUVRE FRANCE Tel : +33 3 83 50 21 06 FAX : +33 3 83 50 21 03 E-Mail : trivin@inrs.fr
			TRIVIN	idem	Idem
2	Meatworking machines	**SCHULZ**		0391 Fachausschuss Fleischwirt-Schaft	Lortzingstraße 2 D-55127 MAINZ - GERMANY Tel : +49 61 31 78 5385 FAX : +49 61 31 78 5342
			SCHULZ	idem	Idem
3	Presses for the cold working of metals	**LIEDTKE**		0393 Fachauschuss "Eisen und Metall III"	Kreuzstraße 45 D-40210 DÜSSELDORF - GERMANY Tel : +49 211 67008 26 FAX : +49 211 67008 44
			BRENDEL	0032 TÛV Hannover	TÛV NORD ANLAGENTECHNICK GMBH - Postfach 81 05 51 D-30505 HANNOVER Tel : +49 511 986-0 FAX : +49 511 986 12 37 E-mail : TBrendel@tuevnord.de
4	Injection or compression moulding machines	**GEBAUER**		0393 Fachauschuss "Eisen und Metall III"	Kreuzstraße, 45 D-40210 DÜSSELDORF - GERMANY Tel : +49 211 67008 24 FAX : +49 211 67008 44
			PALLOWSKI	0418 Fachauschuss Chemie	Kurfürsten-Anlage, 62 D-69115 HEIDELBERG - GERMANY Tel : +49 40 236 323 18 FAX : +49 40 236 323 55

European Co-ordination for machinery and safety components
Convenors and secretary of the co-ordination

V.G.or H.C N°	Group Title	Convenor	Secretary	Organisation	Address
5	Machines for underground work	**CZYZ**	CZYZ	0080 INERIS idem	BP N°2 - F-60 550 VERNEUIL en HALATTE FRANCE Tel : +33 3 44 55 65 42 FAX : +33 3 44 55 66 99 E-mail : ineris@ineris.fr Idem
6	Refuse collection vehicles	**BINNIG**	BINNIG	0417 Fachausschuss" Verkehr" idem	Wiesbadener Straße, 70 D-65197 WIESBADEN - GERMANY Tel : +49 611 9413 179 FAX : +49 611 9413 208 idem
7	Removable transmission cardan shafts	**HUGO**	HUGO	0388 CEMAGREF idem	Parc de Tourvoie BP n° 44 F-92163 ANTONY CEDEX - FRANCE Tel : +33 1 40 96 61 54 FAX : +33 1 40 96 61 62 E-mail : emmanuel.hugo@cemagref.fr idem
8	Vehicles servicing lifts	**RUSSOLD**	RUSSOLD	0408 TUV -A- idem	Krugerstraße, 16 A-1015 WIEN - AUSTRIA Tel : +43 1 514 07 0 FAX : +43 1 514 07 240 E-mail : rus@tuev.or.at Idem
9	Lifting persons device (LPD)	**GAREIS**	GAREIS	VdTÜV TÜV Cert Leitstelle Maschinen idem	Kurfürstenstr. 56 Postfach 10 38 34 D-45038 ESSEN - GERMANY Tel : +49 201 89 87 176 FAX : +49 201 89 87 120 E-mail :vdtuev.essen@t-online.de Idem
10	Machines for the manufacture of pyrotechnics				
11	Safety components	**BAGGIO**	BAGGIO	0051 I.M.Q. idem	Via Quintiliano, 43 I-20138 MILANO - ITALY Tel : +39 0250 73 269 FAX : +39 0250 73 271 E-mail: baggio@imq.it Idem
12	ROPS and FOPS	**PAOLUZZI**	PAOLUZZI	883 CEMOTER idem	Via Canal Bianco,28 44044 CASSANA - FERRARA ITALY Tel : +39 532 731571 FAX : +39 532 732250 E-Mail : paoluzzi@cemoter.bo.cnr.it idem

Organisation	Observers	Address
DGIII	**J.P. VAN GHELUWE** **B. VILAIN**	DGIII / D / 1 (SC 15 3/171) rue de la Loi 200 B-1049 BRUSSELS - BELGIUM Tel : +32 2 29 60 964 FAX : +32 2 29 66 273 E-mail: jean-pierre.van-gheluwe@dg3.cec.be E-mail: bruno.vilain@dg3.cec.be
DGIII	**B.JENKINSON**	DGIII / B / 1 (SC 15 3/103) rue de la Loi 200 B-1049 BRUSSELS – BELGIUM Tel : +32 2 29 68 184 FAX : +32 2 29 53 877 E-mail: brian.jenkinson@dg3.cec.be
BUNDESMINISTERIUM FÜR ARBEIT UND SOZIALORDNUNG	**U. BECKER**	Am Burgweiher 56 D-53123 BONN - GERMANY Tel : +49 228 527 28 88 FAX : +49 228 527 29 58 E-mail : ul.becker@bma.bund400.de
MINISTERIE VAN SOCIALE ZAKEN EN WERKGELEGENHEID	**W. DE JONG**	PB 90801 NL-2509 LV DEN HAAG - THE NETHERLANDS Tel : +31 70 333 55 23 FAX : +31 70 303 40 26
MINISTERE DE L'EMPLOI ET DE LA SOLIDARITE	**Mrs E. FRICHET-THIRION/** **D. DUFUMIER**	DRT/Bureau CT5 20 bis rue d'Estrées F-75700 PARIS 07 SP - FRANCE Tel : +33 1 44 38 26 77 FAX : +33 1 44 38 27 15 E-mail : drtcta@club-internet.fr
EFTA	**J. BRYNESTAD**	P.b. 8103 Dep, N-0032 OSLO - NORWAY Tel : +47 22 95 70 94 FAX : +47 22 46 09 088 E-mail : jens.brynestad@arbeidstilsynet.dep.no
CEN	**C. PUPLETT**	CEN 36, rue de Stassart B-1050 BRUSSELS - BELGIUM Tel : +32 2 550 08 43 FAX : +32 2 550 08 19 E-mail : puplett@cenclcbel.be
CENELEC	**G. DE CLERCQ**	CENELEC 35, rue de Stassart B-1050 BRUSSELS - BELGIUM Tel : +32 2 519 68 71 FAX : +32 2 519 69 19
ORGALIME	**B. VON RAUCH**	c/o VDMA 101, rue de Stassart B-1050 BRUSSELS - BELGIUM Tel : +32 2 502 55 86 FAX : +32 2 502 54 42
ETUC	**M. SAPIR**	BTSE 1545 Bd E. Jacqmain B-1210 BRUSSELS - BELGIUM Tel : +32 2 224 05 60 FAX : +32 2 224 25 61

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.101 Revision 01 Language : E

Number of pages : 2	Date :24/09/96	To be approved by :	Approved on :
Origin : Horizontal Committee		☐ Vertical Group..... ☑ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : Simplified procedure/acknowledgement of receipt

Question :

How should the acknowledgement of receipt of technical documentation aimed by Art. 8.2.c 1st indent be written out ?

Solution :

A proposal is made in attached model.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

(Notified body -name, address, identification number)

Acknowledgement of receipt

(Storage of the technical files according to the EC-Directive for Machinery)

(Registration number)

Name and address of the applicant

Name and address of the manufacturer

Ref. of applicant	**ref. of notified body**	**Date of Issue**

Product designation

Type :

Technical files submitted :

In accordance with the Directive 89/392/EEC (Machinery), article 8.2.c first indent, the applicant has submitted technical files of the above-mentioned product. This is to acknowledge receipt of the files.

In accordance with the above-mentioned Directive the applicant has to inform us about any modifications - even insignificant ones - made or planned to be made to the above-mentioned product.

The files will be stored until

On request of the applicant, they will then be further stored, returned or destroyed.

.....

(signature and status of subscriber)

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.102 Revision 01 Language : E

Number of pages : 2	Date :24/09/96	To be approved by :	Approved on :
Origin : Horizontal Committee		☐ Vertical Group..... ☑ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : Simplified procedure/certificate of adequacy of the documentation

Question :

How should a certificate of adequacy of technical documentation be written out ?

Solution :

A proposal is made in attached model

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

(Notified body - name, address, identification number)

Certificate of adequacy

(Verification of the technical files according to the EC-Directive for Machinery)

(No. of certificate)

Name and address of the applicant

Name and address of the manufacturer

Ref. of applicant	**Ref. of notified body**	**Date of Issue**

Product designation

Type :

Technical files submitted :

In accordance with the Directive 89/392/EEC (Machinery), article 8.2.c second indent, the applicant has submitted technical files of the above-mentioned product for the purpose of verification. This is to certify, that the harmonised standards have been correctly applied and that the forwarded files are adequate to the provisions laid down in the Directive.

In accordance with the above-mentioned Directive the applicant has to inform us about any modifications - even insignificant ones - made or planned to be made to the above-mentioned product. Further provisions are laid down in our rules of testing and certification dated...

The verified files will be stored until

On request of the applicant, they will then be further stored, returned or destroyed.

(signature and status of the subscriber)

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.103 Revision 02 Language : E

Number of pages : 1	Date :21/03/97	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/11.020/R/E Rev 01 on 09/11/95		☐ Vertical Group..... ☑ Horizontal Committee ..... ☑ Standing Committee	.....09/11/95 .....11/03/97 .....03/12/96

Question related to : Directive 89/392/EEC Annex : VI ESR (1) :	EN/prEN : Clause :	Other :

Key words : Number of EC type-examination certification

Question :

Is it possible to issue EC type-examination certificates for the same product to different applicants ?

Recommended solution :

It is possible to issue other EC type-examination certificates for the same product which has an existing EC type-examination certificate provided the following rules are observed:

* The request shall be made to the notified body which issued the original EC type-examination certificate giving all relevant information to ensure the product is the same. The new applicant must obtain official authorization from the owner of the original certificate, a copy of which must accompany the request.

* The new applicant shall be considered as a manufacturer and shall conform with the requirements of Annex VI, in particular point 5.

* To eliminate ambiguities between the original certificate and the new one, the references of the product must not be the same, the information for use and trade documents must accordingly be changed. The notified body has the responsibility to verify the new documents and to confirm the product is the same as the one originally approved.

* The new EC type-examination certificate should be issued by the same notified body as the original certificate ensuring full traceability of each document.

In this matter, the legislation on intellectual property and the patent and trade mark laws have to be observed.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.104 Revision 01 Language : E

Number of pages : 1	Date :24/09/96	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/ 11.002RER 01 on 19/05/95 & CNB/M/ 05.218 RER 01 on 30/05/95		☑ Vertical Group.....19/05/95 ☑ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : subcontracting, accreditation, acceptance of test results, competence of laboratories

Question : Is it possible for a certification body to accept test data obtained by other accredited laboratories?

Are test reports from authorities outside the Community acceptable for the purpose of EC type-examination?

If this so, what is the minimum criteria to be used in judging their competency and how should they be monitored?

What quality control methods should be applied to sub-contracting laboratories?

Can the notified body use test reports on materials, items or components carried out by other specialised laboratories?

Can the notified body use reports on tests carried out by the manufacturer or the applicant?

Solution :

Under all circumstances, the notified body takes on the responsibility for test results/test reports it accepts as basis for certification.

Therefore, it should generally be recommended to use test results from accredited test laboratories. As this will not always be possible, other sources of testing have to be used. Sub-contracting laboratories should meet the requirements according to EN 45 001, if this is not the case, the notified body has to ensure by other means that the test results are reliable.

The notified body itself will have to specify the conditions for acceptance of other test laboratories to carry out the tests. This also refers to test results obtained by laboratories outside of European Union or the manufacturer or the applicant himself.

Quality control measures for sub-contracting test laboratories are important, the notified body itself is responsible for deciding how to proceed with this.

Reference : Community legislation on machinery (Comments on Directive 89/392/EEC and Directive 91/368/EEC), P. Massimi, J.-P. Van Gheluwe 1993, Article 8, paragraph 2, Comment .

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.105 Revision 01 Language : E

Number of pages : 1	Date :08/10/96	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/05.219		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	30/05/95 12/12/95 03/06/96

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : EC type-examination, voluntary examination

Question :

Is it possible to carry out EC type-examination for machinery not listed in annex IV of the EC-Directive for Machinery?

Solution :

No it is not possible to carry out an EC-type-examination for machinery not listed in annex IV.

However, a notified body can carry out a voluntary examination for a machinery not listed in annex IV on request of an applicant or a manufacturer. In this case, the notified body shall not mention its European identification number on the voluntary examination-certificate.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.106 Revision 01 Language : E

Number of pages : 1	Date :24/09/96	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/11.005 RER 01 on 19/05/95		☑ Vertical Group.....19/05/95 ☑ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : internal organisation Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : test report

Question :

How should test reports be written?

Solution :

It was generally agreed that no harmonized format is necessary for the presentation of test reports.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.201 Revision 01 Language : E

Number of pages : 1	Date :17/10/96	To be approved by :	Approved on :
Origin : Horizontal Committee		☐ Vertical Group..... ☑ Horizontal Committee .....19/09/96 ☐ Standing Committee 04/06/96	

Question related to : Several Directives Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Machines subjected to several Directives

Question :

When a notified body, as per Article 9 of Directive 89/392/EEC, carries out one of the certification procedures specified in Article 8, paragraph 2, points b and c, for a machine specified in Annex IV of the Directive, is its role limited to the operations mentioned in this article?

Should the conformity to other Community Directives, which these machines and their components must meet, be verified?

Solution :

The notified body, as per Article 9 of Directive 89/392, which is responsible for carrying out the certification procedures defined in Article 8, paragraph 2, point b and c, for a machine specified in Annex IV, is only required to carry out the operations defined in the above mentioned Article.

In particular, when a machine or one of its components is subject to Community Directives other than the modified Directive 89/392, there is no requirement to check whether these other Directives are being respected. In which case, the notified body must draw the attention of the contractor to his obligation to complete his technical file (also termed technical documentation) with reference to other Directives applicable to the machine.

In effect, the manufacturer must ensure that these other Directives are being respected, and conforming to Article 8, paragraph 5, the EC markings required by Article 8 paragraph 1 and specified in Article 10 mean that the machine also responds to the requirements of these other Directives.

Comments from Member States :

The position taken by European Co-ordination is legally right but it is not able to solve the problem arisen with several Directives applied to the same product and when it is not possible to find the best agreement on which to treat the given hazard (for example : effect of an electromagnetic disturbance on the safety control circuit).

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.202 Revision 01 Language : E

Number of pages : 1	Date :17/10/96	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/03.001/R/E Rev 02		☑ Vertical Group.....12/12/95 ☑ Horizontal Committee .....19/09/96 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/336/EEC Annex : Art. 8.2.ESR (1):	EN/prEN : Clause :	Other :

Key words : technical file

Question :

When the harmonised C-Standard exists and if the manufacturer decides to follow the procedure defined in Art. 8.2.c., what does the notified body do ?

Recommended solution :

In this case, the notified body registers the file without verifying its content (this answer is in accordance with Qtn/Answer number 42)

Moreover, it is recommended that the notified body mentions in his answer that he hasn't engaged his technical responsibility.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.203 Revision 02 Language : E

Number of pages : 1	Date :06/06/97	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/03.010/R/E/ rev 04 on 10/06/96		☑ Vertical Group.....10/06/96 ☑ Horizontal Committee .....11/03/97 ☑ Standing Committee 25/03/97	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Harmonised standards, national standards, transposition

Question :

1 - Will It be only possible to check a technical file using standards referred into Article 5(2), to be in line with Article 8(2)(c) second dash?(Adequacy of file)

2 - Will it be only possible to test and check a technical file using standards referred to in Article 5(2), to be in line with Article 8(2)(c) third dash? (EC type examination)

3- Will it be possible to examine the technical file and the machine using standards referred to in Article 5(2), to be in line with Article 8(2) c third dash ? (EC type examination) ?

Solution :

1 - Yes

2 - No. The Notified body shall examine the technical file and the machine.

A harmonised standard will take away mandatory EC type-examination, if only one Member State of the European Community has transposed it (may also be for Members of EFTA regulation).

3 - Yes.

Sent for information to : ☑ members of the VG ☑ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.204 Revision 01 Language : E

Number of pages : 1	Date :17/10/96	To be approved by :	Approved on :
Origin : Horizontal Committee		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	12/12/95 19/09/96 04/06/96

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : adequate safety, deviation from a standard

Question :

Are there any methods or procedures available for testing that adequate safety has been achieved if the product is not in accordance with the harmonised standard ? What and how can it be done ?

The notified body cannot always wait for the next meeting of the vertical group or horizontal committee to discuss the problem

Recommended solution :

Each type of standard has a role to play and to be brought to the attention of all parties concerned under the responsibility of the Member States. But the standards are not mandatory and the manufacturer can always directly apply the essential requirements.

We have no official regulation for the time being than the EHSR's, but we can rely on:

- experience of some notified bodies ('ringing round')
- completing a technical sheet 'proposal for enquiry'
- informative report and discussion in the vertical group
- compliance to national specifications/standards

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.206 Revision 01 Language : E

Number of pages : 2	Date :17/10/96	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/11.001 R/E Rev 01 on 19/05/95		☑ Vertical Group.....12/12/95 ☑ Horizontal Committee .....04/06/96 ☐ Standing Committee 19/09/96	

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : EC type-examination

Question :

How can it be assured that the manufacturer has not presented the same file to two or even several notified bodies?

How can it be assured that the manufacturer does not re-submit a file having been the subject of a previous EC type examination certificate refusal decision?

Recommended solution :

The manufacturer will be asked to confirm (an example of a confirmation form is attached) that he has not submitted the same file to another notified body and that the model presented for examination or a very similar one has not been the subject of any previous EC-type certificate refusal decision.

For the future, an information system is considered to be useful. The Commission should be asked by the Horizontal Committee whether the Directive provides a legal basis for the establishment of such a system.

The aim of the confirmation Form is to make the manufacturer aware of his(her) responsibilities.

Remark from the Secretariat of the Horizontal Committee:

This question is related to paragraph 6 from Annex VI of the Directive :

" A body which refuses to issue an EC type- examination certificate shall so inform the other notified bodies. ..." The problem is that this information shall be given very quickly to all other competent notified bodies (for example by FAX). If this is so, all notified bodies know what are the rejected machines. But this supposes that the list of European notified bodies is always up to date and sent in time to all notified bodies.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

Confirmation form (example)

In the name of .....
(name of the company)

the undersigned
.....certifies
(name of the undersigned)

- That the following Machinery or Safety Component for machinery :

.....
(type of the machinery or Safety Component according to Annex IV of MD 89/392/EEC)

.....
.....
(identification of the product including designation of series or type, serial number and year of construction)

whose manufacturing technical file enclosed herewith, with the view of being granted a EC-type examination certificate, has not been the subject of a previous EC-type examination certificate refusal decision.

- that no request of a similar nature concerning the same model has been submitted to any other Notified Body for the granting of EC-type examination certificates.

Done at.....Date.....

(signature) (position of the undersigned) (seal)

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.209 Revision 03 Language : E

Number of pages : 1	Date :06/06/97	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/11.006 R/E/Rev.01 on 19/05/95		☐ Vertical Group..... ☑ Horizontal Committee .....11/03/97 ☑ Standing Committee 03/12/96	

Question related to : Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Standards, deficiencies

Question :

What action should be taken if deficiencies and/or mistakes in standards are detected?

Recommended solution :

Questions concerning possible deficiencies and/or mistakes in standards shall be brought to the attention of relevant CEN/CENELEC Technical Committees for possible solution.

Before a decision is taken, the Vertical Group shall discuss the matter in order to reach a common agreement on how to proceed with the testing.

However, if the questions require an urgent solution the notified body who detected the possible deficiency(ies) or mistake(s) can start within the VG members a quick enquiry (by fax) in order to collect answers within a reasonable period of time (10 days).

If the question(s) are deemed to be of general interest, the Horizontal Committee shall also be informed.

The Member States are automatically informed through the minutes of the meeting of the Horizontal Committee.

Sent for information to : ☑ members of the VG ☑ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.210 Revision 01 Language : E

Number of pages : 1	Date :06/06/97	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/11.011 R/E/ Rev 01		☐ Vertical Group..... ☑ Horizontal Committee .....11/03/97 ☑ Standing Committee 27/05/97	

Question related to : Directive 89/392/EEC Annex : Annex VI ESR (1) :	EN/prEN : Clause :	Other :

Key words : retention, technical file, liability

Question :

For how long must the EC type-examination files be stored by the notified body?

Recommended solution :

The Annex VI does not give any explicit limitation to the notified bodies concerning the retention of the EC type-examination files.

In view to ensure some coherence with the annex V paragraph 4 b, the notified bodies can be advised to keep the file for fifteen years after the last intervention of the notified body. This period can be modified :

- in accordance with the national regulations of the Notified Body, or
- by contractual agreement between the notified body and the applicant.

In relation with the nature of the product each VG can agree any other time of retention and it shall confirm this common position by a vertical sheet.

Sent for information to :☑ members of the VG ☑ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.220 Revision 04 Language : E

Number of pages : 1	Date :06/06/97	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/03.012/R/E Rev 02 on 22/05/95 and CNB/M/11.007/R/E Rev 01 on 15/06/95		☐ Vertical Group..... ☑ Horizontal Committee .....11/03/97 ☑ Standing Committee 03/12/96	

Question related to : Directive 89/392/EEC Annex : VI / 5 ESR (1) :	EN/prEN : Clause :	Other :

Key words : Supplementary options to machinery or safety component.

EC type-examination certificate, modification of products

Question :

What should the manufacturer or his authorised representative established in the Community do in the case of a modification to a machine or a safety component having been the subject of an EC type-examination.

Is a new testing procedure required ?

Recommended solution :

The manufacturer or his authorised representative established in the EEA must inform the Notified Body who delivered the EC type-examination certificate of any intended modification of the machine or the safety component. The changes should be added into the technical file.

The Notified Body then has to decide whether the modification does or does not require new EC type-examination procedures.

If the modification only involves minor changes not affecting the safety characteristics of the product, the Notified Body informs the applicant that the EC type-examination as realized will continue to be valid for the modified model. It may then either deliver an EC type-examination certificate extension or a new certificate. When there are several successive modifications on the model, the Notified Body shall always compare the last modified product with the initial model in view to define the applicable procedure.

If the modification consists of major changes to the product, the Notified Body has to inform the manufacturer or the authorised representative that the certificate cannot be transferred to the modified model. If the manufacturer intends to keep the modifications, he will be required to make a new official request for an EC type-examination.

In case of a range of products, the change can be the addition of one or several product(s) in the range or a modification of one or several product(s) in the existing range : this point shall be very clear in the technical file and in the decision of the Notified Body.

Sent for information to :☑ members of the VG ☑ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.221 Revision 01 Language : E

Number of pages : 1	Date :06/06/97	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/11.004/R/E/rev 01 on 19/05/95		☐ Vertical Group..... ☑ Horizontal Committee .....11/03/97 ☑ Standing Committee 27/05/97	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Certification, variant product.

Question :

What is the procedure to be applied to the EC type-examination of variants of a machine or a safety component ?

Which criteria should be taken into account for the certificate ?

Recommended solution :

The normal procedure is to put a family in one certificate. However, the notified body shall verify if the range of products of the manufacturer presents an equivalent series of risks and/or technical solutions. If not, we are dealing with separate types which are covered by separate certificates. A machine or a safety component is considered as a variant of a referenced machine or safety component only if it differs on points which have no noticeable influence on the expected performances. The variants can correspond to differences relating in particular to dimensions, shape, nature of constituents materials, colour, assembly methods, manufacturing processes etc.

It is the responsibility of the Notified Body to evaluate for each individual case, if a given machine or safety component can effectively be considered as a variant. In case of doubt, it will carry out any check, measurement or test considered to be useful.

In every case and for each of the variants, the applicant will provide the Notified Body with a detailed description indicating the differences in comparison with the reference model and the number of samples of these variants required for complementary checks and tests.

Sent for information to :☑ members of the VG ☑ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.230 Revision 01 Language : E

Number of pages : 2	Date :06/06/97	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/11.022/R/E Rev 01 on 09/11/95		☐ Vertical Group..... ☑ Horizontal Committee .....11/03/97 ☑ Standing Committee 27/05/97	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.5.1	EN/prEN : Clause :	Other :

Key words : Low voltage, tests, report, declaration, electrical components

Question :

To what extent can a notified body accept certificates for electromechanical components of machinery?

Recommended solution :

The intention is to create a document that may be used by all Notified Bodies to determine the acceptability of electrical components.

EXAMPLES

l. The list of components given in the columns is non exhaustive and only meant as indication.

2. In all cases, the actual use of the component has to be considered and it has to be decided if it is used as a functional or as a safety component.

3. It should be checked whether the declaration and/or certificate of conformity with a specific directive (EMC, Low voltage) or a standard allow to cover the specific requirements of the machinery directive for the component concerned.

Sent for information to :☑ members of the VG ☑ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

AVAILABLE COMPONENT INFORMATION	COMPONENT IS USED AS:		
	FUNCTIONAL COMPONENT	SAFETY RELATED COMPONENT	SAFETY COMPONENT
	Failure of the component does not decrease the safety level	Failure of the component causes a limited decrease of safety	Not Annex IV-B Failure leads to unacceptable decrease of safety
Manufacturer's specifications No conformity mark and no reference to compliance with standards	Y	N	N
Manufacturer's specifications with reference to a standard No conformity mark No declaration of Conformity	Y	Y(1)	N
Manufacturer's specifications +Declaration of Conformity	Y	Y	Y
Voluntary conformity marks	Y	Y	Y(2)
	EXAMPLES Plugs and sockets(3) Cables Push-buttons Pilot lights Switches/contactors/timers El. Magnetic valves Temp. controls Motor start capacitor	EXAMPLES Transformers. Temp. limiters. Position Switches. Motor protectors. Overload protectors. Main power switches. Power supply units. Fuses	EXAMPLES Safety transformers. Safety circuit controls. Emergency stop controls. Interlocking switches

In all cases it is assumed that components operate within their specified limits
Y= The notified body may accept the component with the information certificate provided
N= The notified body shall not accept the component as such other types of certificate or additional testing are needed

(1) if manufacturer states in writing that he has followed the standard
(2) only if test report shows that the safety functions have been checked as well
(3) strictly speaking plugs and sockets outlets for domestic use are not under the low voltage directive.

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.240 Revision 02 Language : E

Number of pages : 1	Date :30/09/96	To be approved by :	Approved on :
Origin : Horizontal Committee generalisation of CNB/M/03.003/R/E Rev 03 on 22/05/95		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	22/05/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC , Directive Annex : VI-Point 2 ESR (1) :	EN/prEN : Clause :	Other :

Key words : Internal arrangements, series production, quality assurance

Question :

In the EC type-examination requested dossier what shall "the internal arrangements for maintaining the conformity of machines and safety components manufactured in series" contain ? What are the acceptance criteria for the Notified Body?

Recommended solution :

Point 2 of Annex VI requires that the technical dossier contains the internal arrangements established to ensure that the conformity of machines and safety components manufactured in series meet the requirements of the Directive.

The notified body cannot require the manufacturer to present a quality manual conforming to the series of EN ISO 9-000 standards (preferably 9001 and 9002). If the firm has set up such a system it is enough to have a copy of the certificate. Otherwise, the notified body will be satisfied with a commitment from the manufacturer to ensure the homogeneity of manufacturing together with a concise description of the means of control. The form of control may rely on :

- foreign bought parts, components,
- during production,
- final check before delivering the machines/safety components.
- check list for the final check
- external compliance

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.301 Revision 02 Language : E

Number of pages : 2	Date :12/05/97	To be approved by : ☐ Vertical Group..... ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	Approved on :
Origin : Horizontal Committee			

Question related to : Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Component, manual handling

Question :

What criteria should be taken into account when evaluating if a component can be transported by hand?

Recommended solution :

The principal criteria to be taken into consideration are :

. the mass of the component
by component we mean all components used during the maintenance
. the dimensions of the component.

The maximum permitted mass per person is worked out according to the maximum distance between lifting and laying, as per the following table, and under no circumstances can exceed 25 Kg (in accordance with Directive 90/269/EEC, see also prEN 1505-2 : safety of machinery. Human performance. Part 2 : Manual handling of machinery and component parts of machinery). Otherwise, standardised gripping devices which can be used in conjunction with slings, hooks, lifting rings or more simply cut holes must be foreseen for handling, and the instruction handbook should give all the necessary instructions.

Regardless of their weight, machine components which are more hazardous due to sharp areas, bulky shapes, slippery lubricated surfaces, etc. must be fitted with appropriate devices to ease handling.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

Where the mass of a component to be handled is not obvious, (a strengthened, heat insulating guard for example), an indication regarding its sturdiness must be affixed to the guard itself.

The notified body should ensure that the instruction handbook gives all the details pertinent to the handling of these components.

The mass of components exceeding 25 Kg must be mentioned in the instruction handbook.

MASS (m) (kg)	MAXIMUM DISTANCE BETWEEN LIFTING AND LAYING (m)	
	HORIZONTAL DIRECTION	VERTICAL DIRECTION
0<m<=15	1,2	1
10<m<=20	1	0,8
15<m<=25	0,8	0,6

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.302 Revision 03 Language : E

Number of pages : 1	Date :30/09/96	To be approved by :	Approved on :
Origin : Horizontal Committee		☐ Vertical Group..... ☑ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.5.4	EN/prEN : Clause :	Other :

Key words : Machinery, Errors of fitting

Question :

How can the prevention of errors of fitting components making up machinery or errors of connection likely to leaf to a risk be ensured?

What criteria should be retained to ensure that the instructions of the manufacturer prevent errors of fitting or connection?

Recommended solution :

Ensure that in the documentation :

1°) in the case of pre-fitting

- the "pre-fitting" of items or couplings has already been carried out by the manufacturer. In these circumstances the handbook must provide the information necessary for any possible dismounting operation as well as on the risks likely to result from an error of fitting where there is the possibility of interchangeability.

2°) without pre-fitting

- the items or couplings are fitted with polarizing slots in the case where "pre-fitting" has not previously been carried out. These devices should be strong enough not to break or deform if incorrect fitting is attempted .
- the items or couplings must be identified by means of markings or distinctive colours when 'pre-fitting' and fitting of polarizing slots are not feasible. These markings must be affixed directly on the items and/or on their housing. If a direction of movement is required this should be indicated on the items and/or on their housing. The handbook must provide information regarding the risks likely to result from an error of fitting.

In all circumstances the handbook must explain the fitting and dismounting phases, and the cautions must de drafted clearly. Ensure by means of inspection that :

- the pre-fitting is in conformity with the documentation
- the polarising slots are efficient,
- the markings are adequate

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.402 Revision 02 Language : E

Number of pages : 1	Date :30/09/96	To be approved by :	Approved on :
Origin : Horizontal Committee generalization of CNB/M/03.012 R/E/Rev 02 on 22/05/95		☑ Vertical Group.....22/05/95 ☑ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : supplementary options to machinery

Question :

If a basic machine is certified and then additional equipment is installed without affecting a safety, is a new testing procedure required?

Recommended solution :

The change should be added into the technical documentation/file and the notified body should consider this in the testing report. It is the responsibility of the notified body to decide whether it is necessary for a further examination partly or not.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.501 Revision 02 Language : E

Number of pages : 1	Date : 1996/10/14	To be approved by :	Approved on :
Origin : Horizontal Committee		☐ Vertical Group..... ☑ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I, IV (1) : 1.5.8.ESR (1):	EN/prEN : Clause :	Other :

Key words : noise, machines

Question :

How is it to be ensured that the essential requirement of Section 1.5.8. of Annex I (risks of noise emitted by machines) is being satisfied by machines entering into the field of application of Annex IV ?

Recommended solution :

EC type examination for all machines entering into the field of application of Annex IV must include verification of all the essential requirements stated in Annex I, including the requirements which are recognised as not constituting the basis of this examination :

- either by checking that the requirements directly applied by the manufacturer are adhered to
- or by checking that the harmonised standard or standards have been used correctly, as regards the essential requirements covered by these standards, when the manufacturer has made reference to them

Taking noise as an example, the essential requirement aimed at in Section 1.5.8. of Annex I :

The notified body must, in general, abide by the declaration of the manufacturer as stated in the instruction manual (point f of 1.7.4.) and should not

- carry out the measurement again
- or require a certificate by a third party if the measurements and the equipment used comply with the relevant standards

At the meeting of 4 July 1993, the 89/392 Committee stated that the role of the notified body should be limited to :

- verifying that all measures have indeed been taken to ensure that noise has been reduced to the lowest possible level (by isolating the transmission components, for instance)
- verifying that the manufacturer has indeed indicated in the instruction manual both this noise level and the methods used to reach the result shown.
- In the case of a bad indication of the emission level or when the stated emission level is clearly at odds with reality, the notified body must ask for explanations from the manufacturer. In this case, it should carry out further measurements and, afterwards, refuse the EC type examination. Systematic verification of the emission level is, however, not envisaged.

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/00.502 Revision 03 Language : E

Number of pages : 2	Date :20/10/98	To be approved by :	Approved on :
Origin : Horizontal Committee		☐ Vertical Group..... ☑ Horizontal Committee .....18/09/97 ☑ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.5.10 and 1.5.11	EN/prEN : Clause :	Other :

Key words : EMC, Emissions, Immunity.

Question :

How to take account of electromagnetic effects in the context of the machinery directive?

Recommended solution :

Generally speaking, the machinery directive and the EMC directive are complementary (see the European Commission's compatibility guide mentioned below). Neither of the directives can be considered specific, given the different nature of the essential requirements defined by the two directives (radiation and employee safety for the machinery directive and electromagnetic compatibility for the EMC directive).

This being said, it should be borne in mind that there are two aspects to the problem:

? Emissions (not causing interference in the environment): this point is raised in paragraph 1.5.10 of Annex I of the machinery directive (risks due to radiation). It has two facets:
  - ? induced effects on the performance of machinery and equipment: : this aspect is covered by the EMC directive ;
  - ? the physiological effects on human beings : this aspect is adequately covered by, among others, the IRPA (1) and NRPB (2) guides. For conventional machines, there is normally no risk in this field.

  The analysis of these risks by the manufacturer is compulsory.

? Immunity (not being influenced by electromagnetic interference): this point is raised in paragraph 1.5.11 of Annex I of the machinery directive (risks due to external radiation). Electromagnetic interference also constitutes an external influence under paragraph 1.2.1, with effect on paragraph 1.2.7 (failure of the control circuit). The manufacturer must ensure that the interference does not create a dangerous situation. According to the directive, there must not be :
  - ? untimely start-up;
  - ? prevention of the machine being stopped if the instruction to do so is given;
  - ? fall or ejection or a component of the machine or a part held by the machine;
  - ? prevention of automatic or manual stopping of the mobile components, whatever they are ;
  - ? ineffectiveness of protective equipment.

  It is also clear that interference must not cause the machine to make sudden random movements.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

The manufacturer and any notified body which may be involved in the conformity assessment process must ensure that these rather particular aspects are properly dealt with. We should bear in mind that effects of interference on the machine are covered specifically by the EMC directive and not the machinery directive. The following are possible approaches :

- reports drawn up by competent EMC bodies ;
- declarations of conformity to the EMC directive for components, apparatus, systems forming part of the machine ;
- analysis of the electrical circuit to determine whether the electromagnetic interference is likely to create a dangerous situation. The designer may have decided to guarantee immunity by using electromechanical devices which are not vulnerable to interference. In this case of complex control circuits, the manufacturer must make a risk analysis to evaluate the effect of faults. This analysis is to be included in the technical file.

It is often impossible to verify by testing whether a large machine is immune. In this case, the immunity of the electronic control systems and safety components is to be checked.

(1) International Radiation Protection Association
PO Box 662 - 5600 Ar - Eindhoven - Netherlands

(2) National Radiological Protection Board
Chilton - Didcot - Oxon - United Kingdom

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.002 Revision 02 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	21/07/95 12/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 2.3 c	EN/prEN : Clause :	Other :

Key words : Braking systems, braking time, sanding machine, abrasive tool

Question :

Clause 2.3 c) of annex I requires, that woodworking machines be fitted with automatic brakes which stop the tool in a sufficiently short time if there is a risk of contact with the tool whilst it runs down.

l. What does a sufficiently short time means? Is a brake not necessary if there is no risk of contact with the tool but the rundown time is very long e.g. 5 minutes so that it is to expected that the user will not accept such a long time?

2. Manufacturers of sanding machines with accessible sanding tool i.e. disc sanding machines, belt sanding machines do not fit the machines with automatic brakes with the argumentation that sanding discs or sanding belts are no tools. Is this correct?

Solution :

1 . Braking time

-Machines where the tool is accessible whilst it runs down:

An automatic brake shall be provided for each tool spindle where the unbraked run-down time is more than 10 seconds, The braking time shall be

- less than 10 seconds, or
- where the run-up time exceeds 10 seconds, be less than the run-up time but shall in no case exceed 30 seconds.

- Machines where the tool is not accessible whilst it runs down i.e. is guarded with a fixed guard and/or movable guard with guard locking:

An automatic brake shall be provided for each tool spindle where the unbraked run-down time is more than 30 seconds. The braking time shall be less than 30 seconds.

This time may be increased up to a maximum of 80 seconds on high output machines with infrequent set-up.

2. Sanding machines

In most cases sanding tools are a type of abrasive tool and therefore machines with such tools need an automatic brake if there is a risk of contact with the tool whilst it runs down.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.004 Revision 02 Language : E

Number of pages : 2	Date :23/06/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group.....21/07/95 ☐ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : IV ESR (1) :	EN/prEN : Clause :	Other :

Key words : Manual loading, manual unloading, manual feed

Question :

According to a statement of the Standing Committee (Q.35, A.35) machines are considered to be manual loaded except where feeding devices are attached and fulfil the following criteria:

"- it takes the blank from a nearby pile ..... and brings it automatically to the machine tool,

- it is integrated with the machine's central circuit in such a way that the machine cannot be hand loaded by the operator when the feeding device is out of order or has been deliberately shut down."

How can we make manual loading and/or unloading more understandable and is the machine shown in the enclosure to be considered as a machine with manual loading and/or unloading?

Solution :

Manual loading and/or unloading occurs when it is possible for the operator to have direct contact with the workpiece when it is in contact with the tool (see figure 1) . Machines like figure 2 and figure 3 are not Annex IV if separate use of the machine without the conveyor system is impossible and the tools are out of reach of the user.

Manual feed occurs when either the workpiece or the tool is manually moved during machining.

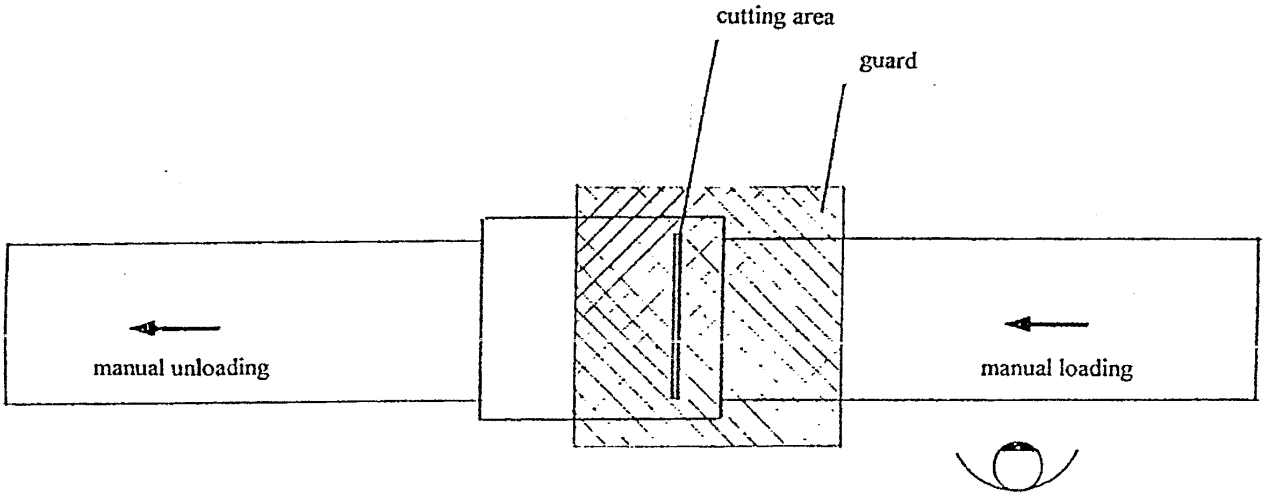


Figure 1

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

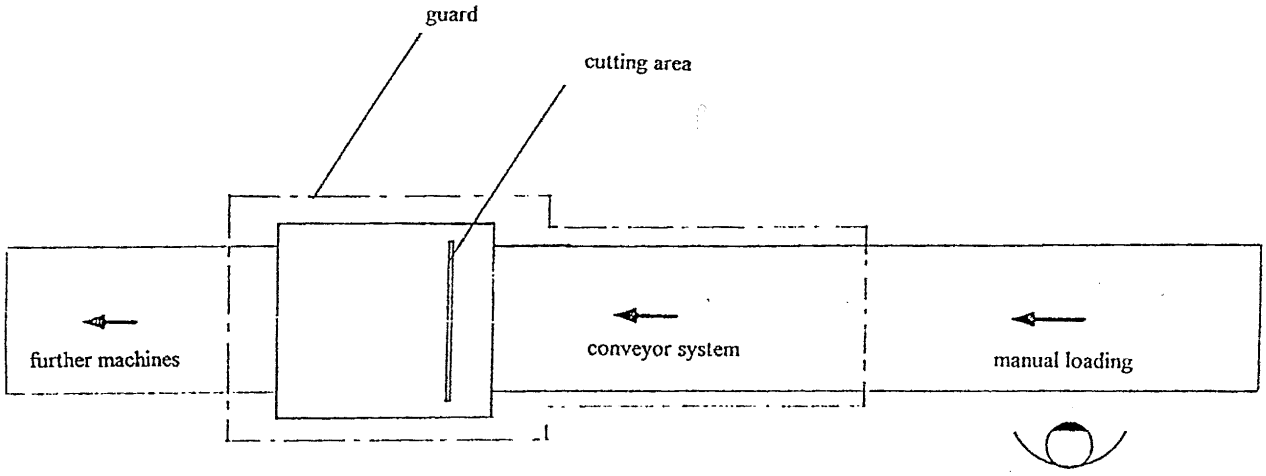


Figure 2

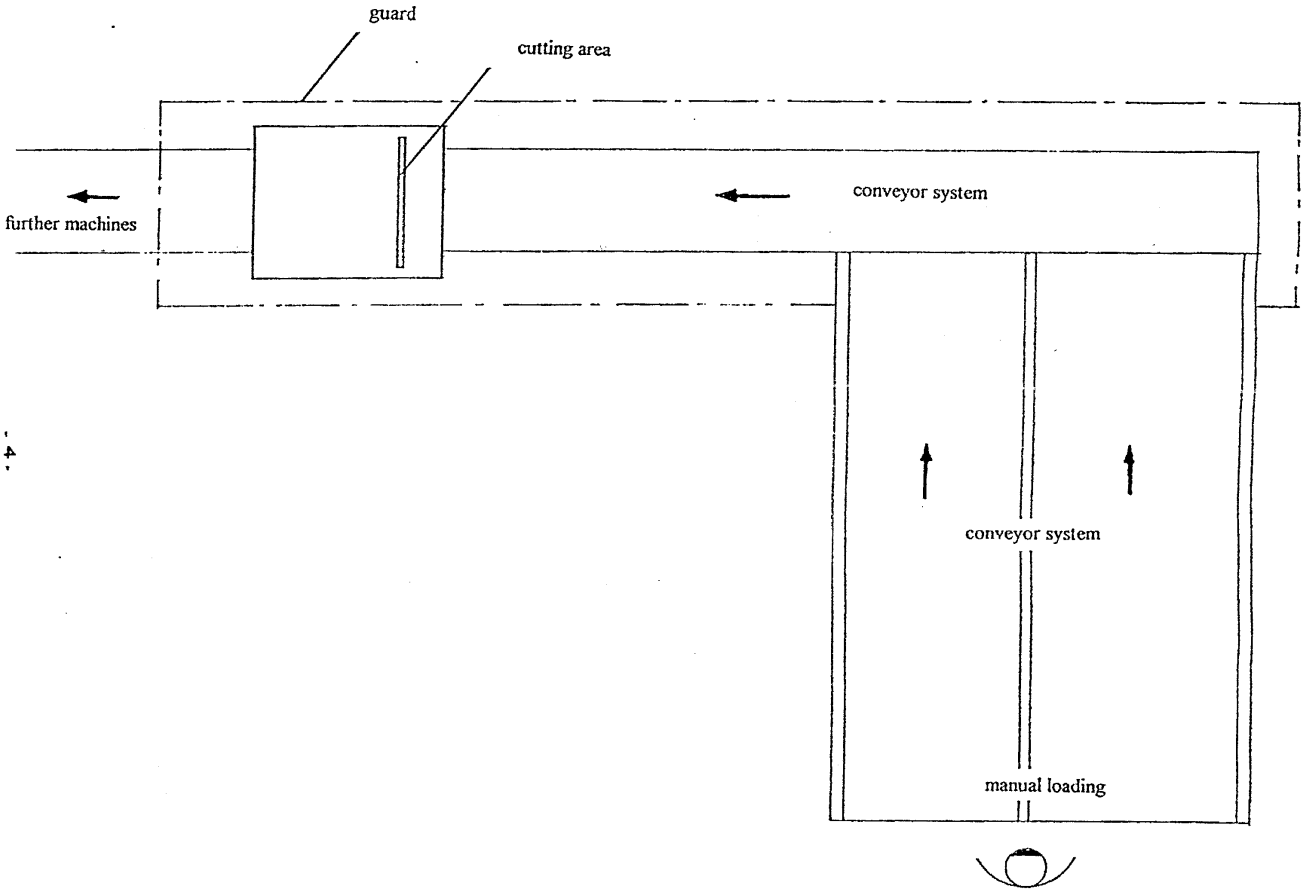


Figure 3

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.005 Revision 02 Language : E

Number of pages : 1	Date :09/09/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	07/02/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.7 and 1.4	EN/prEN : Clause :	Other :

Key words : Guards

Question :

When a manufacturer equips a machine with an additional guard (a basic guard supplied is according to the requirements of the essential safety requirements of the directive), should this additional guard meet all the requirements set for his guard as described in clause 1.4 ?

Solution :

The designer has to make the risk analysis taking into account the foreseeable use of the machine. The chosen solution could be a guard or an association of different kinds of guards and/or protective devices. Each one shall comply with the requirements in annex I of the machinery directive for the chosen system. As a help European Standards or European draft standards in the final vote can be used if applicable.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.006 Revision 01 Language : E

Number of pages : 1	Date :21/10/96	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group.....21/07/95 ☐ Horizontal Committee .....12/12/95 ☑ Standing Committee	

Question related to : Directive 89/392/EEC Annex : I and IV ESR (1) : 1.3.5	EN/prEN : 940 Clause : [(pr)EN]	Other :

Key words :

Question :

Should the notified body limit the EC type examination of combined machinery for working with wood and analogous materials to those units on the list In Annex IV?

Solution :

We have to consider on the one hand combined machinery on the list of Annex IV and on the other hand machines using one footing for different process modes.

1/ combined machinery

A combined machine for working wood and similar materials includes from 2 to 6 units In the same frame. The operator is machining a workpiece by manual loading an/or feeding on one only and must load this piece by hand between two operations (units).

In the case of six units, five are in the list of Annex IV (planing, thicknessing, circular sawing, moulding and tenoning) ; one is not in this annex (drill mortising) and is proposed in general by manufacturers as an option.

The most Important part, and cost, of the EC type examination is covered by annex IV units verification. Regarding for example the prEN 940, few requirements are related to the mortising unit : the notified bodies should examine the total combined machine.

2/ Machine using the tooling for different process modes.

This machine is not defined as a combined machine, but it carries out different processes by using one tool mounted in a particular shape of the frame. The most common example is a semi stationnary circular sawing machine with manual loading and feeding, used either as a table saw (annex IV) or a down entering cross cut saw (non annex IV).

The design of this machine is so that when considering the table saw, the cutting area of the circular saw is the non cutting area of the cross cut saw and vice versa. The notified body can't test the annex IV machine without checking the non annex IV machine : guarding, dust extraction, changing the blade at least are bounded together.

For these reasons, to be sure that the annex IV machine satisfies the relevant requirements of the Directive, the notified body should examine the complete machine.

In both cases, it should carry out the EC type examination to the complete machine.

Note : Editorial comments from Member States

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.007 Revision 02 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group.....21/07/95 ☐ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : IV - point 4 ESR (1) :	EN/prEN : Clause :	Other :

Key words : Bandsaw machines

Question :

Bandsawing machines with a travelling table (usually known as "chariot"), mostly those with large dimensions, are designed and manufactured for incorporation in a complex installation, where usually the feed and removal are carried out by mechanical equipment (feed rollers). In this case there's no hand feed or removal.

In this case, may I conclude that these machines are not in Annex IV of the Machinery-Directive?

Solution :

If the machine is designed to be incorporated in an installation and cannot function independently, this machine does not belong to Annex IV and the manufacturer shall provide a manufacturer's declaration according to Annex II B.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.012 Revision 02 Language : E

Number of pages : 1	Date :21/10/96	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group.....07/02/96 ☐ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : IV-4 ESR (1) :	EN/prEN : Clause :	Other :

Key words : EC type-examination certificate, state of the art

Question :

What should a notified body do with a given EC type-examination certificate if the state of the art has changed e.g. by published new harmonized standard?

Solution :

The notified body should check if further measures are necessary and inform the manufacturer.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.017 Revision 03 Language : E

Number of pages : 1	Date :12/05/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	21/10/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : II ESR (1) :	EN/prEN : Clause :	Other :

Key words : EC declaration / Declaration by the manufacturer

Question :

If an EC type-examination is carried out, how far shall the Notified Body check the EC declaration (Annex II A) or declaration by the manufacturer (Annex II B) :

1) accept as it is,

2) check with regard to formal aspects only,

3) complete check of the contents with regard to formal aspects, all relevant provisions, reference to harmonized standards and other specifications?

Solution :

The Notified Body should carry out a check according to point 3) of the above question.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.019 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group.....21/10/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.5	EN/prEN : 940 (06/1996) Clause : [(pr)EN] 5.2.3.2.	Other :

Key words : Combined woodworking machines.

Question :

According section 5.2.3.2 of pr EN 940, on combined woodworking machines with tenoning-sawing mode, the saw element shall be capable of horizontal movement in the direction of the saw spindle axis and it shall not be permitted to reposition the saw blade along the saw spindle.

Could the VG1 clarify this requirement?

Solution :

It's not permitted to move the saw blade only on the spindle.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.020 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	21/10/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.5	EN/prEN : 940 (06/1996) Clause : [(pr)EN] 5.2.3.3	Other :

Key words : Combined woodworking machines

Question :

1- Should combined woodworking machines with surfacing planing / thicknesser / mortising / circular saw elements without vertical spindle moulder element be provided with means to lower the saw spindle and the upper guard completely below the table when this element is not in use?

2- If the clause 5.2.3.3 is not applicable to this machine, what safety requirements shall be taken?

Solution :

1- On combined woodworking machines with surfacing planing / thicknesser / mortising / circular saw elements without vertical spindle moulder element it is not required to lower the saw spindle and the upper guard under the table, when mounted on the riving knife, if this unit in its rest position is not in conflict with the use of other elements, considered one by one (E.S.R. 1.3.5).

2- The Notified Body should verify that :

* starting of the circular saw element is not permitted when starting other elements (e.g. b y checking relevant circuit diagrams and/or drawings and functional testing of the machine),

* according to the foreseeable use for planing described in the instructions handbook the adjustment of the fence and the feed of the workpiece are not restricted by the circular saw element (functional testing of the machine).

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/01.022 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG1 Woodworking machinery		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	21/10/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.4.2.2	EN/prEN : 1807-1 (09/1996) Clause : [(pr)EN] 5.2.7.1.1	Other :

Key words : Band sawing machines / Guards / Non cutting area

Question :

In case of using a movable guard to gain access to moving parts of the machine, then pr EN 1807-1, clause 5.2.7.1.1, requires an interlocking movable guard.

Why is this movable guard not interlocked with guard locking?

Recommended solution :

For choosing the type of movable guard (interlocked or interlocked with guard locking), the Notified Body shall take into account of the access to the band saw in the non cutting area and its stopping time.

The table below gives indications for choosing the correct solution.

Access to the band saw	Stopping time of the band saw	Type of movable guard
No	Not relevant	Interlocked
Yes	Less or equal to 10 sec.	Interlocked
Yes	more than 10 sec.	Interlocked with guard locking

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.002 Revision 05 Language : E

Number of pages : 1	Date :24/09/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....11/12/95 ☑ Horizontal Committee .....12/12/95 ☑ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : IV-9 ESR (1) :	EN/prEN : Clause :	Other :

Key words : Presses. Metal. Field of application

Question :

Which categories of metal presses are referred to in Annex IV A, point 9, of the "machine directive". ?

Recommended solution :

1) By cold working it is understood that there is a possibility of the operator placing or removing a metallic item from the machine with bare hands without risk of burning.
Under these conditions the temperature of the item must never exceed 65°C corresponding to a maximum contact time of one second with bare, non-coated metal (cf. prEN 563).

2) By metal, it is understood to be a material, either in sheet, rolled conditions, or forged form. Powders, not necessarily metallic, irons, and concrete meshes are excluded from this definition.

3) By cold metal working it is understood to be a transformation process either by folding, stamping, or cutting, etc.
Only presses whose movable working parts are driven by an alternative movement having the two following constructional characteristics are referred to :
- a travel of greater than 6 mm,
- a closing speed superior to 30 mm/sec. (see CNB/M/03.042R/E Rev 02)

Regarding mechanical presses, the instantaneous speed reached by the movable working parts at the mid-point of their travel during their ascent and descent should be taken into consideration, as it is maximum in either of these positions.

4) Exclusion from annex IV A for the machines whose principal purpose is :
- sheet metal cutting by guillotine (guillotine shears),
- attaching a fastener, e.g. riveting, stapling or stitching, fastening etc...(erection, dismantling machines)- assembling e.g. bearings (simple assembling presses)- bending or folding (bending machines, bending presses)
- calibrating- straightening (straightening presses, planing presses),
- turret punch pressing (punching and nibbling machines),
- extruding (extruder presses),
- drop forging or drop stamping,
- compaction of metal powder (presses for compacting powders),
- punching (punching machines)
- blow forging (blow forging presses),
- isostatic forming (isostatic presses for metal powder, for complex parts of sheet material)

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.004 Revision 05 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....12/12/95 ☐ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : VI point 2 ESR (1):	EN/prEN : Clause :	Other :

Key words : Technical file

Question :

What shall be the contents of a press technical file ?

Solution : The content of the technical file is defined by annex VI point 2 of the directive. It should contain at least the following :

1st dash (related to the annex VI point 2 about the technical file)
- Dimensions of the machine related to the protective means (general drawings with dimensions of accesses to the dangerous parts),
- Location diagram of the electrical components on the press (in the cabinet, on the frame...)
- Location diagram of the hydraulic and pneumatic components

2nd dash- Functional schematics of the control circuits (hydraulic, electric, pneumatic, mechanic...),
- Description of the time sequences, e.g. functional characteristics of the valves
- Diagrams for cams, selector switches,- A component list with data sheets and instructions for use of certified safety components.
- Drawings of the guards (dimensions, material, cams, attachments...),
- Drawings of the power flow related to the safety (flywheel, slide, piston, ejectors, handling devices...),
- Positioning of the controls (selector switches, emergency stops, pedal...),
- Positioning of the guards and the protective devices to prevent the possibilities of access,
- Calculations or references about experiences with well tried components...,(see separate technical sheet n° ..)
- Declaration of conformity for safety components.
- Notes, results, tests (for example stopping time)
- Declaration of conformity with the EMC directive from the lst/01/96 (see CNB/M/03.006/R/E Rev02 and CNB/M/03.021/R/E Rev 03)
- Declaration of conformity with the low voltage directive from the lst/01/97 (see CNB/M/03.067/R/E Rev 03)
- Declaration of conformity with others related directives concerning hazardous aspects

3rd-dash As parts of the risk assessment, the designer shall verify whether the list of hazards in table 1 of Pr EN692, 693, ... is exhaustive and applicable to the press under consideration.

If additional hazard is identified the risk assessment has to be carried out and the measures taken to eliminate or reduce this risk shall to be described

4th dash Recommendation for the handbook :
- Where the protective means are described, the associated safety instructions shall also be given and highlighted.

There shall be, at least, one clause containing safety instructions, with reference to the description of the protective devices.
- The instruction handbook may give additional information.

5th dash See technical sheet CNB/M/03.003 RER 03 on 13/12/95

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.005 Revision 02 Language : E

Number of pages : 1	Date :22/05/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....22/05/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC	EN/prEN :	Other :
Annex : ESR (1) : 1.6.2	Clause :	

Key words : Platform, ladders

Question :

E.S.R. 1.6.2 requires a manufacturer of a press, to provide means of access to the points (for maintenance reasons) :

Do those requirements force the manufacturer to provide every type of press with a working platform at the top and ladders for access, to work safely in maintenance operations?

In which conditions is this E.S.R. may be considered non applicable?

Solution :

Adjustments, inspections, lubrication on raised workstation (at the top of the press...) shall require a platform and a permanent access. For repair only, no platform is required.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.007 Revision 02 Language : E

Number of pages : 1	Date :14/12/94	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....14/12/94 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

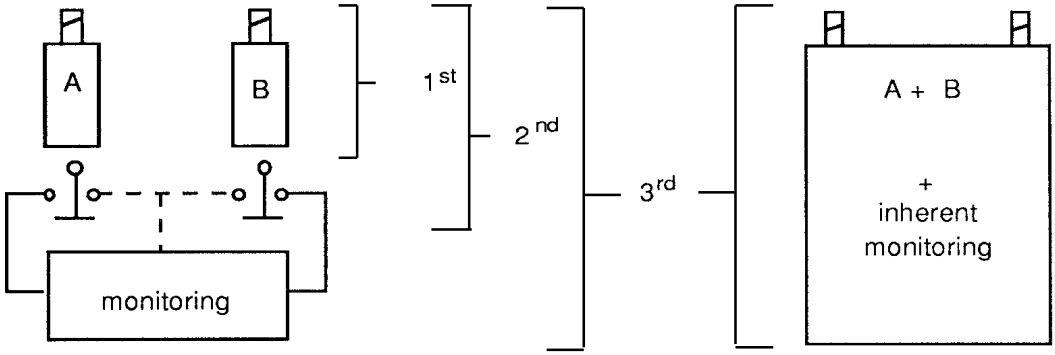
Question related to : Annex : ESR (1):	EN/prEN : 692 Clause : [(pr)EN] 5.4.2.3	Other :

Key words : Safety components - Safety valve

Question :

What are the minimum characteristics that a valve has to fulfil to be considered as a safety component submit to the CE declaration of conformity ?

Solution :



lst level : 2 simple valves or a double bodied valve. It is a simple redundancy, each valve or the double bodied valve are not considered as safety components.

2nd level : a double bodied valve integrating sensors of the positions of each valve.
This will insure redundancy and is designed to permit the monitoring of the two valves within an adequate circuit. It is a safety component, it is a safety valve.

3rd level : a double bodied valve integrating redundancy, sensors of the two valves, with an automatic monitoring or an inherent monitoring. This valve is a safety component, it is a safety valve.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.009 Revision 04 Language : E

Number of pages : 1	Date :19/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Article 8 Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : product families/series

Question :

What is a family and/or a series ?

Solution :

Series : number of products of the same family and size (identical machines with options)
Family : variation in size (variation of one type or size)

Main criteria classifying a family :
- the risks are exactly the same
- same guarding / protection
- the control circuits have the same scheme
- same mode of production / protection / initiation
- differences only in size.

Possible variations which may need examination or testing :
- drive systems / main drive / revolutions (per minute)
- EN 60204-1 protection against direct and indirect contact, fire
- power / voltage
- force (calculation of parts in the power-flow, practical experiences, research, references ...)
- stopping performances
- weight of closing movable guards
- gaps between guards and tools area.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.013 Revision 04 Language : E

Number of pages : 1	Date :16/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Article 8 Annex : ESR (1):	EN/prEN : 692/693 Clause : [(pr)EN] 5.4.4.2/5.4.3.2	Other :

Key words : acceptability of components of type examined presses

Question : If a:
- two hand control device
- active opto-electronic protective device
- cyclic moving interlocking guard
- rotary cam gear
- control system
- overrun detection etc.

is examined under an EC-Type-Examination of a press, should the results be respected and accepted by other notified bodies testing other presses (also of other press manufacturers) in relation to the above mentioned components ?

Solution :

Normally no.
However, if there are separate certificates for single components, the following shall be taken into consideration :

1 - Certificates from notified bodies for safety components, established in Annex IV B, shall be accepted by notified bodies for presses.
2 - Certificates from notified bodies for safety components which are specific to presses and which are not listed in annex IV will be accepted by notified bodies for presses only if these components have been examined and certified by a notified body for presses.
3 - Certificates of accredited Test and Certification bodies may be accepted by notified bodies for presses.

Note : The notified body examining a press should have all the necessary technical data for installation and operation of the component.

Sent for information to ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.014 Revision 03 Language : E

Number of pages : 1	Date :22/05/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		? Vertical Group.....22/05/95 ? Horizontal Committee .....17/04/96 ? Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Article 8.2.b Annex : ESR (1):	EN/prEN : 50100-1/2, 574, 953, Clause : [(pr)EN]	Other :

Key words : Harmonized B-type standards- unavailability.

Question :

Will a EC-type examination be required for presses when the C-type standard is harmonized and the B-type standards for components and safety components are not yet harmonized ?

Solution :

No, but Pr EN's may be used to check the conformity with the ESR'S.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.019 Revision 04 Language : E

Number of pages : 1	Date :31/10/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....18/09/95 ☑ Horizontal Committee .....18/09/97 ☐ Standing Committee	

Question related to : Directive 89/392/EEC Annex : IV- B3 ESR (1):	EN/prEN : Clause :	Other :

Key words : automatic movable screen

Question :

What kind of safeguarding is mentioned in Annex IV-B3?

Solution :

A cyclic moving interlocking guard (with or without guard locking, may be an early opening and control guard) which permits the operator to load or/and unload the machine manually in accordance with each single cycle (stroke). The guard movement should not itself present a hazard to the operators.

Note : Question addressed by Article 6.2 Committee.

Sent for information to :☑ members of the VG ☑ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.022 Revision 05 Language : E

Number of pages : 1	Date :31/10/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	13/12/95 18/09/97 08/06/98

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : 692 Clause : [(pr)EN] 5.4.2.3	Other :

Key words : Intrinsically safe pneumatic valve

Question :

If an intrinsically safe pneumatic valve fails, the press cannot be started or it stops immediately and no further start is possible. After disconnecting the energy supply or if there is air leakage in the valve, the valve may restore itself and a further cycle can be initiated after reconnection of the supply. Is that acceptable ?

Solution :

Yes, because no hazard arises and the fault becomes obvious (self revealing) the next time the valve fails. This is only true if initiating the cycle is a deliberate action by the operator.

Sent for information to :☑ members of the VG ☑ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.023 Revision 04 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....12/12/95 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1):	EN/prEN : Press brakes Clause : [(pr)EN] 5.3.25	Other :

Key words : Back gauges

Question :

Which protection measures shall be provided against movements of the programmable back gauges?

Solution :

(see TC143/WGl secr. N 209R02)

5.3.25 When the operator is not protected by the light curtain or other safeguards against hazardous movements at programmable back gauges, such as those towards the operator, sidewards and upwards, the following measures either singly or in combination shall be taken:

a) movement initiation by the operator ,

b) the demarcation of a zone in which only reduced speed (less than or equal to 2 m/min.) or limited force (less than or equal to 150 N) only is possible.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.026 Revision 04 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : Press brakes Clause : [(pr)EN] 5.3.21/5.3.17	Other :

Key words : Foot switches for press brakes

Question :

Interpreting the draft standard on press brakes, we conclude that: :

If the access to the tools area is not protected by electrosensitive equipment (ESPE) or other means of protection that prevent the operator from reaching the tools area, the machine can only be actuated by foot switches when it is operated at slow speed (<=10 mm/s) ?

Solution :

This is a correct interpretation.

The use of foot pedal without other safeguarding requires slow speed (<= 10 mm/s) and hold to run control. After muting an ESPD or a THCD, slow speed (<=10 mm/s) and a hold to run control shall be automatically in operation.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.027 Revision 05 Language : E

Number of pages : 1	Date :04/03/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	04/03/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.8.B	EN/prEN : 692/693 Clause : [(pr)EN] 5.3.13	Other :

Key words : Secondary protection/THCD/AOPD

Question :

If a large press is safeguarded by light curtains and the tools area has to be entered by operators, what is considered as an acceptable level of protection ?

Normally, the table height is less than 750 mm, sometimes zero. Considering the recommended solution, may a single push button with monitoring and reset function be an acceptable level of protection ?

Solution :

1. The light curtain can act here only as a secondary protection measure to protect third persons.
2, Each operator has to use a two hand control device (THCD) type 3C to initiate the stroke.
3, Each two hand control device requires a synchronous operation, the THCD's one with another require only simultaneous operation.

After an interruption of the light curtain, during the dangerous movement, the reset function has to be actuated before further movement can be initiated.

Sent for information to :☐ members of the VG ☐ other(s) VG ☑ HC (2) ☑ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.028 Revision 05 Language : E

Number of pages : 1	Date :31/10/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	18/09/95 18/09/97 08/06/98

Question related to : 89/392/EEC Annex : I ESR (1): 1.1.2	EN/prEN : 692 Clause : [(pr)EN] 5.2.1.2	Other :

Key words : Failing of springs in the brake

Question :

How should verification of function with only 50% of the springs operating be carried out ?

Solution :

If there is a spring assembly in a circular formation, 50% of only one side (180° of the core diameter) shall guarantee correct engagement of the brake.

If this or a similar case occurs on a press, there will be an overrun of the crankshaft and the overrun detection device shall inhibit the initiation of a further stroke.

The test shall be conducted in a way compatible for other spring arrangements.

References : see CNB/M/03.008/R/E/Rev04, CNB/M/03.073/R/E/Rev04

Sent for information to :☑ members of the VG ☑ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.029 Revision 03 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	18/09/95 13/12/95 04/06/96

Question related to : 89/392/EEC Annex : I ESR (1): 1.3.7	EN/prEN : 692/693 Clause : [(pr)EN] 5.3.13 (692 Annex E)	Other :

Key words : Reaching over, under and around the detection zone

Question :

Which tables in EN 294 can be used to determine safety distances for reaching over, under and around the detection zone of a light curtain?

Solution :

For reaching under and around the light curtain, tables 3, 4 and 6 shall be followed.

For reaching over, table 1 may be used because there is no support for the arms by a physical guard ; the light curtain will be interrupted using these correlating values.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.030 Revision 04 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1):	EN/prEN : TC143/WG1 N 209-2 Clause : [(pr)EN] 5.4.1.1 and Annex C, Figure C1	Other :

Key words : Redundant and monitored control system for press brakes

Question :

Which requirements shall be fulfilled in the machine control system of a press brake

Solution :

:

(See 5.4.1.4 of TC/143-WGI N 209-2)

The redundant and monitored control system shall operate in two separate functioning systems. Either system shall be independently capable of stopping the hazardous movement, irrespective of the condition of the other. Failure of either system shall be detected through monitoring, and another closing stroke prevented. If failure of one system is self-revealing, i.e. the loss of the function itself prevents the next operating cycle, further monitoring of that system is not required. Each cylinder capable of independent movement shall be provided with redundant and monitored functions (see figure C.2)

Note : Mechanically linked cylinders e.g. by a tension bar are considered as a single cylinder.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.032 Revision 03 Language : E

Number of pages : 1	Date :17 juillet 1998	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....18/09/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.3.8.B	EN/prEN : TC143/WG1 Clause : [(pr)EN] 5.3.19.1/5.3.17.1	Other :

Key words : Fixing the tools, failure of one component

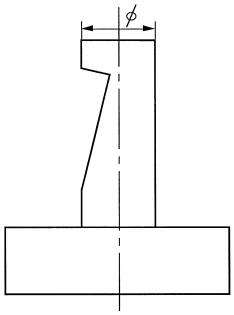
Question :

Sometimes, single components are used to fix the tool (rod, latch, screw).

What requirement does a single component have to fulfil ?

Solution :

One screw with a nut for blocking up will be sufficient. Adequate strength has to be achieved. See following figure.



Sent for information to :☐ members of the VG ☐ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.033 Revision 03 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.3.8.B	EN/prEN : 692/693 Clause : [(pr)EN] 5.3.1	Other :

Key words : Protection measures die cushion and workpiece ejector

Question :

If there are dangerous movements of the die cushions and workpiece ejectors, in which kind/category of the control system shall the safety related parts be designed and constructed ? (active actuation)

Solution :

The dangerous/hazardous movements shall be initiated and stopped in an electrical, pneumatic or hydraulic circuit with redundant and monitored function.

Sent for information to :☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.034 Revision 04 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.3.8.A	EN/prEN : 693 Clause : [(pr)EN] 5.6	Other :

Key words : Crushing, shearing hazards - cams and switches

Question :
Small hydraulic presses without guideways for the ram often have bars with cams for stroke length adjustment.
What action must be taken to avoid any crushing and shearing hazards ?

Solution :

Bars with cams and switches shall be safeguarded so that the danger zone cannot be reached (EN 294). The distance between the connecting rod and the next fixed part of the press shall not be less than 100 mm (hands safety - EN349)
See CNB/M/03.035/R/E Rev 03

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.035 Revision 03 Language : E

Number of pages : 2	Date :21/10/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	11/12/95 12/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.3.8.A	EN/prEN : 693 Clause : [(pr)EN] 5.6	Other :

Key words : crushing hazards, ramframe

Question : Small hydraulic presses often create a crushing hazard between the frame (bottom of the cylinder) and the ram. Which method is appropriate to avoid the hazard?

Solution :

See attached figures 1 to 6 and table 1 of standard EN 349 .
If the head can be inserted, the distance shall be equal or more than 300 mm.
(see CNB/M/03.034/R/E Rev 03)

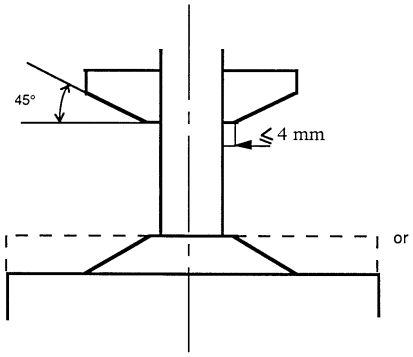


Figure 1

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

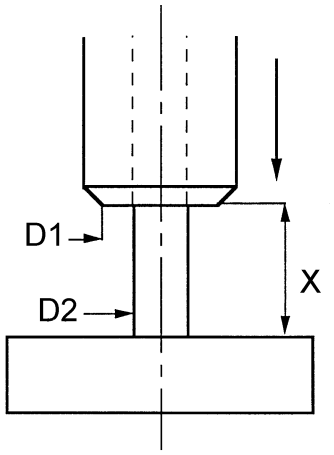


Figure 2

		D1 - D2	= 6 mm	X	=	6 mm
6 mm	<	D1 - D2	= 25 mm	X	=	25 mm
25 mm	<	D1 - D2	= 100 mm	X	=	100 mm
100 mm	<	D1 - D2		X	=	100 mm

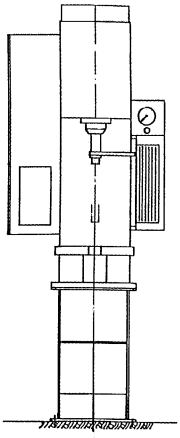


Figure 3

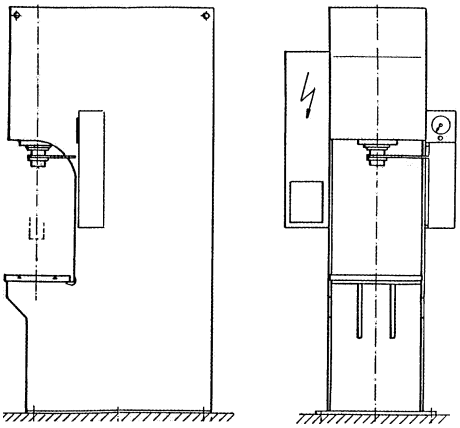


Figure 4

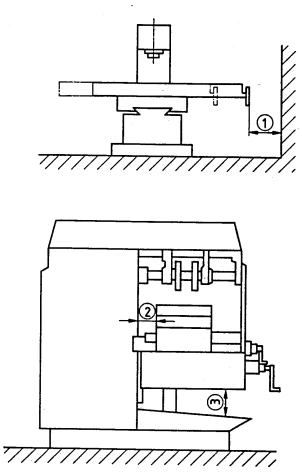


Figure 5

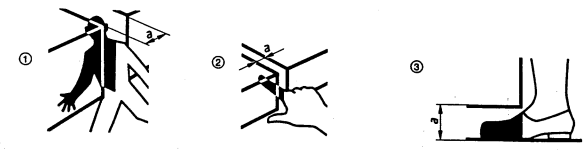


Figure 6 (Fig. A.1 from EN 349)

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.037 Revision 04 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....11/12/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : IV B3 ESR (1) :	EN/prEN : 692 Clause : [(pr)EN] 5.3.10, 5.3.11, 5.3.12	Other :

Key words : Only electromechanical position switches, cyclic movable guard

Question :

Do other solutions with sensors, proximity sensors (switches) at cyclic movable guards require an EC type examination of the press?

Solution :

This is a deviation from the standard and EC type examination is required.

If proximity switches are used to achieve the same level of protection the following requirements shall be fulfilled :

1. cyclic monitoring in accordance with category IV of EN 954 - 1

2. well tried components and principles

3. diversity of the sensors or diversity of the functioning of the sensors.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.038 Revision 06 Language : E

Number of pages : 1	Date :17/07/98	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	15/04/97 18/09/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.1	EN/prEN : 12.622:96 / 693:96 Clause : [(pr)EN]: 5.4.1.3, 5.4.1.4 / 5.4.1.3, 5.4.1.5	Other :

Key words : Fault exclusion/directional valve

Question :

Are there fault exclusions possible dealing with hydraulic directional valves ?

Solution :

No ! Because the break of a spring or a blockage of the piston will not let return that valve to the safe position.

See also CNB/M/03.069/R/E/Rev02

Sent for information to : ☐ members of the VG ☐ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.039 Revision 04 Language : E

Number of pages : 2	Date :23/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....11/12/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.7	EN/prEN : 692 Clause : [(pr)EN] 5.3.13	Other :

Key words : Permissible gap between light curtain and press table

Question :

Access of the body will be detected if the gap is less than 75 mm.
How can the problem be solved ?

Solution :

a) All reaching situations have to be considered.

b) Normally, gaps of 75 mm, 40 mm and 30 mm are too large to prevent hands and arms reaching the danger zones.

c) Different solutions are possible (see page 2).

See CNB/M/03.049/R/E/Rev02

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

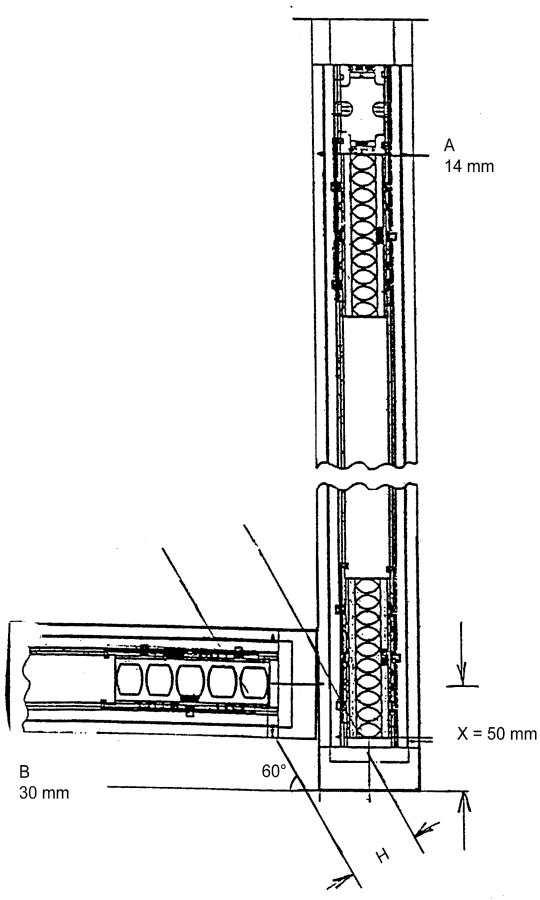
(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

In this case : protection against access by means of vertically and horizontally arranged light curtains (ESPE using AOPD's).

At the link between the vertical and horizontal light curtains there is a gap which depends on the dimensions and detection capability resolutions of the light curtains.

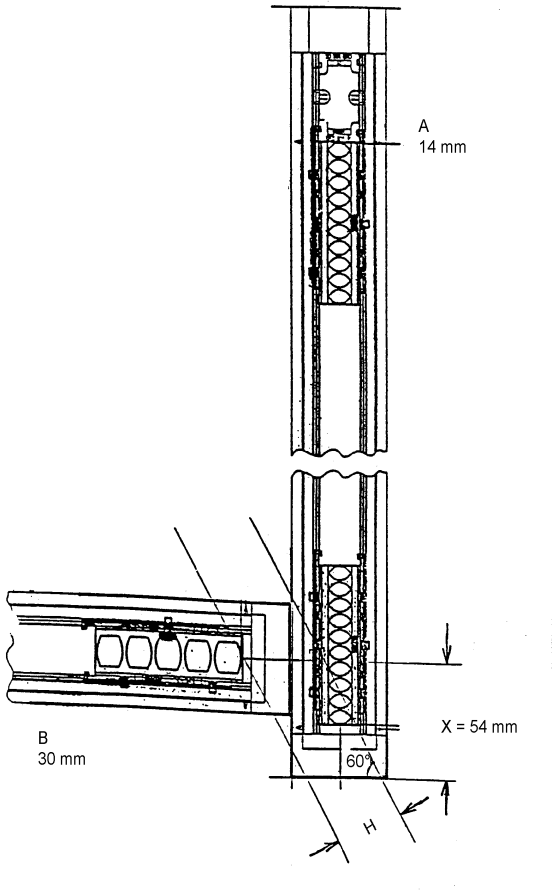
The light curtains have to be arranged so that a forearm of 36 mm thickness and a gripping angle of 60 degrees will completely occlude one light beam. Whenever different combinations are possible, the "safest" method must be used.

Possibility n°1



H = 36 mm
A : Host
B : Guest

Possibility n°2



H = 36 mm
A : Host
B : Guest

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.041 Revision 03 Language : E

Number of pages : 1	Date :18/06/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	11/12/95 13/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.4	EN/prEN : 692/693/EN418 Clause : [(pr)EN] 5.4.8.2/5.4.6.2	Other :

Key words : Stop function, emergency stop function

Question :

Dealing with presses, shall emergency stop disconnect all the energy supplies ?

Solution :

No ! Not in general, but it may do in particular circumstances.
Following the actuation of the emergency stop, all dangerous movements have to stop and the central control system shall prevent any further dangerous movement.
Cutting the energy supply to the actuators of the dangerous moving parts is acceptable. The emergency stop function shall not create additional hazards.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.042 Revision 02 Language : E

Number of pages : 1	Date :21/10/96	To be approved by : ☑ Vertical Group.....11/12/95 ☐ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	Approved on :
Origin : VG3 Presses for cold working metals			

Question related to : Directive 89/392/EEC Annex : IV - 9 ESR (1) : 1.2.4	EN/prEN : 692/693 Clause : [(pr)EN] 5.4.8.2/5.4.6.2	Other :

Key words :
Travel < 6 mm
Speed <= 30 mm/s

Question :

Is the meaning / interpretation strictly "and" or "either or"?

Solution :

If both conditions exceed , the press is included in Annex IV.
If only one condition exceeds, the press is not included in Annex IV.

Note :
- If the closing speed is equal to or less than 30 mm/s the press is not particularly dangerous but safeguarding in relation to EN 692 and EN 693 is necessary.
- A gap equal to or less than 6 mm can be neglected for the closing movement of the tools.

See CNB/M/03.002R/E Rev 05

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.043 Revision 03 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : 692/693 Clause : [(pr)EN] 5.4.1.3/5.4.7	Other :

Key words : Rotary cam gear

Question :

Is an electronic relay an adequate solution for the monitoring of the correct relationship between the rotation of the crankshaft and the rotation of the cam gear?

Solution :

Where the function of the electronic relay is cyclically monitored, it should be regarded as a sufficient solution.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.044 Revision 03 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : 692/693 Clause : [(pr)EN]	Other :

Key words : Compensation of masses

Question :

Where there is a translatory compensation of the moving masses at the press, can this translatory compensation replace a mechanical restraint device ?

Solution :

That will be seen as the same protection in an equivalent way.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.046 Revision 06 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	10/06/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.6	EN/prEN : 692/693 Clause : [(pr)EN] 5.2.4.4 et 5.2.3.4	Other :

Key words : Leakage speed

Question :

What is the limit value which the leakage speed can not exceed when a single fault occurs in a component of the hydraulic circuit ?

Solution :

If a single fault occurs in a component of the hydraulic circuit, the speed of the beam/slide shall not exceed 10 mm/s due to the leakage (see drawing page 2). Are excluded the components which are tested and locked against unauthorised adjustments (see clauses 5.2.4.4 of prEN 693 and 5.2.3.4 of prEN on Press brakes)

Note : the manual shall include instructions on how to check the leakage speed for all machine, the max. safe leakage speed and the period of checking.

To close a cartridge in an appropriate time, a bleed may be needed to allow the fluid volume to be evacuated (e.g. into a tank). This bleed shall not increase the leakage speed of the slide/ram to more than 5 mm/s, if the cartridge fails and remains in the opened position.

The designer of a press is forced to provide the press (hydraulic circuit) with the largest possible bleed, so that a very short stopping time and an ergonomical acceptable safety distance are achieved.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.049 Revision 02 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	13/12/95 17/04/96 08/06/98

Question related to : Annex : ESR (1) :	EN/prEN : 692 Clause : [(pr)EN] Annex E	Other :

Key words : Preventing access to the danger zone using light curtains

Question :

The standard EN 692 contains values for gaps : 75 mm, 40 mm, 30 mm.

Is there any relationship between ergonomic reaching and standing situations and the gaps ?

Solution :

1 . Il shall not be possible to reach the danger zone with the upper limbs.

2 . It shall not be possible for persons to stand between the guard, the AOPD and the danger zone.

Result : both requirements have to be fulfilled. (see CNB/M/03.039 RE Rev 04)

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.050 Revision 04 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....10/06/96 ☐ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.7 and 1.3.8	EN/prEN : 692 Clause : [(pr)EN] 5.3.18	Other :

Key words : Mechanical restraint device

Question :

What kind of mechanical restraint device can be used?

What is the reference force on which shall be the restraint device calculated ?

Solution :

As mechanical restraint device can be used, e.g :

- a scotch (e.g. a bar between the slide and the press table or in the guide way)
- a second brake
- a self blocking system by friction

The manufacturer has to demonstrate that adequate protection is achieved (e.g. a test report)

The reference force :

- With interlocking :

  The highest possible force of the moving parts caused by the gravity.

- Without interlocking :

  The entire press force.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☑ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.051 Revision 04 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	04/03/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.4	EN/prEN : 692 Clause : [(pr)EN] 5.3.2 and 5.3.11	Other :

Key words : Accessibility using control guards

Question :

Will it be possible to use a control guard if the operator can fully enter the tools area or if he can stand between the guard and the press?

Solution :

No! The use of a control guard shall not be admissible, (see EN 292-2, clause 4.2.2.4)

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.054 Revision 05 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals 0409		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	1996/03/04 11/03/97 08/06/98

Question related to : Annex : ESR (1) :	EN/prEN : 693/692 Clause : [(pr)EN] ((pr)EN 5.3.13 g) iii)	Other :

Key words : Time out for Active Opto-electronic Protective Devices used for cycle initiation

Question :

May Active Opto-electronic Protective Devices be used for cycle initiation if the operating cycle is e. g. 2 minutes ?

Solution :

Yes if the next cycle cannot be initiated more than 30s after the end of the previous cycle.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.055 Revision 04 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	10/06/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.4.3	EN/prEN : 692/693 Clause : [(pr)EN] 5.4.3.2 and 5.4.1.3	Other :

Key words : PES (1) and PPS (2) and safety related functions.

Question :

Clause 5.4.1.3 states : "The start and stop function in the safety related parts of the press control systems shall be hardwired, redundant and monitored." Does it mean that both channels have to be hardwired and monitored?

Solution :

Yes, but using AOPD's (3), early opening features, control guards, interlocking guards (see tables 2, 3 and 4 of EN 692 and 693).

(1) PES : Programmable Electronic Systems

(2) PPS : Programmable Pneumatic Systems

(3) AOPD : Active Opto-electronic Protective Devices

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.057 Revision 03 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	10/06/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : IV-9 ESR (1) :	EN/prEN : 693 Clause : [(pr)EN] 5.3.8	Other :

Key words : Travel exceeding 6 mm, gap exceeding 6 mm.

Question :

Which limit values have to be achieved?

Solution :

Reasons : travel of 6 mm allowed a gap greater than 6 mm which could be dangerous. For example, signing a workpiece with a thickness of 10 mm, the gap without the piece will be 16 mm and the operator can access between the punch and the table with his fingers. Initiating a stroke, the fingers will be compressed to 10 mm.

a) Travel exceeding 6 mm will create a press in accordance with annex IV of 89/392/EEC.

b) a gap between or within the tools shall not exceed 6 mm (close tools), otherwise, additional safe guarding is required (see CNB/03.002 an CNB/03.042).

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.058 Revision 03 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : IV - A9 ESR (1) :	EN/prEN : Clause :	Other :

Key words : Press, feeding, rotary table or magazine

Question :

Must presses be considered included in clause A9 of annex IV, where the feed and removal of the work pieces are made beyond of the danger zone by means of a rotary feed table or magazine ?

Solution :

No, since this type of feed/removal is not considered in the same sense of the annex IV, manual reach between the tools. Nevertheless trapping hazards subsist so that it will be necessary to apply appropriate protection measures, such as fixed guard or movable guard with interlocking.

This kind of machine shall non be suitable for manual feed or removal.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.060 Revision 03 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.2.7, 1.4.3	EN/prEN : prEN 574/prEN 954-1 Clause : [(pr)EN]	Other :

Key words : Pneumatic two hand control devices

Question :

In the case of a press of exclusively pneumatic technology with two hand control, is it acceptable for the application of type III-B devices.

(according to prEN574) ?

Solution :

In the case of exclusively pneumatic technology, the state of the art at present doesn't allow to achieve two hand control devices of type III-C (equivalent to category 4, according to prEN 954-1), so it would be acceptable for the application of devices of type III-B, complemented with the establishment in the handbook of systematic verifications of its performances.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.062 Revision 03 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Pneumatic presses, restraint device

Question :

Is it necessary to use restraint devices in the case of small pneumatic presses, when it is not foreseeable that the moving parts (rod of cylinder, slide and tool) can fall by gravity as their weight cannot overcome the friction force (of seals and wiper) ?

Solution :

If the weight of the moving parts is $\leq \frac{\sum Friction\_forces}{1.5}$ it is considered that the hazard of the unintended gravity fall doesn't exist and thus a restraint device is not necessary. The directional control valve will be enough.
In addition, the force by gravity shall not exceed 150 N and/or 50 N/cm2.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.065 Revision 03 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : Press brakes Clause : [(pr)EN] 5.4.1.5	Other :

Key words : Hydraulic press brakes, muting

Question :

The muting function shall be monitored. Which requirements according to prEN 954-1 has to be fulfilled?

Solution :

The muting function can be realized by a PES (1)

(1) PES : Programmable Electronic Systems.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.066 Revision 05 Language : E

Number of pages : 1	Date :10/09/97	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	10/06/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.4.3	EN/prEN : 693 Clause : [(pr)EN] prEN 5.4.2.1	Other :

Key words : Hydraulic presses, muting

Question :

The signals for the initiation of muting shall monitored. Which requirements according to prEN 954-1 have to be fulfilled ?

Category IV or single system with monitoring ?

Suitable alternative do they include way measurements systems or the use of PES ?

Solution :

Using electromechanical position switch :

Only one position switch with cyclic monitoring is required.

Using way measurement system with PES :

Redundancy and cyclic monitoring are required.

Additional condition :

The pressure signal or suitable alternative gives the reversing signal for the initiation of the return stroke and can be reset to confirm the muting signal.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.067 Revision 03 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : 574 Clause : [(pr)EN] 6.3.3	Other :

Key words : Failure effects, failure simulation

Question :

Have the contacts, transmitting the inputs signals from the actuators to the logic unit, to be redundant (duplicated and antivalent) in accordance to clause 6.3.3 of EN 574 ?

Solution :

Yes !

It was recognised that this requirement is an existing justified level of protection.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.069 Revision 02 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : TC143/WG1 N209 Clause : [(pr)EN] 5.4	Other :

Key words : Proportional valves - servovalves - press brakes

Question : An electronic controlled proportional valve or a servovalve is used to modify the speed of a beam.
Under which conditions can such valves can take over safety functions and replace e.g. a cartridge? In fact, in the case of an electronic fault, it is possible to find the following situations:
1 - with a hold to run control, when the valve insures the parallelism of a beam, a quick unintended opening, sufficient to introduce the fingers, can be understood as the normal opening and to surprise the operator when it is followed by an unintended closing, even if it is at a slow speed.
2 - when a pedal is used to control the opening, the operator can be surprised by an unintended opening and be injured by the falling of the sheet.
3 - As soon as the opening is controlled it shall not be possible to control a new closing before the end of the opening.

Solution :

1 - when a hold to run control is used, to limit the closing and opening speeds to V<=10 mm/s by an intrinsic hydraulical solution e.g. a bleed, (restrictor), capacity of the pump (max. Flow).

2 and 3 - The function must be active as soon as the opening is controlled. If the intended and initiated direction of the movement changes (malfunction), during the closing stroke or the opening stroke, the control system shall stop the beam immediately. That can be achieved by using the parallelism measuring system.

Note : modifications introduced by Rev 02 are underlined.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.070 Revision 03 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Machinery functional (ready for use), separate actuators

Question :

If a small press (to be placed on a worktable) is fitted with two separate actuators of a two hand control connected by flexible cables, will it be possible to deliver this machine with a CE mark and a declaration of conformity ?

Solution :

Yes ! when there are precise instructions on how to fix the press and the two separate actuators of the two hand control on the press table, to maintain the safety distance and good ergonomic principles.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.071 Revision 02 Language : E

Number of pages : 1	Date :13/12/95	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group.....13/12/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : 693 Clause : [(pr)EN] 5.2.1	Other :

Key words : Hydraulic presses, restraint device

Question :

Is it necessary to use restraint devices in the case of small hydraulic presses, when it is not foreseeable that the moving parts (rod of cylinder, slide and tool) can fall by gravity as their weight cannot overcome the friction force (of seals and wiper) ?

Solution :

If the weight of the moving parts is $\leq \frac{\sum Friction\_forces}{1.5}$ it is considered that the hazard of the unintended gravity fall doesn't exist and so a restraint device is not necessary. The directional control valve will be enough.
In addition, the force by gravity shall non exceed 150 N and/or 50 N/cm2

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.073 Revision 04 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	10/06/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.7	EN/prEN : 692 Clause : [(pr)EN] 5.2.1.2.f)	Other :

Key words : Testing procedure for brake

Question :

Taking into account that the press has an overrun detection, what is the reason of the clause 5.2.1.2.f)?

Note : take into account CNB/M/03.073/P/ERev 01 discussed during VG3 meeting on 04/03/96 and CNB/M/03.028/R/ERev 02.

Solution :

The requirement of the clause 5.2.1.2.f) shall prevent a blockage between the piston and the cylinder (or other linked mechanical parts) operating the brake. A blockage can lead to a continuously running of the press, so that the overrun detection will not stop the closing movement. This test should be carried out with maximum admissible clearance between the discs.

(see CNB/M/03.008 and CNB/M/03.028)

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.074 Revision 04 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	10/06/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.2	EN/prEN : Clause :	Other :

Key words : Flexible piping, connection joints

Question :

a) Do flexible joints have to be marked?

b) Do the connection joints have to be marked?

Solution :

Marking of flexible piping and its joints is recommended in clause 7.3 of prEN 982 and prEN 983.

Where flexible pipes are not fully shrouded to ensure that no risk is posed by a rupture or sudden breakage, they shall be marked with the year of production. Instructions shall be included regarding the period and procedure of their replacement..

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.075 Revision 03 Language : E

Number of pages : 2	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	10/06/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.1	EN/prEN : 574 Clause : [(pr)EN] 8.5	Other :

Key words : Deafet blocking actuators

Question :

May an output of THCD be generated, when both actuators are blocked and the energy supply is switched on?

Solution :

No! EN 574 required in clause 5.7.1 that an output signal shall only be generated, if both actuators are pushed within a time of 0,5 seconds (synchronous operation). Otherwise it could be possible to initiate a stroke movement with the isolation switch required in clause 5.4.6 of EN 692. It shall be incorporated in the logic unit (see also annex I, 1.2.3 of the directive 89/692/EEC).

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/03.095 Revision 03 Language : E

Number of pages : 1	Date :10/06/96	To be approved by :	Approved on :
Origin : VG3 Presses for cold working metals		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	10/06/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.4	EN/prEN : 692 Clause : [(pr)EN] 5.3.15 and annex C	Other :

Key words : Guards, safety distance

Question :

Draft standard prEN 999 provides parameters based on values for hand/arm and approach speed to determine minimum safety distances from specific sensing or actuating devices, so it doesn't take into consideration the early opening interlocking guards. On the other hand annex C of EN 692 only indicates that parameter C, in the general formula from prEN 999, can be zero but it is not given the value of the parameter K.

How to solve the problem of calculation of the safety distances for early opening interlocking guards ?

Solution : To achieve adequate protection, the following general formula may be used :

$$S = K(T-t') + C$$

It is the necessary time to have the possibility to enter into the danger zone depending upon the design of the guard (the mass, the overlapping of the guard with the table, ...) K = 1,6 m/s

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/04.004 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG4 Injection or compression moulding machine		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	14/10/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.1.2.f	EN/prEN : Clause :	Other :

Key words : Moulding machine. Essential equipments and accessories

Question :

How is it to be verified that the essential and special equipment and accessories necessary for the adjustment, servicing, and utilisation of moulding machines have been foreseen and can be used without risk?

Solution :

The essential and special equipment and accessories to be supplied with moulding machines, so that they can be adjusted, serviced and used without risk are the tools, measuring instruments or equipment, adaptors or accessories not currently found on the market and which are necessary, whether or not, to allow the user to carry out operations in conformity with the instructions contained in the handbook such as :

- a special spanner for no standardised nuts,
- a specially designed tool allowing intervention on a component inaccessible by means of an everyday tool,
- control instruments.

The verification consists of :

- ensuring that the instruction handbook gives a list of special equipment and accessories as well as pertinent instructions for their use,
- ensuring, by evaluations or tests, that their use does not present a risk.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/04.005 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG4 Injection or compression moulding machine		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	14/10/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.1.3	EN/prEN : Clause :	Other :

Key words : Moulding machines. Materials. Products

Question :

What is the nature and what are the limitations of the technical investigations to be carried out to ensure that an injection or compression moulding machine for plastics or rubber conforms to the essential requirements laid down in Section 1.1.3. of Annex I?

Solution :

In general, the materials used during the construction of these machines do not present any intrinsic risk.

Several types of fluids can be used :

- oil for the hydraulic circuit,
- warming liquid,
- cooling fluids,

gas (nitrogen, etc.)

The inherent characteristics and hazards of these fluids must be indicated in the instruction handbook forwarded to the user. The machine manufacturer does not know the manufactured products in advance. In consequence, the requirement relative to these products cannot be verified during the EC type examination of injection or compression moulding machines for plastics and rubbers.

However, the notified body must ensure the manufacturer point out in the instructions that potential risks resulting from use of some substances or mixtures exist.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/04.007 Revision 03 Language : E

Number of pages : 1	Date :31/10/97	To be approved by :	Approved on :
Origin : VG4 Injection or compression moulding machine		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	06/03/97 18/09/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.8. B	EN/prEN : Clause :	Other :

Key words : moulding machinery / injection / moving parts involved in the process / ESPS (1)

Question :

Are we allowed to use ESPS (1) for the protection of a moulding machine of rubber ?

Solution :

The moving parts of injection moulding machines for rubber involved in the process, except machines with horizontal injection unit in line to the user, may be protected by ESPSs (1) using AOPDs (2) because projections do not represent a risk for the operators. The product is pasty, does not stick on the skin and its temperature does not exceed 100° C.

This protective device shall :

- only concern the side of the machine from which the start cycle may be given
- be covered by a certificate acceptable to the notified body and be of type IV in accordance with pr EN 61496-1:1997 standard or equivalent.
- be interlocked via hardware by two separate circuits on the directional control valve and the closing safety valve, the safe position of both valves is monitored at each cycle (the monitoring may be carried out by the programmable controller).

- for moulding machines for plastics see sheet CNB/M/04.011

(1) ESPS : Electro sensitive Protective System

(2) AOPD : Active Optic Protective Device (light curtain)

Sent for information to : ☑ members of the VG ☑ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/04.008 Revision 03 Language : E

Number of pages : 1	Date :31/10/97	To be approved by :	Approved on :
Origin : VG4 Injection or compression moulding machine		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	06/03/97 18/09/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.8. B	EN/prEN : Clause :	Other :

Key words : Moulding machinery / injection / moving parts involved in the process / two-hand control

Question :

In which cases can the moving parts of an injection moulding machine involved in the process be protected by a two-hand control ?

Solution :

The moving parts involved in the process of injection moulding machines for rubber may be protected by a two-hand control because the projection of rubber does not represent a major risk for operators. The product is pasty, does not stick on the skin and its temperature does not exceed 100 °C.

As the two-hand control is not a protection of the operator against risk of burns, this protection mode should be reserved for duplicate moulding machines with a short vulcanisation time. This is the reason why this protection mode shall be used only for goose neck machinery equipped with plates not exceeding 800 x 800 mm.

A protection on the side is not necessary as the plates are of short sizes.

The two-hand control shall be of type III B in accordance with EN 574 standard or equivalent.

- The two-hand control acts via hardware by two separate circuits on the directional control valve and the closing safety valve.
- The safe position of both valves is monitored in each cycle.

The monitoring may be carried out in the electronic control.

Injection moulding machines for plastics shall in no way be equipped with such a protective device.

Sent for information to : ☑ members of the VG ☑ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/04.010 Revision 04 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG4 Injection or compression moulding machine		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	1996/14/10 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : 1 ESR (1) : 123 § 5	EN/prEN : Clause :	Other :

Key words : Moulding machinery / flexible hoses

Question :

In which case should the flexible hoses carrying high-pressure-fluids not be attached or protected ?

Solution :

Two cases should be considered :

1st case : see TS the flexible is inside an enclosed area delimited by physical guard. It is impossible to gain access to this flexible hose whilst the machine is operating.

2nd case : the flexible pipe is outside an enclosed area.

In this case the flexible hose and its connectors must fulfil the following conditions :

- the linkage between the pipe and the connector must be tearproof, proved by drawings and/or test report of a third party,
- the ratio of the burst-pressure to the maximum pressure being possible for the special application must be equal or higher than 3,5,
- the pipe should have to steel-cord-layers as a minimum,
- no extraordinary environmental conditions (mechanical, thermic or chemical) are to be expected.

Note : connectors with "cutting rings" are forbidden for high pressure hoses.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/04.011 Revision 03 Language : E

Number of pages : 1	Date :31/10/97	To be approved by :	Approved on :
Origin : VG4 Injection or compression moulding machine		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	06/03/97 18/09/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.8. B	EN/prEN : Clause :	Other :

Key words : Moulding machinery / injection for plastics / light curtains

Question :

Which are the conditions for using light curtains instead of movable guards for the protection of the mould area of an injection moulding machine for plastics ?

Solution :

For all machines, except machines with horizontal injection in line to the user, light curtains shall be :

- covered by a certificate acceptable to the notified body and be of type IV in accordance with pr EN 61496-1:1997,
- interlocked via hardware by two separate circuits on the directional control valve and the closing safety valve, the safe position of both valves is monitored at each cycle (the monitoring may be carried out by the programmable controller),
- the safety distance given by the light curtain has to be taken into consideration (care must be taken also to other danger-zones than the tool-area, if they should be protected by the light curtain, e.g. a turn-table),
- It must be impossible to step between light curtain and tool-area with the full body,
- the gap between the upper and lower tool shall be covered in such a way that no hot material can injure the user (e.g. metal shield).
- the dimensions of the machine should not exceed the following :

a) horizontal machines : according EN 201 p.5.2.1.1.4,

b) vertical machines : max. Stroke : 600 mm, max. Table : 1000 x 1000 mm (if both dim. are exceeding).

For larger machines additional safeguarding systems and risk analysis should be applied.

Sent for information to : ☑ members of the VG ☑ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/04.018 Revision 03 Language : E

Number of pages : 1	Date :31/10/97	To be approved by :	Approved on :
Origin : VG4 Injection or compression moulding machine		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	07/03/97 18/09/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.3	EN/prEN : Clause :	Other :

Key words : Gate start, automatic cycle

Question :

Is it admissible, when running the machine in the operating mode "automatic" and when switching on the machine and/or disrupting the cycle by opening the guard gate, to restart the mould closing movement by closing the guard gate. (Gate Start)?

Solution :

Yes, in pr EN 201, the Gate Start is not linked to a defined operating mode : the requirements of clause 5.2.1.1.4. shall be fulfilled. However, this does not apply to the occurrence of faults in the guard interlocking. Here, it shall only be possible to initiate a new cycle after the fault has been eliminated.

Sent for information to : ☑ members of the VG ☑ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/05.201 Revision 02 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG5 Machines for underground work		☑ Vertical Group.....30/05/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Hydraulic powered roof support

Question :

Which types of machine are classed as "hydraulic powered roof supports"?

Solution :

Types of machines classed as "hydraulic powered roof supports" are :

one support unit under adjacent control
several support units under group control
entire coal face support under central control

Coal-getting machines and hoisting engines are excluded.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/05.202 Revision 01 Language : E

Number of pages : 1	Date :30/05/95	To be approved by :	Approved on :
Origin : VG5 Machines for underground work		☑ Vertical Group.....30/05/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Hydraulic powered roof support, components with safety function, safety components

Question :

Which are the components with safety function/safety components for hydraulic powered roof support?

Solution :

safety components - examples

support units:
canopy, gob shield, base etc.

hydraulic rams:
rams, adjusting cylinders, canopy cylinders

hydraulic control devices:
check valves, pressure limitation valves (yield valves), control valves for setting props, retracting, alignment, advancing

electrohydraulic control devices:
discrete control devices, emergency off devices, sensors which initiate movements, master control devices, software

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/05.203 Revision 01 Language : E

Number of pages : 1	Date :24/09/96	To be approved by :	Approved on :
Origin : VG5 Machines for underground work		☑ Vertical Group.....30/05/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Hydraulic powered roof support, technical rules, EC type-examination

Question :

Are there special technical rules for the EC type-examination of hydraulic powered roof support?

Solution :

special rules for EC type-examination

directives by LOBA NRW:
- directive for self-advancing support (14.06.1977)
- directive for the testing of yielding rams (04.08.1971)
- valve directive (draft - 25.02.1982)
- administrative provision for the testing and use of electrohydraulic control devices (06.01.1993)
- (EDIN 21 558, EDIN 21 567, EDIN 21 568, EDIN 21 569)

standard drafts by CEN/TC 196/WG 3:
- (prEN 1804-1 to 4) which have been approved by the Technical Committee

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/05.208 Revision 02 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG5 Machines for underground work		☑ Vertical Group.....30/05/95 ☐ Horizontal Committee .....12/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Hydraulic powered roof support, placing on the market, putting into service

Question :

What are the most common manufacturing, modification and repair combinations by which new/modified or used hydraulic powered roof supports are placed on the market ?

Solution :

Placing on the market, putting into service of hydraulic powered roof supports

Cases

a) new hydraulic powered roof support
one manufacturer

b) new hydraulic powered roof support
several manufacturers

c) used hydraulic powered roof support
original manufacturer modifies type

d) used hydraulic powered roof support
non-original manufacturer modifies type

e) used hydraulic powered roof support
original replacement parts are fitted

f) used hydraulic powered roof support
non-original replacement parts are fitted

g) unchanged type of hydraulic powered roof support authorized before 01-01-95 is placed on the market anew.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/05.217 Revision 01 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG5 Machines for underground work		☑ Vertical Group.....30/05/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Hydraulic powered roof support, interchangeable equipment

Question :

Which are the types of interchangeable equipment for hydraulic powered roof support?

Solution :

Interchangeable equipment :

equipment for pneumatic stowing
anchoring devices
anti-spalling devices

particularity :

complete hydraulic and electrohydraulic control systems

Note: Editorial comments from one Member State

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/05.801 Revision 01 Language : E

Number of pages : 1	Date :09/06/97	To be approved by :	Approved on :
Origin : VG5 Machines for underground work		☑ Vertical Group..... ☑ Horizontal Committee ..... ☑ Standing Committee	30/05/95 12/12/95 25/03/97

Question related to : Directive 89/392/EEC Annex : IV ESR (1) :	EN/prEN : Clause :	Other :

Key words : Machines for tunnels

Question :

Do machines for tunnels rank as machines for underground working according to EEC machine directive?

Recommended solution :

Machines which are underground during the construction of a tunnel are reckoned among machinery for underground work. This does not apply to machines which are underground after completion of the tunnel. This opinion is shared by German Fachausschuss "Tiefbau" der Berufsgenossenshaften (sector committee for underground engineering of the trade associations) who have defined "underground working" as works for the construction of underground hollow spaces in enclosed construction and works for their extension, reconstruction, maintenance and removal (ZH 1/486, 2).

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

comment from HC during meeting on 12/12/95 : to be sent to SC for examination.

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.002 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group.....18/11/94 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 3.2.3	EN/prEN : 1501-1 Clause : [(pr)EN] 6.6.3.2+6.6.3.3	Other :

Key words : Refuse collection vehicle (RCV)-footboards

Question :

Which technical solutions can be accepted to fulfil the requirements of prEN1501 clause 6.6.3 (prevention of reversing the RCV, driving forwards faster than 20 km/h and immobilizing of compaction mechanism when the rear footboards are occupied)?

Solution :

The participants agreed for every save technical solution will be accepted fulfilling the requirements item 6.6.3 prEn1501-1. It shall be clearly stated in the manual that jumping onto the boards during motion of vehicles is prohibited.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.003 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	01/03/95 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : 1501-1 Clause : [(pr)EN]	Other :

Key words : Refuse collection vehicle (RCV)- modified RCV

Question :

How shall a notified body deal with an order to examine a modified RCV, where another body has made the first EC-type examination?

Recommended solution :

The participants are aware that in case of a modification on a certified RCV a new type of RCV has been created and has to be certified as a new RCV by a notified body. The participant unanimously agreed the notified body should only examine the parts of modification and the relevant original parts of RVC. For that purpose the « second » notified body will need the report of type examination of the original RCV and the relevant parts of the technical file.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.005 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	.....1995/03/02 .....11/03/97 .....08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.1+1.3.2	EN/prEN : 1501-1 Clause : [(pr)EN] 6.11	Other :

Key words : Refuse collection vehicle (RCV)-calculations

Question :

Which calculation shall be required from the manufacturer for an EC type-examination, and which safety factors should be considered?

Solution :

The participants unanimously agreed on requiring the following calculation from the manufacturer:

Stress calculation:

a) hinges, locks and cylinders at the tailgate

b) safety props for the opened tailgate

c) safety props for suspending the vehicle at rear, if fitted, including relevant parts e.g. hinges

d) fitting points and lifting arms of the lifting device, if required by the testing engineer.

Stability calculation:

Tilting over the rear axle with raised tailgate, empty body and filled hopper, as far as these combinations are possible, based on a horizontal even ground.

The safety factor shall be 1,25.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.008 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	01/06/95 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.6.1	EN/prEN : 1501-1 Clause : [(pr)EN] 7.2	Other :

Key words : Refuse collection vehicle (RCV)

Question :

How to deal with the requirements stated in clause 1.6.1 Annex I Machinery Directive (handling of spare parts substituted during maintenance and repair)?

Solution :

The delegates present agreed unanimously on the following text::

The manufacturer is responsible for identifying the maintenance and repair activities which may be carried out by the user. Such activities must be clearly described in the user manual including the following information:

- descriptions of removable components (including drawings)
- frequency of maintenance activities
- slinging diagrams, where appropriate, stating the masses of components to be lifted
- integral lifting points (holes, lugs, etc.)
- gripping points for manual handling.

Other activities, requiring specialist knowledge or equipment should be carried out by the manufacturer or his authorized representative. The maintenance manual should carry a warning that such operations should not be carried out by the user.

Requirements for safe fitting and removing of interchangeable lifting devices shall be stated clearly in the manual of the lifting device.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.011 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group.....30/04/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.1+1.2.7	EN/prEN : 1501-1 Clause : [(pr)EN] 6.3.11+6.8.1.1	Other :

Key words : Refuse collection vehicle (RCV)-automatic lifting device-switching device for monitoring the correct position of waste containers.

Question :

Are switching devices monitoring the position of waste containers on the lifting device to be safeguarded like operation controls at the outside of the RCV?

Solution :

Switches resp. Switching devices monitoring the waste container is well positioned on the lifting device shall be safeguarded as far as the function allows.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.013 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group.....30/04/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.1+1.2.7	EN/prEN : 1501-1 Clause : [(pr)EN] 6.3.11+6.8.1.1	Other :

Key words : Refuse collection vehicle (RCV)-automatic lifting device, sensor switches monitoring the position of waste containers

Question :

Which category according to prEN 954-1 is required for sensor switches monitoring the correct position of waste containers on the lifting device?

Solution :

The category due to prEN 954-1 can only be allocated in consideration of the design of the entire control. In general that particular control should be allocated into category 2 prEN 954-1.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.015 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group.....30/04/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.3.3	EN/prEN : 1501-1 Clause : [(pr)EN] 6.2.1+6.2.2+6.3.1+7.1.2	Other :

Key words : Refuse collection vehicle (RCV)-falls of waste containers and tailgate, ejection of waste out of the hopper

Question :

What are the conditions for the statutory objective regarding protection against risks due to falls and projection of objects to be considered as having been fulfilled?

Solution :

Protection against risks of falls of the tailgate is given in prEN 1501-1 clause 6.2.1 and 6.2.2.

Protection against risks of waste containers falls off is given en prEN 1501-1 clause 6.3.1.

The risk of waste ejection out of the hopper is a residual risk, which is to be dealt with in the « information for use » (operator's manual). That is given in prEN 1501-1 clause 7.1.2.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.016 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group.....30/04/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.6.3+3.5.1	EN/prEN : 1501-1 Clause : [(pr)EN] 6.7.5	Other :

Key words : Refuse collection vehicle (RCV)-energy separation-main switch

Question :

What are the conditions for the statutory objective as defined in ESR 1.6.3 (energy source separation) to be considered as having been fulfilled?

Solution :

Due to prEN 1501-1 clause 6.7.5 a separate main switch for the body work conforming to EN 60204-1 shall be fitted. Additional the hydraulic pump shall be switched ineffective either by switching off (e.g. electromagnetic clutch) or electro-hydraulical by-passing. The main switch for the body work must be lockable in the off-position.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/06.017 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG6 Household waste collection skip		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	30/04/96 11/03/97 08/06/98

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.2.2	EN/prEN : 1501-1 Clause : [(pr)EN] 6.5.2+6.5.4	Other :

Key words : Refuse collection vehicle (RCV)-operating elements-pictograms

Question :

1- Shall pictograms for operating elements be engraved directly into the button's/lever's surface or a durable label aside the button/lever adequate?

2- Is the colour for operating elements given in prEN 1501-1 required for the element itself or for the pictogram?

Solution :

1- A durable label fitted beside the operating element shall be accepted as long as the location is clear.

2- The colours are required for the element itself. See EN 60204-1 respectively EN 418 for emergency stops.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/07.001 Revision 02 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG7 Removable transmission cardan shafts		☑ Vertical Group.....14/11/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.5.4	EN/prEN : 1152 Clause :	Other :

Key words : guard and removable transmission cardan shaft ; error of fitting

Question :

How to check that the requirements of clause 1.5.4 relating to risk due to errors of fitting are prevented?

Solution :

After having performed the testing detailed in EN 1152, the operator should twice consecutively dismantle and reassemble the guard according to the instruction manual, by using the tools as stated in the manual. The requirement is achieved if the operation is successfully and easily carried out and the guard remains functional.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/07.002 Revision 01 Language : E

Number of pages : 1	Date :24/09/96	To be approved by :	Approved on :
Origin : VG7 Removable transmission cardan shafts		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	14/11/95 13/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.7.3	EN/prEN : Clause :	Other :

Key words :

Question :

How to check that clause 1.7.3 about « indelible » marking is satisfied?

Solution :

Perform test according to EN 1152 with the marking. At the end of the test check the marking. Then rub the marking by hand for 15 s with a piece of cloth soaked in water and again 15 s with a piece of cloth soaked in fuel oil. The marking shall remain easily legible. It shall be not easily possible to remove any label nor shall any label show any sign of cutting. The question of high pressure washing will be addressed.

Sent for information to : ☑ members of the VG ? other(s) VG? HC (2) ? TC (3) ? SC (4) ? other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/07.003 Revision 01 Language : E

Number of pages : 1	Date :24/09/96	To be approved by :	Approved on :
Origin : VG7 Removable transmission cardan shafts		☑ Vertical Group.....14/11/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.5.11	EN/prEN : Clause :	Other :

Key words :

Question :

How to check effects of ultraviolet rays on plastic guards?

Solution :

The manufacturer shall provide in the technical file a test report (according to national or international standard) concerning the resistance of the plastic to ultraviolet rays.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/07.007 Revision 02 Language : E

Number of pages : 1	Date :10/09/97	To be approved by :	Approved on :
Origin : VG7 Guards and removable transmission cardan shafts		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	05/07/96 19/09/96 08/06/98

Question related to : Directive 89/392/EEC Annex : IV ESR (1) : 3.4.7	EN/prEN : Clause :	Other :

Key words : guards and removable transmission shafts ; EC-type examination certificate ; extension

Question :

When is it possible to issue an « extension » of EC-type examination certificate ?

Solution :

It is possible to issue extension of EC-type examination certificate in the following cases :

-when only the denomination is changed

- there is a little modification

in the technical file : place of manufacture

on the shaft or the guard itself (locking device, length of the shaft, type of yoke and so on) if it has no influence on the type examination which has been performed.

In the other cases, a new type examination certificate shall be issued.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/08.001 Revision 03 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG8 Vehicles servicing lifts		☑ Vertical Group.....27/01/95 ☐ Horizontal Committee .....13/12/95 ☐ Standing Committee 04/06/96	

Question related to : Annex : ESR (1) :	EN/prEN : prEN 1493 Clause : [(pr)EN] 5.6.5.6	Other :

Key words : Polyamide Nuts

Question :

With regard to screw drives red brass or bronze are the most common materials for the load bearing nut and the safety nut as written in the comments of the German prevention rule VBG 14. However, some manufacturers intend to use polyamide for the load bearing nut.

Some tests in our institute have shown that polyamide nuts can have the same or even a better tribological behaviour than bronze nuts,

e.g. with regard to self-locking and self-retarding. Is it allowed to use polyamide nuts in vehicle lifts? Do the other NB's have any experiences with these nuts, especially when the lubricant is contaminated with dirt or particles (e.g. swarf)?

Solution :

Polyamide nuts may be used in vehicle lifts, provided that lifetime tests have been carried out. The technical file should describe the conditions for this test which should include carrying out min. 30000 load cycles (nominal load), which relates to a life time of 10 years.

A safety factor of 6 against breaking shall be used.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/08.004 Revision 02 Language : E

Number of pages : 2	Date :25/10/96	To be approved by :	Approved on :
Origin : VG8 Vehicles servicing lifts		☑ Vertical Group.....27/01/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 1.2.1/1.2.6	EN/prEN : prEN1493 Clause : [(pr)EN] 5.14	Other :

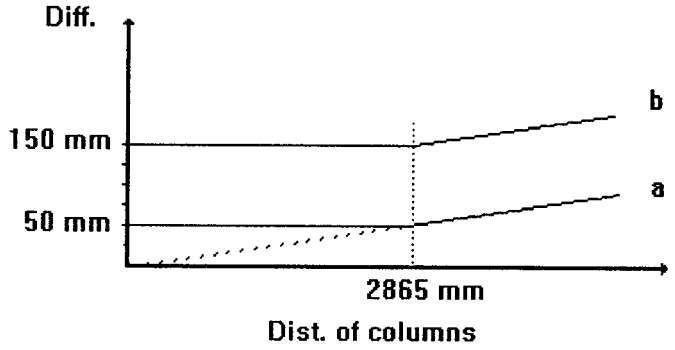
Key words : Measures against unintentional desynchronisation during operation

Question :

Errors in logic shall not lead to dangerous situations.
Interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply must not lead to a dangerous situation.
It shall be ensured that the vehicle stays horizontal even if it is supported by two or more drives or bearing devices

Solution :

Unintentional desynchronisation may lead to an overload of one or more drives, if one or more drives do not longer support the load. Furthermore it may cause tilting of the supported vehicle.
Interpretation:
1. Synchronisation may be accomplished by using:
- mechanical devices (ropes, chains, poles),
- hydraulically circuits,
- electrical controls (not considered to be a safety device).
The maximum allowed tilt is 50 mm or 1° (may be more than 50 mm); see picture, line a.



2. In case of rupture of drives, ropes, chains, nuts or gears or leakage in the hydraulic or pneumatic line an additional 100 mm difference is permitted; see picture line b. If the synchronisation is performed using an electrical central or a hydraulically circuit, an additional safety central has to stop the movement of the vehicle lift, unless the proper synchronisation has been restored using other measures.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
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3. Electrical (or electronical) safety controls must store the amount of unsynchronisation regardless of voltage drop, power failure and power return. Otherwise multiple power off and on may lead to unintended tilt angles more than allowed.
4. Safety categories
If in a common electrical design the switchgear has priority over the synchronising central because of hardware design, the central can only cause a unsynchronisation, if the movement is intended by the user. In this case the safety category of prEN 954-1 is considered to be 2 (S2-Fl-Pl). If the electrical central can cause a movement in case of failure, its safety category is considered to be 4 (S2-F2-P2). A safety device of category 2 shall be internally redundant or self checking prior to each use (demand). A safety device of category 4 shall be internally redundant and designed to be continuously self checking.
5. lt is no contradiction to section 5.14, if a special mode exists, in which the different drives con be controlled independently from each other. This might be necessary, if the supporting drives have to be fitted to the vehicle in different heights. This is called "intentional desynchronisation". Nevertheless, in the mode, in which all the supporting drives are controlled using one central, the maximum desynchronisation must checked by an additional safety central.

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/08.007 Revision 02 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG8 Vehicles servicing lifts		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	.....27/01/95 .....17/04/96 .....08/06/98

Question related to : Directive 89/392/EEC Annex : ESR (1) : 4.1.2.1/4.1.2.3	EN/prEN : prEN 1493 Clause : [(pr)EN] 5.6.6, 5.6.2.1	Other :

Key words : Horizontal Forces

Question :

Loading system for motor bike lifts.

Solution :

A general horizontal force of 1000 N from manipulation on vehicles is required in prEN 1493.
This force is not applicable on motor bikes (self weight between 800 N and 4200 N) without pushing the bikes from the lift and should be reduced, taking into account the nominal load of the lift.
lt is proposed to apply for the horizontal forces on motor bike lifts 10% of the nominal load, but min. 300 N.

Sent for information to: ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/08.008 Revision 02 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG8 Vehicles servicing lifts		☑ Vertical Group.....27/01/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 4.1.2	EN/prEN : prEN 1493 Clause : [(pr)EN]	Other :

Key words : Auxiliary Lifting Systems

Question :

Safety requirements for auxiliary lifting systems installed on vehicle lifts: Are safety devices for preventing
. desynchronisation of lifting and lowering,
. inadvertent lowering in case of a failure in the lifting system
also required for these systems?

Solution :

For auxiliary lifting systems on vehicle lifts the same safety devices are required as necessary for the vehicle tilts. The reason for that are hazards to be taken into consideration from
. positioning the head and arms by manipulations in upper position of the lift
. lifting vehicles without wheels in case of using auxiliary lifts.

Sent for information to :☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/08.010 Revision 02 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG8 Vehicles servicing lifts		☑ Vertical Group.....18/05/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : prEN 1493 Clause : [(pr)EN]	Other :

Key words : Type Examination of vehicle lifts - Extent

Question :

What extent shall the tests have, to be carried out for type examination?

Recommended solution :

* Design check: acc. prEN 1493/6.3.2`
- verification of static calculation and stability (by recalculation)
* Manufacturing check: prEN 1493/16.3.3
- measures for constant production: list of measures (technical file)
  verification of these measures (welders, material, check list for final tests)
* Electrical tests: acc, to EN 60204-1 § 20 - type test at manufacturer
- check of control circuits relevant for safety
* Hydraulic, pneumatic tests: Verification of circuits

Safety devices

* Practical Tests: Overload tests
  Functional tests
* Noise: Test results from manufacturer are acceptable.
* Instruction handbook: to be verified (sec CNB/M/08.003)

Exclusions from Testing at the moment:

- EMC (until 1.1.96)
- Vibrations - considered to be not relevant

Results from VG11 (Safety Components) shall be included.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/08.011 Revision 02 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG8 Vehicles servicing lifts		☑ Vertical Group.....18/05/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : prEN 1493 N12 Clause : [(pr)EN] 3.1	Other :

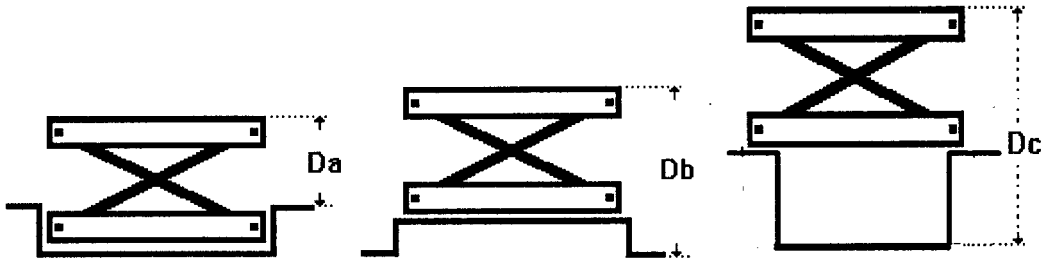
Key words : Short stroke lifts - Definition

Question :

How is the lifting height defined?

Solution :

The lifting height is defined by the standing area of the user and the position of the lift related to the user (see examples below).



Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/08.013 Revision 02 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG8 Vehicles servicing lifts		☑ Vertical Group.....27/01/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) : 4.1.2	EN/prEN : prEN 1493 Clause : [(pr)EN] 5.16	Other :

Key words : Pinching and Shearing Hazards

Question :

Measures to prevent pinching and shearing hazards caused by lifted parts of vehicle lifts

Solution :

For vehicle lifts according the standard EN 1493, fulfilling the requirements about lifting and lowering speed, adequate control position and control equipment, the following lift positions shall be secured by safety devices (on outside of lifts):
- position of moving parts before contracting the standing position on ground, to prevent crushing hazards for feet (e.g. warning device 5.16.3 at 120 mm above ground)
- shearing hazards for hand (30 mm) and fingers (25 mm) in all heights of moving parts of vehicle lifts
- shearing and crushing hazards for the head created by auxiliary lifting systems, installed on vehicle lifts
- diverting parts at the ground on two post lifts

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/09.106 Revision 02 Language : E

Number of pages : 1	Date :11/06/96	To be approved by :	Approved on :
Origin : VG9 Lifting persons device		☑ Vertical Group.....11/06/96 ☐ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : V-7 ESR (1) :	EN/prEN : Clause :	Other :

Key words : Documentation, language, Instruction

Question :

Notified Bodies that carry out certification procedures for foreign manufacturers have to decide what language version of the user information will be checked in the framework of conformity assessment.

Solution :

The Notified Body can choose which language it does accept for testing. Any translation is the responsibility of the manufacturer/authorized representative. It would be useful, however to note in the test report which language version was checked.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.009 Revision 04 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group.....15/06/95 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : IV B2 ESR (1) :	EN/prEN : Clause :	Other :

Key words : B2-component, programmable logic controller (PLC)

Question :

Annex IV of the Machinery Directive deals with safety components. Is a Programmable Logic Controller (PLC) on its own a safety component and can a PLC be a B2-component?

Solution :

Logic units (e.g. a PLC or a pneumatic logic unit) can not necessary be considered as safety components according to Annex IV, even if they can perform safety functions which are typical for components listed in Annex IV, Machinery Directive.

Normally such components can not be bought ready to fit in machinery where they will perform a safety function if they are installed. However a manufacturer can declare a logic unit to be e.g. a B2-component if it incorporates a two-hand-control function (bi-manual-control) with fixed modules for it (software modules etc. for a PLC). In this case an EC type-examination shall be carried out.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.012 Revision 02 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	15/06/95 13/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause : [(pr)EN]	Other :

Key words : testing, order of tests, categories, EC type-examination

Question :

Is there a defined order in which the different tests for an EC-type approval should be carried out?

Solution :

In general there is no defined order, but for practical reasons the following should be recommended.
For each safety function the correct performance category has to be validated. Changes in the safety functions may result in a new validation of the performance category. Each change of the layout may lead to new environmental testing. Because of that fact there is a nominal order in which the tests should be carried out:

1. All safety functions should be validated by carrying out functional tests on a prototype or the end product.
2. The category should be validated using the design documentation and doing fault insertion tests using a prototype or the end product.
3. All environmental testing should be done using the same end product. Where a particular test is destructive the testing can be continued with a new test sample if it can be justified that the executed tests do not influence the results of the following tests, e.g. the tests for mechanical stress have to be done before the IP-rate verification.

Safety components are safety related parts of machinery control systems and can therefore be approved to prEN 954-1.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
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(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.013 Revision 02 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	15/06/95 13/12/95 04/06/96

Question related to : Annex : ESR (1) :	EN/prEN : prEN 61496-1 Clause : [(pr)EN] 4.2.2.2	Other :

Key words : performance test

Question :

What is the nature of the initial performance test for Electrosensitive Protective Equipment (ESPE)?
(see prEN 61496-1, 4.2.2.2 (last sentence))

Solution :

The nature of the initial performance test for ESPE is not defined in prEN 61496-1. This test should be similar to the (periodic) performance test given in prEN 61496-1 during normal operation. This test should be systematically applied by the operator as following, for example:

. Applying the supply voltage to the device, then the performance test is automatically executed and the Output Signal Switching Devices (OSSD's) should go to the "on" state position only if no fault is detected.

. When a test piece is introduced in the detention zone, the OSSD'S go to the "on" state position only if the test piece is recognised, i.e. no fault is detected.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
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(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.014 Revision 03 Language : E

Number of pages : 1	Date :17/071998	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	15/06/95 13/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : IV B1 ESR (1) :	EN/prEN : prEN 61496-1 Clause : [(pr)EN]	Other :

Key words : EC type certificate, interface unit, electro-sensitive protective device (ESPE)

Question :

Is it possible to give an EC type-certificate for an interface unit which is designed to be connected with ESPE's outputs?

Solution :

Such an unit is not an ESPD and cannot be submitted alone to the EC type-examination.

Nevertheless, when this unit is not sold separately from the ESPE, the ESPE + this unit are considered together as an ESPE and this whole shall have an EC type-certificate. Otherwise when this unit is sold alone to complement an ESPE, it is considered as a safety component submitted to the self certification.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☐ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.015 Revision 02 Language : E

Number of pages : 1	Date :24/09/96	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	15/06/95 13/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : IV, VI ESR (1) :	EN/prEN : Clause :	Other :

Key words : EC type-examination, safety components

Question :

For what kind of safety components should an EC type-examination be carried out?

Solution :

According to Article 8 (2c) of the Machinery Directive an EC type-examination can be carried out if the machinery or safety component is referred to in Annex IV. An amendment to the list in Annex IV with other components like guards, interlocks or emergency stopping devices is only possible on the basis of a comparable legislative measure, i.e. a Council Directive.

For safety components not listed in Annex IV a manufacturer or his authorized representative in the Community can obtain any technical report or certificate from a competent body or laboratory to use it for the technical construction file of an EC declaration of conformity (Annex V (3a), Machinery Directive).

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
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(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.019 Revision 03 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group..... ☐ Horizontal Committee ..... ☐ Standing Committee	09/11/95 13/12/95 04/06/96

Question related to : Directive 89/392/EEC Annex : I ESR (1) : 1.4.1, 1.4.3, 3.1.7	EN/prEN : prEN 61496-1-2 Clause : [(pr)EN]	Other :

Key words : safety performances, modification

Question :

Is it possible to give an EC type certificate to an ESPE on which it is possible to modify its safety performances by blanking (fixed or movable) the detection zone or decreasing the detection capability.

If yes, what are the conditions ?

Solution :

An ESPE type IV which is designed to allow the user to adapt its safety performance shall be in accordance with the following requirements :

- a key operated switch or a code number to set the detection performances shall be provided,
- means shall be provided to warn the operator of the performances modifications (e.g., visible lamps) .

Regarding the blanking (muting of a part of the detection zone):

- the instructions for user shall give in particular the safety distances, related to the possible gaps created by the muted zone, in accordance to prEN999 if there is no physical limitation of the muted zone, and in accordance to EN294 if the muted zone is physically protected.

Regarding the detection capability:

- the range of the detection capability shall be marked on the device (e.g. detection capability: 14 mm to 40 mm)
- the instructions for use shall also give the complementary safety distances, related to the possible detection capabilities, in accordance with prEN999.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

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(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.021 Revision 03 Language : E

Number of pages : 1	Date :23/06/97	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group.....09/11/95 ☐ Horizontal Committee .....03/12/95 ☐ Standing Committee 04/06/96	

Question related to : Directive 89/392/EEC Annex : VI ESR (1) :	EN/prEN : EN 574 Clause :	Other :

Key words : logic units for two hand control

Question :

Logic units for two hand control devices shall be tested in environmental conditions (climatic, electrical, EM, vibrations, bump, ...). Nevertheless, no requirements are listed in EN 574.

How can the test laboratory determine these requirements?

Solution:

For the present, the requirements could be the same as the ones of prEN 61496-1. In fact these units are often used in place of light curtains and in the same environmental conditions.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.023 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group.....29/03/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1):	EN/prEN : Clause :	Other :

Key words : documents, diffusion

Question :

Are the Notified Bodies authorised to distribute, freely, documents of the VG11 to the safety component manufacturers ?

Solution :

Recommendations for use can be distributed freely. Proposals for enquiry should not be distributed.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.024 Revision 03 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group..... ☑ Horizontal Committee ..... ☐ Standing Committee	29/03/96 11/03/97 08/06/98

Question related to : Annex : ESR (1):	EN/prEN : Clause : prEN 954-1 relationship to draft IEC 1508	Other : IEC 1508

Key words : category, Safety Integrity Level, risk reduction

Question :

How is the relationship between the categories of prEN 954-1 and the Safety Integrity Levels of draft IEC 1508?

Recommended solution :

By using the guidance on risk reduction in annex B of EN 954-1 and by comparing this with the risk reduction to safety integrity level given in Fig. D.2 of part 5 of draft IEC 1508, it is possible to make a cross-reference between the categories of prEN 954-1 and the Safety Integrity Levels of draft IEC 1508 in the following way:

Safety Integrity Level	Category
no special safety requirements	B
1	1 - 2
2	3
3	4
4	--

It must be stressed that the systematic aspects have to be considered when validating the safety-related parts of machinery control systems in accordance with the cross-referenced safety integrity level of draft IEC 1508.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/11.025 Revision 04 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG11 Safety components		☑ Vertical Group.....23/09/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 08/06/98	

Question related to : Several Directives Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : EC type-examination certificate, validity, safety components

Question :

Shall Bodies, notified for verifying the conformity of electrical safety components (B1, B2 and B3) to the directive 89/392/EEC, also access the conformity to the directive 89/336/EEC (EMC) and the directive 73/23/EEC (Low Voltage)?

Solution :

No, these Notified Bodies shall only verify the conformity of electrical safety components (B1, B2 and B3) to the relevant requirements of the directive 89/392/EEC. The EC type-examination certificate delivered shall only mention the conformity to the 89/392/EEC directive.

If a specific (pre)standard for safety components is used as a base for testing within an EC type-examination all safety relevant tests according to this standard shall be carried out.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/12.003 Revision 02 Language : E

Number of pages : 1	Date :25/07/97	To be approved by :	Approved on :
Origin : VG12 ROPS and FOPS		☑ Vertical Group.....30/01/96 ☑ Horizontal Committee .....11/03/97 ☐ Standing Committee 27/05/97	

Question related to : Directive 89/392/EEC Article 5, § 2 Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Harmonized standards, normative references

Question :

If a specific standard (e.g. ISO 3471) (1) is a normative reference of an harmonized standard (e.g. EN 474 -1) (2), shall this specific standard also be considered as an harmonized standard according to 89/392/EEC article 5, paragraph 2?

(1) ISO 3471 Earth moving machinery. Roll over protective structures. Laboratory tests and performance requirements.

(2) EN 474-1 Earth moving machinery. Safety. Part 1. General requirements.

Recommended solution :

No. The definition of harmonized standards in the recitals of new approach Directives describes harmonized standards as technical specification adopted by a European Standard organization on the basis of the general orientations signed between the European standard organizations and the Commission on 13 November 1984 following mandate by the Commission issued pursuant to Directive 83/189/EEC.

An ISO standard cannot meet these requirements.

A dated reference to an ISO standard (or part thereof) is part of the harmonized EN but shall be applied strictly within the scope of this EN.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☐ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/12.005 Revision 02 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG12 ROPS and FOPS		☑ Vertical Group.....30/01/96 ☐ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : Clause : [other]	Other : ISO 3471, ISO

Key words : charpy V-test

Question :

What shall be energy requirement if the charpy V-test is done at -20 °C instead of -30 °C?

Solution :

If the Charpy V- test is carried out at - 20 °C instead of - 30 °C, the energy requirement shall be 2,5 times the value specified for - 30 °C.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/12.007 Revision 02 Language : E

Number of pages : 1	Date :28/12/95	To be approved by :	Approved on :
Origin : VG12 ROPS and FOPS		☑ Vertical Group.....30/01/96 ☐ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : Clause : [other]	Other : ISO 3449

Key words : DLV

Question :

What shall be the location of rollers with moveable operator seat?

Solution :

The travelling position due to the manufacturers specification shall be used until the standard committee decide otherwise.

Sent for information to : ☑ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/12.008 Revision 02 Language : E

Number of pages : 1	Date :07/05/96	To be approved by :	Approved on :
Origin : VG12 ROPS and FOPS		☑ Vertical Group.....16/01/96 ☐ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : DLV, Feet

Question :

Shall the feet of the DLV be included in the boundary planes of FOPS?

Solution :

No, the boundary planes is with feet outside. The FOPS do not have to be over the feet of the DLV.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/12.009 Revision 02 Language : E

Number of pages : 1	Date :07/05/96	To be approved by :	Approved on :
Origin : VG12 ROPS and FOPS		☑ Vertical Group.....02/05/96 ☐ Horizontal Committee .....19/09/96 ☐ Standing Committee 08/06/98	

Question related to : Directive 89/392/EEC Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : Minor modification

Question :

What kind of modifications of ROPS and FOPS can be accepted without new test?

Solution :

Safety cabs will be modified during the course of their production life. In order to make it simpler for all involved, modifications to a tested safety cab may be made without requiring a retest.

1) Changes of model denomination as a result of production processing, e.g. painting, trimming are not structural and therefore consideration to test mass used for a ROPS test may be the only additional information needed for model changes.

2) The drilling of holes for wiring or painting process and the addition for brackets for mounting of mirrors, lights, etc. needs considerations to given to the size and location and whether they would affect the test result.

3) Changes of seats resulting in new positions for SIP, changes to the design or size of structural members including the addition of gussets, changes which affect the clearance between the DLV and safety cab or ground line changes of mounting brackets are beyond the understanding of minor modifications. This does not mean that they can not be considered. However as a notified body you must be confident that in the event of a fatal accident you can produce evidence that any modifications approved offer the same protection as the original design. It is also important to keep in mind that comparison tests between say different mounts is not the total affect on the original test, as the safety cab and mounts work as a unit. With these points in mind may we suggest that modifications of this nature are very hard to substantiate.

The additional data sheet of the original certificate must contain:

- a reference to the original certificate.
- a reference to the original test report.
- a unique number for this modification.
- a description of the changes made including references to drawings and issue numbers.
- declaration of acceptance.
- the date of approval and - if applicable- limited series numbers.

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

	CO-ORDINATION OF NOTIFIED BODIES **Machinery-Directive 89/392/EEC + amendments** **RECOMMENDATION FOR USE**	CNB/M/12.010 Revision 02 Language : E

Number of pages : 1	Date :25/10/96	To be approved by :	Approved on :
Origin : VG12 ROPS and FOPS		☑ Vertical Group.....30/01/96 ☐ Horizontal Committee .....17/04/96 ☐ Standing Committee 08/06/98	

Question related to : Annex : ESR (1) :	EN/prEN : Clause :	Other :

Key words : FOPS, Standing operator

Question :

What DLV height shall be used for standing operator when testing FOPS according to ISO 3449?

Solution :

According to ISO 3411 the height of a large operator is 1880 mm without helmet. The DLV height from the standing platform shall be 1930 mm (1880 mm + 50 mm for helmet).

Sent for information to : ☐ members of the VG ☐ other(s) VG ☑ HC (2) ☐ TC (3) ☑ SC (4) ☐ other (5)

(1) Essential safety requirement
(2) Horizontal Committee
(3) N° of CEN/TC (Secretary & Chairman)
(4) EEC Standing Committee 89/392
(5) To be specified

PART 4

NOTIFIED BODIES

This section provides a table (updated at the date of publication) which indicates the area of responsibility, for all bodies notified by the Authorities of the Member States and of the EEA States, within the framework of the Machinery Directive.

The table identifies the relevant Annex IV machinery and safety components which each notified body has responsibility for conformity assessment procedures. It also specifies the level of this responsibility as defined by Article 8, Section 2, of the Directive.

CONTENTS

NAME AND IDENTIFICATION NUMBER OF THE NOTIFIED BODIES		MACHINERY AND SAFETY COMPONE														
		A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	A 9	A 10	A 11	A 12 .1	A 12 .2	A 12 .3	
AIB-VINÇOTTE INTERNATIONAL	0026	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
INSTITUTO DE SOLDADURA E QUALIDADE	0028	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
TÜV HANNOVER/SACHSEN-ANHALT e.V.	0032									X	X	X			X	
TÜV SAARLAND e.V.	0034															
TÜV BERLIN-BRANDENBURG e.V.	0035	X	X	X	tf	X	X	X	X	X	tf					
TÜV BAYERN/SACHSEN e.V.	0036	W	X	X	W	X	X	X		X	X	X				
EAGLE STAR CERTIFICATION LIMITED	0037									X	X	X				
LLOYD'S REGISTER OF SHIPPING	0038	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NATIONAL VULCAN ENG INS GROUP LTD	0040									X	X	X				
PLANT SAFETY LTD	0041	X	X	X	X	X	X	X	X	X	X	X				
RW TÜV e.V.	0044	X	X	X	X	X	X	X	X	X						
TÜV NORD e.V.	0045	X	X	X	X	X	X	X	X	X	X	X				
TÜV SÜDWESTDEUTSCHLAND e.V.	0047	W	X	X	W	X	X	X		X	X	X				
NATIONAL STANDARDS AUTHORITY IRELAND	0050	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IST ITALIANO DEL MARCHIO DIQUALITÀ	0051	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CUALICONTROL ACI, S.A.	0052	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
ASISTENCIA TECNICA INDUSTRIAL S.A.E.	0053	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
BUREAU VERITAS ESPAÑOL S.A.	0054	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
ENTIDAD COLABORADORA DE LA ADMIN	0056	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
EUROCONTROL S.A.	0057	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
INSPECCION Y GARANTIA DE CALIDAD S.A.	0058	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
NORCONTROL S.A.	0059	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
BUREAU VERITAS	0062															
ICEPI	0066	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ING. CESARE PETROSILLO	0067	X	X	X	X	X	X	X	X	X	X	X				
IST DI RICERCHE E COLLAUDI M.MASINI Srl	0068	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UTAC	0069															
INRS	0070	W	X	X	W	X	X	X		X						
LABORATOIRE NATIONAL D'ESSAIS LNE	0071	W	X	X	W	X	X	X								

NAME AND IDENTIFICATION NUMBER OF THE NOTIFIED BODIES		MACHINERY AND SAFETY COMPONE														
		A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	A 9	A 10	A 11	A 12 .1	A 12 .2	A 12 .3	
APAVE PARISIENNE	0077															
INERIS	0080														X	
LCIE	0081															
APAVE LYONNAISE	0082										X	X				
BRITISH STANDARDS INSTITUTION BSI	0086	X	X	X	X	X	X	X	X	X	X	X				
ICICT S.A.	0093	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
LLOYD'S REGISTER OF SHIPPING	0094	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
NOVOTEC CONSULTORES, S.A.	0095	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
SGS TECNOS, GARANTIA DE CALIDAD, S.A.	0096	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
AENOR	0099	M			M						X	X				
BIA	0121															
TÜV PRODUCT SERVICE GmbH	0123	X	X	X	X	X	X	X	X	X	X	X				
DEKRA CERTIFICATION SERVICES (DCS) GmbH	0124	W	X	X	W	X			X	X						
LGA	0125	X	X	X	X	X	X	X	X	X	X	X				
DMT-ZERTIFIZIERUNGSSTELLE DER DMT	0158												X	X	X	
LOM	0163												X	X	X	
TÜV RHEINLAND Product Safety GmbH	0197	X	X	X	X	X	X	X	X	X	X	X				
ANCCP	0302	X	X	X	X	X	X	X	X	X						
ISTITUTO CERTIFICAZIONE EUROPEA S.R.L.	0303	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
TNO CERTIFICATION B.V.	0336	X	X	X	X	X	X	X	X	X	X	X				
PRÜF-UND ZERTIFIZIERUNGSSTELLE IM	0340															
KEMA NV KEMA	0344	M			M				X	X	X	X				
SGS UNITED KINGDOM LTD SGS	0353	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DPLF	0363	W			W				X							
ELOT	0365	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
VDE	0366	X	X	X	X	X	X	X	X							
CTBA	0380								X							
ADIV	0381	M			M											
AIF SERVICES SA AIF	0384									X						

NAME AND IDENTIFICATION NUMBER OF THE NOTIFIED BODIES		MACHINERY AND SAFETY COMPONE														
		A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	A 9	A 10	A 11	A 12 .1	A 12 .2	A 12 .3	
AINF	0385									X						
APAVE NORD PICARDIE	0386															
APAVE ALSACIENNE	0387															
CEMAGREF	0388															
APAVE NORMANDE	0389															
FACHAUSSCHUß FLEISCHWIRTSCHAFT	0391	M			M											
FACHAUSSCHUSS HOLZ	0392	W	X	X	W	X	X	X								
FACHAUSSCHUß EISEN UND METALL III	0393									X	X	X				
LAVM-CNVM	0394	W	X	X	W	X	X	X		X						
DANSK TEKNOLOGISK INSTITUT	0396	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ORGANISMO CERTIFICAZIONE EUROPEA OCE	0397	W	X		W	X	X		X	X			X	X		
ISTITUTO DI RICERCHE, PROVE E ANALISI CPM	0398	X			X				X	X	X	X				
STICHTING ABOMA + KEBOMA	0399															
STICHTING NEDERLANDS INSTITUUT	0400															
VTT VALMISTUSTEKNIIKKA /	0401	X	X	X	X	X	X	X		X						
SNTRI	0402															
SVENSK MASKINPROVNING AB	0404[1]	W	X	X	W	X		X	X	X			X		X	
ISTITUTO GIORDANO SPA	0407	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
TÜV- ÖSTERREICH TÜV-A	0408	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SAQ KONTROLL AB SAQ	0409	X	X	X	X	X	X	X		X	X	X				
SEMKO AB	0413[2]	w			w			x	x							
FACHAUSSCHUß "VERKEHR"	0417															
FACHAUSSCHUß "CHEMIE"	0418										X	X				
INSPECTA OY	0424															
ICIM	0425								X							
ISTITUTO RICERCHE BREDA – TÜV ITALIA	0426	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
MPA-NRW	0432													X		
DET NORSKE VERITAS REGION NORGE AS	0434	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
AMTRI VERITAS LIMITED	0463	X	X	X	X	X	X	X	X	X	X	X				

NAME AND IDENTIFICATION NUMBER OF THE NOTIFIED BODIES		MACHINERY AND SAFETY COMPONE														
		A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	A 9	A 10	A 11	A 12 .1	A 12 .2	A 12 .3	
CATIM	0464	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
AEA TECHNOLOGY PLC	0466	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NEMKO AS	0470	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
REGISTRO ITALIANO NAVALE RINA	0474									X	X	X	X	X	X	
ISTITUTO ITALIANO DELLA SALDATURA	0475										X					
CERMET	0476	X	X	X	X	X	X	X		X						
SLG PRÜF UND ZERTIFIZIERUNGS GmbH	0494	W	X	X	W	X	X	X	X	X	X	X				
INDUSTRIAL ENGINEERING CONSULTANTS	0495	X	X	X	X	X	X			X						
MODULO UNO	0496	X	X	X	X	X	X	X	X	X	X	X				
STICHTING KEURINGSBUREAU HOUT SKH	0502	W	X	X	W	X	X	X	X							
AGRIC RESEARCH CENTRE OF FINLAND	0504	X				X			X							
VENETA ENGINEERING SRL	0505	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PRÜF- UND ZERTIFIZIERUNGSSTELLE IM	0515															
ERA TECHNOLOGY LTD	0524	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CETIM	0526															
ISTITUTO SPERIMENTALE PER L'EDILIZIA	0529	X	X	X	X	X	X	X	X	X						
TECHNISCHE PRÜFSTELLE DIENSTBIER &PIX	0533															
DEMKO A/S	0539	X	X	X	X	X		X	X							
POWERED ACCESS CERTIFICATION LIMITED	0545															
FACHAUSSCHUß "BAU" PRÜFZERT	0547															
FACHAUSSCHUß NAHRUNGS GENUßMITTEL	0556	M			M											
FINN STRØM A/S	0572															
GESELLSCHAFT FÜR SICHERHEITSTECHNIK	0583															
FIMKO LTD	0598	X	X	X	X	X		X	X							
ELECTRICAL INSPECTION FIMTEKNO OY	0599															
CONSULTAS ENGINEERING A.S.	0603															
NORGES LANDBRUKSHØGSKOLE	0604	X			X				X							
SGS TECHNISCHE INSPECTIES B.V.	0608															
HELLENIC REGISTER OF SHIPPING, HRS	0618	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

NAME AND IDENTIFICATION NUMBER OF THE NOTIFIED BODIES		MACHINERY AND SAFETY COMPONE														
		A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	A 9	A 10	A 11	A 12 .1	A 12 .2	A 12 .3	
DELTA KVALITET & CERTIFICERING	0634															
TÜV BAU- UND BETRIEBSTECHNIK GmbH	0635															
ÅF- KONTROLL AB	0640															
TUV HELLAS S.A.	0654	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	tf	
STK Inter Test AB	0655															
TECHNOLOGY INTERNATIONAL LTD	0673															
LONGLANDS CERTIFICATION	0675	X	X	X	X	X	X	X		X						
FACHAUSSCHUß "EISEN UND METAL II"	0697															
EUROPEAN CERTIFYING ORGANIZATION SRL	0714	X							X				X	X	X	
AGENCIA PER L'ALTA TECNOLOGIA CESVIT	0715															
CEMOTER	0716															
NEMKO ALFLAB S.P.A.	0717	X	X	X	X	X	X	X	X	X	X	X				
GAMBA WORKING GROUP	0718															
ITEVELESA	0719	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CESI	0722															
NOVICON SAS DI R. CASTELLI & C. NOVICON	0723	X	X	X	X	X				X	X					
SOCIETA DI FISICA APPLICATA SRL PHIAP	0724								X							
ABS EUROP LTD	0729	X	X	X	X	X										
CERTICONTROL S.A.	0730	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DRUCK UND PAPIERVERARBEITUNG	0739				W											
FACHAUSSCHUß VERWALTUNG	740															
FACHAUSSCHUß EISEN UND METAL II	741					X										
FACHAUSSCHUß "LEDER"	742										X	X				
DANMARKS JORDBRUGSFORSKNING	802								X							

KEY

X	Indicates responsibility for the type examination, as specified in Article 8, 2b and 2c of the Ma
tf	Indicates responsibility for the receipt and verification of the technical file, as specified in Ar Directive.
W	Relates to saws as specified in Sections A1 and A4 of Annex IV, which work **only** on wood ar analogous materials.
M	Relates to saws as specified in Sections A1 and A4 of Annex IV, which work **only** on meat an analogous materials.
No 404[1]	Responsibility restricted, within machine type A16, for type examination of only mobile elevati
No 413[2]	Responsibility restricted for type examination of only those machines specified, and which are 4kW.

ANNEX IV of Machinery Directive 98/37/EC

A. Machinery

A1. Circular saws (single or multi-blade) for working with wood and analogous materials or for working with meat and analogous materials.
- 1.1. Sawing machines with fixed tool during operation, having a fixed bed with manual feed of the workpiece or with a demountable power feed.
- 1.2. Sawing machines with fixed tool during operation, having a manually operated reciprocating saw-bench or carriage.
- 1.3. Sawing machines with fixed tool during operation, having a built-in mechanical feed device for the work-pieces, with manual loading and/or unloading.
- 1.4. Sawing machines with movable tool during operation, with a mechanical feed device and manual loading and/or unloading.

A2. Hand-fed surface planing machines for woodworking.

A3. Thicknessers for one-side dressing with manual loading and/or unloading for woodworking.

A4. Band-saws with a fixed or mobile bed and band-saws with a mobile carriage, with manual loading and/or unloading, for working with wood and analogous materials or for working with meat and analogous materials.

A5. Combined machines of the types referred to in 1 to 4 and 7 for working with wood and analogous materials.

A6. Hand-fed tenoning machines with several tool holders for woodworking.

A7. Hand-fed vertical spindle moulding machines for working with wood and analogous materials.

A8. Portable chainsaws for woodworking.

A9. Presses, including press-brakes, for the cold working of metals, with manual loading and/or unloading, whose movable working parts may have a travel exceeding 6 mm and a speed exceeding 30 mm/s.

A10. Injection or compression plastics-moulding machines with manual loading or unloading.

A11. Injection or compression rubber-moulding machines with manual loading or unloading.

A12. Machinery for underground working of the following types:
- machinery on rails: locomotivies and brake-vans,
- hydraulic-powered roof supports,
- internal combustion engines to be fitted to machinery for underground working.

A13. Manually-loaded trucks for the collection of household refuse incorporating a compression mechanism.

A14. Guards and detachable transmission shafts with universal joints as described in section 3.4.7.

A15. Vehicles servicing lifts.

A16. Devices for the lifting of persons involving a risk of falling from a vertical height of more than three metres.

A17. Machines for the manufacture of pyrotechnics.

B. Safety components

B1. Electro-sensitive devices designed specifically to detect persons in order to ensure their safety (non-material barriers, sensor mats, electromagnetic detectors, etc.).

B2. Logic units which ensure the safety functions of bimanual controls.

B3. Automatic movable screens to protect the presses referred to in 9, 10 and 11.

B4. Roll-over protection structures (ROPS).

B5. Falling-object protective structures (FOPS).

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0495	INDUSTRIAL ENGINEERING CONSULTANTS (IEC) Via Botticelli, 51 I - 10154 Torino Tel : +39.011.242.53.53 Fax : +39.011.242.52.00
0496	CONSORZIO DNV MODULO UNO Centre Direzionale Colleoni Via Paracelso, 20 Palazzo Andromeda ingr. 3 I – 20041 AGRATE BRIANZA 5MI) Tel : +39.011.262.43.74 Fax : +39.011.242.52.00
0502	STICHTING KEURINGSBUREAU HOUT (SKH) Huizermaatweg, 29 NL - 1273 NA Huizen Tel : +31.21.52.68.737 Fax : +31.21.52.68.381
0504	AGRICULTURAL RESEARCH CENTRE OF FINLAND, MTT/VAKOLA, Vakolantie, 55 FIN - 03400 Vihti Tel : +358.9.2242.51 Fax : +358.9.2246.210
0505	VENETA ENGINEERING SRL Via Lovanio 8/10 I - 37135 Verona
0515	FACHAUSSCHUß TIEFBAU PRÜF- UND ZERTIFIZIERUNGSSTELLE IM BG-PRÜFZERT Landsberger Strasse, 309 D – 80687 München Tel : +49.89.88.97.02 Fax : +49.89.88.97.859
0524	ERA TECHNOLOGY LTD Cleeve Road Leatherhead Surrey GB - HT22 7SA. Tel : +44.1372.367.000 Fax : +44.1372.367.099

0526	CENTRE TECHNIQUE DES INDUSTRIES MECANIQUES (CETIM) Rue Felix Louat, 52 - B.P. 67 F - 60304 Senlis Tel : +33.3.44.67.30.00 Fax : +33.3.44.67.34.25 E:mail : michel.chotard@cetim.fr
0529	ISTEDIL SPA - ISTITUTO SPERIMENTALE PER L'EDILIZIA Via Tiburtina Km 18,300 I - 00012 Setteville di Guidonia (RM)
0533	TECHNISCHE PRÜFSTELLE DIENSTBIER (PIX) Hundert Beete, 13 D - 91334 Hemhofen Tel : +49.9195.6712 Fax : +49.9195.6503
0539	DEMKO A/S Lyskær, 8 - Postboks 514 DK - 2730 Herlev Tel : +45.44.85.65.65 Fax : +45.44.85.65.00 E-mail : demko@demko.dk
0545	POWERED ACCESS CERTIFICATION LIMITED – (PAC) P.O. Box 27 Carnforth Lancashire GB – LA6 1GA Tel : +44.1524.782.792 Fax : +44.1524.781.301
0547	FACHAUSSCHUß "BAU" PRÜF- UND ZERTIFIZIERUNGSSTELLE IM BG-PRÜFZERT Steinhäuser Straße, 10 D - 76135 Karlsruhe Tel : +49.721.8102.614 Fax : +49.721.8102.600 E-mail : fa-bau@t-online.de
0556	FACHAUSSCHUß NAHRUNGS- UND GENUßMITTEL Dynamostraße, 7-11 D - 68165 Mannheim Tel : +49.621.4456.3430 Fax : +49.621.4456.3470 E-mail : info@bgn.de
0572	FINN STRØM A/S Teglverksveien 9 - Høvik N - 3010 Drammen Tel : +47.32.84.84.50 Fax : +47.32.84.84.60

0583	GESELLSCHAFT FÜR SICHERHEITSTECHNIK UND PRÜFWESEN GmbH (GSP) Im Rehwinkel, 19 D - 53578 Windhagen Tel : +49.2644.2884 Fax : +49.2644.3123
0598	FIMKO LTD P.O. Box 30 (Särkiniementie, 3) FIN - 00211 Helsinki Tel : +358.9.69.63.61 Fax : +358.9.69.54.74
0599	ELECTRICAL INSPECTION FIMTEKNO OY P.O. Box 38 (Särkiniementie, 3) FIN - 00211 Helsinki Tel : +358.203.66.96 Fax : +358.203.66.999
0603	CONSULTAS ENGINEERING A.S. Dølasletta, 7 - P.O. Box 130 N - 3408 Tranby Tel : +47.32.84.41.50 Fax : +47.32.84.41.55
0604	NORGES LANDBRUKSHØGSKOLE INSTITUTT FOR TEKNISKE FAG SEKSJON KVALITETSSRIKING OG PROVING Postboks 5065 N - 1432 Ås Tel : +47.64.94.87.00 Fax : +47.64.94.88.10
0608	SGS TECHNISCHE INSPECTIES B.V. Malledijk, 18 - Postbus 200 NL - 3200 AE Spijkenisse Tel : +31.18.169.3333 Fax : +31.18.162.3566
0618	HELLENIC REGISTER OF SHIPPING (HRS) Akti Miaouli, 23 GR - 185 35 Piraeus Tel : +30.14.22.19.00.909 Fax : +30.14.22.19.13.14
0634	DELTA KVALITET & CERTIFICERING Venlighedsvej, 4 DK - 2970 Hørsholm Tel : +45.42.86.77.22 Tel : +45.42.86.58.98
0635	TÜV BAU- UND BETRIEBSTECHNIK GmbH Unternehmensgruppe TÜV Süddeutschland Westendstraße, 199 D - 80686 München
0640	ÅF- KONTROLL AB Box 8133 S - 104 20 Stockholm Tel : +46.8.657.1000 Fax : +46.8.650.7726 E-mail : jonas.lidahl@kontroll.af.se
0654	TUV HELLAS S.A. E. Giavassi Street, 46 GR - 153 41 AG. PARASKEVI
0655	STK Inter Test AB Tallmätargatan, 7 S - 721 34 Västerås
0673	TECHNOLOGY INTERNATIONAL (EUROPE) LTD 41-42 Shrivenham Hundred Business Park Shrivenham Wiltshire GB – SN6 8TZ Tel : +44.17.93.783.137 Fax : +44.17.93.782.310
0675	LONGLANDS CERTIFICATION LONGLANDS ADVISORY AND CONSULTANCY SERVICES Teesside Tertiary College – Marton Road Cleveland GB - TS4 3RX Tel : +44.1642.300.100 Fax : +44.1642.300.893 E-mail : lacs@ttc.ac.uk (Attn. Malcom LYALL)
0697	FACHAUSSCHUß "EISEN UND METAL II" PRÜF- UND ZERTIFIZIERUNGSSTELLE – IM BG-PRÜFZERT Wilhelm-Theodor-Römheld-Strasse, 15 D - 55130 Mainz-Weisenau Tel : +49.6131.802.0 Fax : +49.6131.802.572
0714	EUROPEAN CERTIFYING ORGANIZATION SRL (ECO) Via Brunelleschi, 119 I – 48100 Ravenna

0715	AGENCIA PER L'ALTA TECNOLOGIA (CESVIT) Via Pian dei Carpini, 28 I - 50127 Firenze
0716	INSTITUTO PER LE MACCHINE MOVIMENTO TERRA (CEMOTER-CNR) Via Canal Bianco, 28 I - 44044 Cassana (FE) Tel : +39.05.32.73.1571 Fax : +39.05.32.73.2250 E:mail : paoluzzi@cemoter.bo.cnr.it
0717	NEMKO ALFLAB S.P.A. Via Trento e Trieste, 116/118 I - 20046 Biassono (MI)
0718	GAMBA WORKING GROUP di Gamba Davide Piazza Savoia, 4 I - 10122 Torino
0719	ITEVELESA - Inspección Técnica de Vehículos Leonesa S.A. Polígono Industrial San Cristobal C/ Acero, parcela 16 E - 47012 Valladolid
0722	CESI - CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO GIACINTO. MOTTA SPA (CESI) Via Rubattino, 54 I - 20134 Milano
0723	NOVICON SAS DI R. CASTELLI & C. (NOVICON) Via Per Linsanico, 9 I - 22050 Abbadia Lariana
0724	PHIAP - SOCIETA DI FISICA APPLICATA SRL (PHIAP) Via Paradiso, 3 I - 47100 Forli

0729	ABS EUROPE LTD ABS House Frying Pan Alley,1 - London GB - E1 7HR
0730	CERTICONTROL S.A. Manresa 1, 1a Planta E - 30004 Murcia
0739	FACHAUSSCHUß “ DRUCK UND PAPIERVERARBEITUNG” Prüf - und Zertifizierungsstelle im BG-PRÜFZERT Rheinstrasse, 6-8 D – 65185 Wiesbaden Tel : +49.611.131.219 Fax : +49.611.131.155 E-mail : fa-dp@t-online.de
740	FACHAUSSCHUß "VERWALTUNG" Prüf - und Zertifizierungsstelle im BG-PRÜFZERT Deelbögenkamp, 4 D – 22281 Hamburg Tel : +40.5146.2775 Fax : +40.5146.2014
741	FACHAUSSCHUß "EISEN UND METAL I" Prüf - und Zertifizierungsstelle im BG-PRÜFZERT Seligmannallee, 4 D – 30173 Hannover Tel : +49.511.8118.446 Fax : +49.511.8118.373
742	FACHAUSSCHUß "LEDER" Prüf - und Zertifizierungsstelle im BG-PRÜFZERT Lortzingstrasse, 2 D – 55062 Mainz Tel : +49.6131.785.1 Fax : +49.6131.785.566
802	DANMARKS JORDBRUGSFORSKNING Forskningscenter Bygholm Postboks 536 DK - 8700 Horsens Tel +45.75.60.22.11 Fax +45.75.62.48.80

PART 5

USEFUL ADDRESSES

5.1. REPRESENTATIVES OF MEMBER STATES RESPONSIBLE FOR THE IMPLEMENTATION OF THE 98/37/EC DIRECTIVE

	MACHINERY	
B	M. A. Van Hyfte Ministère de l'Emploi et du Travail Administration de la sécurité du travail Rue Belliard 51 B - 1040 Bruxelles	TEL : +32 2 233 45 25 FAX : +32 2 233 42 31
DK	Mr. K. Overgaard-Hansen Direktoratet for Arbejdstilsynet Landskronagade 33 DK-2100 København Ø	TEL : +45 39 15 23 29 FAX : +45 39 15 25 60 E-mail : koh@arbejdstilsynet.dk
D	Herr H.J. Ostermann Bundesministerium für Arbeit und Sozialordnung Postfach 14 02 80 D - 53107 Bonn	TEL: +49 228 527 28 88 FAX: +49 228 527 29 58 E-mail : IIIc3@bma.bund400.de
EL	Mr. Alkiviadis Pardalis Messogion 14-18 GR - 115 10 Athens	TEL : +30 1 778 29 51 FAX : +30 1 779 88 90
E	Sr. Portero Sánchez José Ministerio de Industria y Energia Paseo de la Castellana 160 E-28071 Madrid	TEL : +34 1 349 40 63 FAX : +34 1 349 43 00 E-mail : jpsl@min.es
FIN	Mr. Leo Suomaa Ministry of Labour P.O. Box 524 FIN - 00101 Helsinki	TEL:+358 9 18 56 89 31 FAX:+358 9 18 56 89 57 E-mail : leo.suomaa@stm.vn.fi
F	Mme Frichet-Thirion Elisabeth Ministère de l'Emploi et de la solidarité DRT/Bureau CT5 20, rue d'Estrées F-75700 Paris 07 SP M. G. Robert Ministère de l'Agriculture Bureau DEPSE 53 78, rue de Varenne F-75349 Paris 07 SP	TEL : +33 1 44 38 26 77 FAX : +33 1 44 38 27 15 E-mail : drtcta@club-internet.fr TEL : +33 1 49 55 53 33 FAX: +33 1 49 55 47 70 E-mail : guy.robert@agriculture.gouv.fr
IRL	Mr. Brendan O'Leary Department of Enterprise and Employment Kildare Street IRL - DUBLIN 2	TEL : +353 1 661 44 44 FAX : +353 1 676 26 54

I	Mr Cavanna Paolo Ministero Industria Via Molise, 2 I-00187 Roma	TEL : +39 06 47 05 30 23 FAX : +39 06 47 88 77 48 E-mail : cavanna@minindustria.it
NL	M. Jr. W.J. de Jong Ministerie van sociale Zaken en Werkgelegenheid PB 90801 NL-2509 LV Den Haag	TEL : +31 70 33 35 523 FAX : +31 70 33 34 026 E-mail : wjdjong@minszw.nl
A	Mr. Lentsch Wolfgang Bundesministerium für Wirtschaftliche Angelegenheiten - Abteilung III/3 Stubenring 1 A-1011 Wien	TEL:+43 1 711 00 5831 FAX : +43 1 714 27 18 E-mail : wolfgang.lentsch@ bmwa.gv.at
P	Mrs. Monteiro Maria De Fatima Instituto Protuguês da Qualidade Ministerio da Industria e Energia Rua C à AV. dos Três Vales P-2825 Monte Da Caparica	TEL.: +351 1 294 81 00 FAX : +351 1 294 81 01
S	Mr. Lennart Ahnström Arbetarskyddsstyrelsen National Board of Occupational Safety and Health S - 171 84 Solna	TEL : +46 8 730 94 51 FAX : +46 8 730 19 67 E-mail : lennart.ahnstrom@arbsky.se
UK	Mr. Richard Lawson Department of Trade and Industry 151 Buckingham Palace Road GB-London SW1W 9SS	TEL.: +44 171 215 1970 FAX: +44 171 215 1529 E-mail : richard.lawson@tidv.dti.gov.uk
NOR	Mr. Jens Brynestad Directorate of Labour Inspection P.O. Box 8103 Dep. N - 0032 Oslo	TEL. : +47 22 957 000 FAX : +47 22 693 091 E-mail : jens.brynestad@arbeidstilsynet.dep.no
IS	Mr. Gardar Halldórsson Occupational Safety and Health Administration Bíldshöfda 16 IS - 112 Reykjavik	TEL.: +354 5 672 500 FAX : +354 5 674 086

5.2. EUROPEAN COMMISSION SERVICES

a) DG III/D/1 : Mechanical and Electrotechnical Unit

Mr. Pablo Ruiz Fernandez (Head of Unit)
III/D/1 - SC15 3/012
200, rue de la Loi
B - 1049 Brussels
Tel. : +32 2 295 34 61/299 00 31
Fax : +32 2 296 62 73

Mr. Jean-Pierre Van Gheluwe
III/D/1 - SC15 3/171
200, rue de la Loi
B - 1049 Brussels
Tel. : +32 2 296 09 64
Fax : +32 2 296 62 73

b) DG III/B/1 : Coordination of regulatory activities, international aspects of the internal product market (MRA)

Mr. Brian Jenkinson (Deputy Head of Unit)
III/B/1 - SC15 3/103
200, rue de la Loi
B - 1049 Brussels
Tel. : +32 2 296 81 84
Fax : +32 2 295 38 77

c) DG III/B/2 : Standardisation policy

Mr. Cornelis Brekelmans
III/B/2 - SC15 2/002
200, rue de la Loi
B - 1049 Brussels
Tel. : +32 2 295 66 00
Fax : +32 2 296 70 19

5.3. EUROPEAN ORGANISATIONS IN CHARGE OF STANDARDISATION

a) CEN

Central Secretariat
36, rue de Stassart
B - 1050 Brussels
Tel. : +32 2 550 08 11
Fax : +32 2 550 08 19
E-mail : infodesk@cenclcbel.be
URL : http://www.cenorm.be/

b) CENELEC

Central Secretariat
35, rue de Stassart
B - 1050 Brussels
Tel. : +32 2 519 68 71
Fax : +32 2 519 69 19
E-mail : general@cenelec.be
URL : http://www.cenelec.be/

c) ETSI

ETSI Secretariat
Postal address
F - 06921 Sophia Antipolis Cedex
Tel. : +33 4 92 94 42 00
Fax : +33 4 93 65 47 16
E-mail : infocentre@etsi.fr
URL : http://www.etsi.org/

d) National Committees Members of CEN and CENELEC

	CEN	
B	Institut Belge de Normalisation/ Belgisch Instituut voor Normalisatie (IBN/BIN) Avenue de la Brabançonne 29/ Brabançonnelaan 29 B - 1040 Bruxelles/Brussel	TEL : +32 2 738 00 90 FAX : +32 2 733 42 64
DK	Dansk Standard (DS) Kollegievej 6 DK - 2900 Hellerup	TEL : +45 39 96 61 01 FAX : +45 39 96 61 02
D	Deutsches Institut für Normung e.V. (DIN) Postfach D - 10772 Berlin	TEL : +49 30 26 01 0 FAX : +49 30 26 01 12 31
EL	Hellenic Organisation for Standardisation (ELOT) 313, Acharnon street GR - 11145 Athens	TEL : +30 1 228 00 01 FAX : +30 1 228 62 19
E	Asociación Española de Normalización y Certificación (AENOR) Génova, 6 E - 28004 Madrid	TEL : +34 1 432 60 00 FAX : +34 1 310 40 32
FIN	Suomen Standardisoimisliitto r.y. (SFS) P.O. Box 116 FI - 00241 Helsinki	TEL : +358 9 149 93 31 FAX : +358 9 146 49 25
F	Association Française de Normalisation (AFNOR) Tour Europe F - 92049 Paris la Défense	TEL : +33 1 42 91 55 55 FAX : +33 1 42 91 56 56
IRL	The National Standards Authority of Ireland (NSAI) Glasnevin IRL - Dublin 9	TEL : +353 1 807 38 00 FAX : +353 1 807 38 38
I	Ente Nazionale Italiano di Unificazione (UNI) Via Battistotti Sassi, 11b I - 20133 Milano	TEL : +39 02 70 02 41 FAX : +39 02 70 10 61 06
L	Service de l'Energie de l'Etat (SEE) Département Normalisation Boîte Postale 10 LUX - 2010 Luxembourg	TEL : +352 46 97 45 1 FAX : +352 22 25 24
NL	Nederlands Normalisatie-Instituut (NNI) Postbus 5059 Kalfjeslaan 2 NL - 2600 GB Delft	TEL : +31 15 269 03 90 FAX : +31 15 269 01 90
A	Österreichisches Normungsinstitut (ON) Postfach 130 Heinestraße 38 A - 1021 Wien	TEL : +43 1 213 00 FAX : +43 1 213 00 650

P	Instituto Português da Qualidade (IPQ) Rua C, Av. dos Tres Vales P - 2825 Monte da Caparica	TEL. : +351 1 294 81 00 FAX : +351 1 294 82 22
S	Standardiseringskommissionen i Sverige (SIS) PO Box 6455 S - 11381 Stockholm	TEL : +46 8 610 30 00 FAX : +46 8 30 77 57
UK	British Standards Institution (BSI) 389 Chiswick High Road GB-London W4 4AL	TEL.: +44 181 996 90 00 FAX : +44 181 996 74 00
NOR	Norges Standardiseringsforbund (NSF) P.O. Box 353 Sk yen N - 0212 Oslo	TEL.: +47 22 04 92 00 FAX : +47 22 04 92 11
IS	Icelandic Council for Standardisation (STRI) Keldnaholti IS - 112 Reykjavik	TEL.: +354 57 07 100 FAX : +354 57 07 111
CH	Schweizerische Normen-Vereinigung (SNV) Mühlebachstraße 54 CH - 8008 Zürich	TEL.: +41 1 254 54 54 FAX : +41 1 254 54 75
CZ	Czech office for Standards Metrology and Testing (COSMT) Biskupsky dvúr 5 CZ - 113 47 Praha 1	TEL. : +42 2 232 44 30 FAX : +42 2 232 43 73

	CENELEC	
B	Comité Electrotechnique Belge (CEB) Belgisch Elektrotechnisch Comité (BEC) Avenue Fr. Van Kalken, 9 B - 1070 Bruxelles	http://www.ceb.arc.be Tel: + 32 2 556 01 10 Fax: + 32 2 556 01 20 E-mail: info@ceb.arc.be Comité
DK	Dansk Standard (DS) Electrotechnical Sector Kollegievej, 6 DK - 2920 Charlottenlund	http://www.ds.dk Tel: + 45 39 96 61 01 Fax: + 45 39 96 61 02 - 61 E-mail: ds.clc.nc@ds.dk
D	Deutsche Elektrotechnische Kommission im DIN und VDE (DKE) Stresemannallee, 15 D - 60 596 Frankfurt am Main	http://www.vde.de Tel: + 49 69 63 080 Fax: + 49 69 96 31 52 18
EL	Hellenic Organization for Standardization (ELOT) Acharnon Street, 313 GR - 111 45 Athens	http://www.elot.gr Tel: + 30 1 228 00 01 Fax: + 30 1 228 32 10 E-mail: elotinfo@elot.gr
E	Asociación Española de Normalización y Certificación (AENOR) C/ Génova 6 E - 28004 Madrid	http://www.aenor.es Tel: + 34 1 432 60 00 Fax: + 34 1 310 45 96
FIN	Finnish Electrotechnical Standards Association (SESKO) Särkiniementie 3 P.O. Box 134 FIN - 00211 Helsinki	http://www.sesko.fi Tel : +358 9 696 391 Fax : +358 9 677 059
F	Union Technique de l'Electricité (UTE) 33, avenue du Général Leclerc, B.P. 23 F - 92262 Fontenay-aux-Roses Cedex	http://www.ute-fr.com Tel: + 33 1 40 93 62 00 Fax: + 33 1 40 93 44 08
IRL	Electro-Technical Council of Ireland (ETCI) ESB Office Parnell Avenue Harold's Cross IRL - Dublin 12	http://www.nsai.ie Tel: + 353 1 454 58 19 Fax: + 353 1 454 58 21 E-mail: administration@etci.ie
I	Comitato Elettrotecnico Italiano (CEI) Viale Monza 259 I - 20126 Milano	http://www.ceiuni.it Tel: + 39 2 25 77 31 Fax: + 39 2 25 77 32 10
L	Service de l'Energie de l'Etat (SEE) 34, Avenue de la Porte Neuve L - 2227 Luxembourg Postal address : c/o Service de l'Energie de l'Etat B.P. No 10 L - 2010 Luxembourg	http://www.etat.lu/SEE Tel: + 352 46 97 461 Fax: + 352 46 97 46 - 39
NL	Nederlands Elektrotechnisch Comité (NEC) Kalfjeslaan 2 Postbus 5059 NL - 2600 GB Delft	http://www.nni.nl Tel: + 31 15 269 03 90 Fax: + 31 15 269 01

A	Österreichischer Verband für Elektrotechnik (ÖVE) Eschenbachgasse 9 A - 1010 Wien	Tel: + 43 1 587 63 73 Fax: + 43 1 586 74 08 E-mail: ove@ove.at
P	Instituto Português da Qualidade (IPQ) Rua C à Av. dos Très Vales P - 2825 Monte de Caparica	http://www.ipq.pt Tel: + 351 1 294 81 00 Fax: + 351 1 294 81 12
S	Svenska Elektriska Kommissionen (SEK) Kistagången 19 Box 1284 S - 164 28 Kista Stockholm	http://www.sekom.se Tel: + 46 84 44 14 00 Fax: + 46 84 44 14 30
UK	British Electrotechnical Committee (BEC) British Standards Institution (BSI) 389 Chiswick High Road GB - London W4 4AL	http://www.bsi.org.uk Tel: + 44 181 996 90 00 Fax: + 44 181 996 77 99
NOR	Norges Elektroteknisk Komite (NEK) Harbitzalléen 2A, Skøyen Postboks 280 N - 0212 Oslo	http://www.standard.no Tel: + 47 22 52 69 50 Fax: + 47 22 52 69 61
IS	The Icelandic Council for Standardization (STRI) Technological Institute of Iceland Keldnaholt IS - 112 Reykjavik	http://www.stri.is Tel: + 354 5707 150 Fax: + 354 5707 111
CH	Swiss Electrotechnical Committee (CES) Luppmenstraße 1 CH - 8320 Fehraltorf	http://www.sev.ch Tel: + 41 1 956 11 70 Fax: + 41 1 956 11 90

e) Technical Committees of European Standardisation Bodies responsible for Standardisation in the field of "Machinery"

CEN

CEN/TC 10 : Passengers, goods and service lifts
Secretariat : AFNOR

CEN/TC 98 : Lifting platforms
Secretariat : DIN

CEN/TC 114 : Safety of machinery
Secretariat : DIN

CEN/TC 122 : Ergonomics
Secretariat : DIN

CEN/TC 123 : Lasers and laser related equipment
Secretariat : DIN

CEN/TC 142 Woodworking machines - Safety
Secretariat : BSI

CEN/TC 143 Machine tools - Safety
Secretariat : STANIMUC on behalf of UNI

CEN/TC 144 Tractors and machinery for agriculture and forestry
Secretariat : AFNOR

CEN/TC 145 Rubber and plastics machines - Safety
Secretariat : DIN

CEN/TC 146 Packaging machines - Safety
Secretariat : UNI

CEN/TC 147 Cranes - Safety
Secretariat : BSI

CEN/TC 148 Continuous handling equipment and systems - Safety
Secretariat : AFNOR

CEN/TC 149 Rail-dependent storage and retrieval equipment - Safety
Secretariat : DIN

CEN/TC 150 Industrial trucks - Safety
Secretariat : BSI

CEN/TC 151 Construction equipment and building material machines - Safety
Secretariat : DIN

CEN/TC 153 Food processing machinery - Safety and hygiene specifications
Secretariat : DIN

CEN/TC 168 Chains, ropes, webbing, slings and accessories - Safety
Secretariat : BSI

CEN/TC 169 Lighting applications
Secretariat : DIN

CEN/TC 183 Waste management
Secretariat : DIN

CEN/TC 186 Industrial thermoprocessing - Safety
Secretariat : DIN-NAM

CEN/TC 188 Conveyor belts
Secretariat : BSI

CEN/TC 192 Fire service equipment
Secretariat : BSI

CEN/TC 196 Machines for underground mines - Safety
Secretariat : BSI

CEN/TC 197 Pumps
Secretariat : AFNOR

CEN/TC 198 Printing and paper machinery - Safety
Secretariat : DIN

CEN/TC 200 Tannery machinery - Safety
Secretariat : UNI

CEN/TC 201 Leather and imitation leather goods and footwear manufacturing machinery - Safety
Secretariat : UNI

CEN/TC 202 Foundry machinery - Safety
Secretariat : DIN-NAM

CEN/TC 211 Acoustics
Secretariat : DS

CEN/TC 214 Textile machinery and allied machinery - Safety
Secretariat : SNV

CEN/TC 231 Mechanical vibration and shock
Secretariat : DIN

CEN/TC 232 Compressors - Safety
Secretariat : SIS

CEN/TC 255 Hand-held, non-electric power tools - Safety
Secretariat : SIS

CEN/TC 271 Surface treatment equipment - Safety
Secretariat : DIN

CEN/TC 313 Industrial centrifuges - Safety requirements
Secretariat : SIS/MMS

CEN/TC 322 Equipments for making and shaping of metals - Safety requirements
Secretariat : DIN

CENELEC

CENELEC/TC 2 : Rotating machinery
Secretariat : UTE

CENELEC/TC 44X : Safety of machinery - Electrotechnical aspects
Secretariat : BEC

CENELEC/TC 61 : Safety of household and similar electrical appliances
Secretariat : VDE

CENELEC/TC 61 F : Hand-held and transportable electric motor operated tools
Secretariat : CEI

5.4. OTHER ADDRESSES

a) Workers Associations

Mr. Marc SAPIR
TUTB
155, boulevard E. Jacqmain
B - 1210 Brussels
Tel. : +32 2 224 05 60 / Fax : +32 2 224 05 61
E-mail :

b) Manufacturers Federations

1. ORGALIME (Liaison Group for the European Engineering Industries)
Diamond Building 5th floor
Boulevard A. Reyers, 80
B - 1030 Brussels
Tel. : +32 2 706 82 35 / Fax : +32 2 706 82 50
E-mail : secretariat@orgalime.be
Members of ORGALIME (see next pages - b.1)

2. CECIMO (European Committee for Co-operation of the Machine Tool Industries)
66, avenue Louise
B - 1050 Brussels
Tel. : +32 2 502 70 90 / Fax : +32 2 502 60 82
E-mail : tech-dep@cecimo.be
Members of CECIMO (see next pages - b.2)

3. FEM (European Federation of Handling Industries)
4, Kirchenweg
CH - 8032 Zürich
Tel. : +44 1 384 48 44 / Fax : +44 1 384 48 48
Members of FEM (see next pages - b.3)

c) Co-ordination of Notified Bodies

Chairman
Mr. Guy JACQUES
AIB Vinçotte
29, avenue A. Drouart
B - 1160 Brussels
Tel. : +32 2 674 57 11 / Fax : +32 2 674 59 59
E-mail : guy.jacques@euronet.be

Technical secretariatEUROGIP
Mme M.-C. Blandin
55, rue de la Fédération
F - 75015 Paris
Tel.: +33 1 40 56 30 40 / Fax : +33 1 40 56 36 66
E-mail : eurogip@wanadoo.fr

b.1	**MEMBER ORGANISATIONS OF ORGALIME**	
B	Fabrimétal - Fédération des Entreprises de l'Industrie des Fabrications Métalliques, Mécaniques, Electriques, Electroniques et de la Transformation des Matières Plastiques Diamond Building 5th floor Boulevard A. Reyers, 80 B - 1030 Brussels	TEL : +32 2 706 78 00 FAX : +32 2 706 78 01
DK	DI - Confederation of Danish Industries H.C. Andersens Boulevard 18 DK - 1787 København V	TEL : +45 33 77 33 77 FAX : +45 33 77 33 00
D	VDMA - Verband Deutscher Maschinen- und Anlagenbau e.V. Lyoner Strasse 18 Postfach 71 08 64 D - 60498 Frankfurt/Main	TEL : +49 69 660 30 FAX : +49 69 660 31 511
	WSU - Wirtschaftsverband Stahlverformung e.V. Goldene Pforte 1 Postfach 4009 D - 58093 Hagen/Emst	TEL : +49 2331 9588 0 FAX : +49 2331 5104 6
	ZVEI - Zentralverband der Elektrotechnik- und Elektronikindustrie e.V. Stresemannallee 19 Postfach 70 12 61 D - 60591 Frankfurt/Main	TEL : +49 69 630 21 FAX : +49 69 630 23 17
	EBM - Wirtschaftsverband (Wirtschaftsverband Eisen, Blech und Metall verarbeitende Industrie) An der Pönt 48, D - 40885 Ratingen - Breitscheid	TEL : +49 2102 18 61 01 FAX : +49 2102 18 61 77
E	Confemetal - Confederación Española de Organizaciones Empresariales del Metal Principe de Vergara, 74 E - 28006 Madrid	TEL : +34 91 562 55 90 19 93 FAX : +34 91 562 84 77
FIN	Suomen Metalliteollisuuden Keskusliitto Federation of Finnish Metal, Engineering and Electrotechnical Industries FIMET Eteläranta 10 SF - 00130 Helsinki 13	TEL : +358 9 192 31 FAX : +358 9 624 462
	Federation of Finnish Electrical and Electronic Industries SETELI Eteläranta 10 SF - 00130 Helsinki 13	TEL : +358 9 192 31 FAX : +358 9 635 855

F	FIM - Fédération des Industries Mécaniques Maison de la Mécanique 39-41, rue Louis Blanc F - 92400 Courbevoie Post : Cedex 72 F - 92038 Paris la Défense FIEEC Fédération des Industries Electriques et Electroniques 11, rue Hamelin F - 75783 Paris Cedex 16	TEL : +33 1 47 17 60 00 FAX : +33 1 47 17 64 99 TEL : +33 1 45 05 70 70 FAX : +33 1 45 53 03 93
IRL	E.I.A. - Engineering Industry Association Confederation House 84-86 Lower Baggot Street IRL - Dublin 2	TEL : +353 1 660 10 11 FAX: +353-1 660 17 1723
I	ANIE - Associazione Nazionale Industrie Elettrotecniche ed Elettroniche Via Alessandro Algardi 2 I - 20148 Milano ANIMA - Federazione delle Associazioni Nazionali dell'Industria Meccanica varie ed affine Via Battistotti Sassi 11 I - 20133 Milano	TEL : +39 02 32 641 FAX : +39 02 32 64 21 21 TEL : +39 2 739 71 FAX : +39 2 739 73 16
L	GCFL - Groupement des Constructeurs et Fondeurs du Grand-Duché de Luxembourg 7, rue Alcide de Gasperi Boîte Postale 1304 L - 1013 Luxembourg	TEL : +352 43 53 66 FAX : +352 43 23 28
NL	FME/CWM - Vereniging van Ondernemingen in de Metaal-, Kunststof-, Elektronika- en Elektrotechnische Industrie en Aanverwante Sectoren Postbus 190 Boerhaavelaan 40 NL - 2700 AD Zoetermeer METAALUNIE Nederlandse Organisatie van Ondernemers in het Midden- en Kleinbedrijf in de Metaal, Einsteinbaan 1, 3439 nj Nieuwegein, Postbus 2600, 3430 ga Nieuwegein, Tel : (31) 3060 533 44 - Fax : (31) 3060 531 22	TEL : +31 79 353 11 00 FAX : +31 79 353 13 65 TEL : +31 3060 533 44 FAX : +31 3060 531 22
A	FMWI - Fachverband der Eisen- und Metallwarenindustrie Österreichs Postfach 335 Wiedner Hauptstraße 63 A - 1045 Wien F.E.E.I. - Fachverband der Elektro- und Elektronikindustrie Österreichs Mariahilfer Strasse 37-39 5, Obergeschoss A - 1060 Wien	TEL : +43 1 50 10 50 FAX : +43 1 505 09 28 TEL : 43-1-588 39 0 FAX : 43-1-586 69 71

P	FENAME - Federaçao Nacional do Metal Estrada do Paço do Lumiar Polo tecnologico de Lisboa, lote 13 P - 1600 Lisboa FENAME - Federaçao Nacional do Metal Rua dos Platanos 197 P - 4100 Porto	TEL. : +351 1 715 21 72 FAX : +351 1 715 04 03 TEL. : +351 2 610 71 47 FAX : +351 2 610 74 73
S	VI - Sveriges Verkstadsindustrier PO Box 5510 Storgatan 5 S - 114 85 Stockholm	TEL : +46 8 782 08 00 FAX : +46 8 782 09 41
UK	BEAMA - Federation of British Electrotechnical and Allied Manufacturers' Associations Ltd Westminster Tower 3, Albert Embankment GB - London SE1 7SL METCOM - Mechanical and Metal Trades Confederation Carlyle House 235/237 Vauxhall Bridge RD GB - London SW1V IEJ	TEL.: +44 171 793 30 00 FAX : +44 171 793 30 03 TEL.: +44 171 233 70 11 FAX : +44 171 828 06 67
NOR	TBL - Teknologibedriftenes Landsforening Postboks 7072-Homansbyen Oscars Gate 20 N - 0306 Oslo 3	TEL.: +47 22 59 66 00 FAX : +47 22 59 66 69
CH	VSM - Société Suisse des Constructeurs de Machines Verein Schweizerischer Maschinen-Industrieller Kirchenweg 4 Case Postale CH - 8032 Zürich	TEL.: +41 1 384 48 44 FAX : +41 1 384 48 48

b.2	**MEMBER ORGANISATIONS OF CECIMO**	
B	SYCOMOM (Syndicat des Constructeurs Belges de Machines-Outils pour le Travail des Métaux, affiliés à Fabrimetal) Rue des Drapiers 21 B - 1050 Bruxelles	TEL : +32 2 510 25 12 FAX : +32 2 510 25 63
DK	FDV (Foreningen af Danske Vaerktøjsmaskinfabrikanter) Postboks 19 DK - 7171 Uldum	TEL : +45 75 893 311 FAX : +45 75 893 725
D	VDW - Verein Deutscher Werkzeugmaschinen-fabriken e.V. Corneliusstrasse 4 D - 60325 Frankfurt/Main	TEL : +49 69 756081 0 FAX : +49 69 7560811 1
E	AFM (Asociación Española de Fabricantes de Maquinas-Herramienta) Parque Tecnológico de San Sebastian Paseo Mikeletegi 59 E - 20009 San Sebastian	TEL : +34 943 30 90 09 FAX : +34 943 30 91 91
FIN	FIMET (Federation of Finnish Metal, Engineering and Electro-Technical Industries) Eteläranta 10 FIN - 00130 Helsinki 13	TEL : +358 9 19 23 1 FAX : +358 9 62 50 20
F	SYMAP (Syndicat de la Machine-Outil, du Soudage, de l'Assemblage et de la Productique Associée) 45, rue Louis Blanc (8ème étage) F - 92400 Courbevoie	TEL : +33 1 47 17 67 17 FAX : +33 1 47 17 67 25
I	UCIMU SISTEMI PER PRODURRE (Associazione Costruttori Italiani Macchine Utensili, Robot e Automazione) Viale Fulvio Testi 128 I - 20092 Cinisello Balsamo	TEL : +39 2 26 25 51 FAX : +39 2 26 25 53 49
NL	GGW (Groep Gereedschaps-Werktuigen) Vereniging FME Postbus 190 Boerhaavelaan 40 NL - 2700 AD Zoetermeer	TEL : +31 79 353 12.70 FAX : +31 79 353 13 65
A	FMSO (Fachverband der Maschinen- und Stahlbauindustrie Österreichs) Postfach 430 Wiedner Hauptstraße 63 A - 1045 Wien	TEL : +43 1 505 501 050 FAX : +43 1 505 10 20
P	CIMAF (Centro de Cooperação dos Industriais de Maquinas e Ferramentas) Rua de Salazarares 842 P - 4100 Porto	TEL. : +351 2 617 73 31 ou 617 72 05 FAX : +351 2 617 96.25

S	FVM (Föreningen Svenska Verktygs- och Verktygsmaskintillverkare) Storgatan 5 S - 114 85 Stockholm	TEL : +46 8 782 08 00 FAX : +46 8 660 33 78
UK	MTTA (The Machine Tool Technologies Association) 62 Bayswater Road UK - London W2 3PS	TEL.: +44 171 402 6671 FAX : +44 171 724 7250
CH	VSM (Société Suisse des Constructeurs de Machines) Verein Schweizerischer Maschinen-Industrieller Kirchenweg 4 Case Postale CH - 8032 Zürich	TEL.: +41 1 384 48 15 FAX : +41 1 384 48 48
CZ	SST (Svaz Vyrobcu à Dodavatelu Strojirenske Techniky) Politickych Vzenu 11 CZ - 113 42 Praha 1	TEL.: +42 2 24 21 16 23 FAX : +42 2 24 21 47 89

b.3	**MEMBER ORGANISATIONS OF FEM**	
B	Comité national belge de la FEM - Fabrimétal Rue des Drapiers 21 B - 1050 Bruxelles	TEL : +32 2 510 23 11 FAX : +32 2 510 23 01
D	Verband Deutscher Maschinen- und Anlagenbau e.V. VDMA Fachgemeinschaft Fördertechnik Lyoner Strasse 18 Postfach 710864 D - 60528 Frankfurt/Niederrad	TEL : +49 69 660 30 FAX : +49 69 660 31 496
E	ETSEIB - Asociación Española de Manutencion Pabeljon F Diagonal 647 E - 08028 Barcelona	TEL : +34 3 401 60 60 FAX : +34 3 401 60 58
FIN	Federation of Finnish Metal, Engineering and Electrotechnical Industries Eteläranta 10, P.O. Box 10 SF - 00131 Helsinki	TEL : +358 9 192 31 FAX : +358 9 624 462
F	Syndicat des industries de matériels de manutention Maison de la Mécanique 39-41, rue Louis Blanc F - 92400 Courbevoie Syndicat MTPS 39-41, rue Louis Blanc F - 92400 Courbevoie	TEL : +33 1 47 17 63 27 FAX : +33 1 47 17 63 30 TEL : +33 1 47 17 63 20 FAX : +33 1 47 17 62 60
I	Associazione Italiana Sistemi di Sollevamento, Elevazione et Movimentazione Via L. Battistotti Sassi 11 I - 20133 Milano	TEL : +39 02 73 971 FAX : +39 02 73 97 316
L	Fédération des Industriels Luxembourgeois Groupement des Constructeurs Boîte Postale 1304 L - 1013 Luxembourg	TEL : +352 43 33 66 FAX : +352 43 23 28
NL	Vereniging FME G.K.T Postbus 190 Bredewater 20 NL - 2700 AD Zoetermeer	TEL : +31 79 353 11 00 FAX : +31 79 353 13 65
P	FENAME - Federaçao Nacional do Metal (ANEMM) Estrade do Paço do Lumiar Polo Tecnologico de Lisaboa - Lote 13 P - 1600 Lisboa	TEL.: +351 1 715 21 72 FAX : +351 1 715 04 03

S	Swedish Association of Suppliers of Mechanical Handling Equipment MHG Storgatan 5 Box 5510 S - 11485 Stockholm	TEL : +46 8 782 08 00 FAX : +46 8 660 33 78
UK	British Materials Handling Federation c/o METCOM 8th floor, Bridge House Smallbrook Queensway GB - Birmingham B5 4JP Federation of Manufacturers of Construction Equipment and Cranes Ambassador House Brigstock Road GB - Thornton Heath CR7 7JG National Association of Lift Makers (NALM) 33-34 Devonshire Street GB - London W1N 1RF	TEL.: +44 121 643 33 77 FAX : +44 121 643 50 64 TEL.: +44 181 665 53 95 FAX : +44 181 665 64 47 TEL.: +44 171 935 30 13 FAX : +44 171 935 33 21
NOR	Norsk Verkstedsindustris Standardiseringssentral NVS Oscars Gate 20 Postboks 7072 H N - 0306 Oslo 3	TEL.: +47 22 59 66 00 FAX : +47 22 59 66 96
CH	VSM - Verein Schweizerischer Maschinen-Industrieller Gruppe “Förder- und Lagertechnik” Kirchenweg 4 CH - 8032 Zürich	TEL.: +41 1 484 48 44 FAX : +41 1 484 48 48
CZ	Association of Czechoslovak Manufacturers of Transport and Lifting Equipment c/o VUTZ Kartouzska 200/4 CZ - Praha 5 - Smichov	TEL.: +42 2 54 56 41 FAX : +42 2 54 12 17

PART 6

NATIONAL IMPLEMENTATION MEASURES

This section provides information from Member States illustrating the measures which have been taken at national levels to implement the provisions of the four relevant machinery Directives.

The information contained in this section has been summarised from the CELEX database, which is produced and managed by the Office for Official Publications of the European Communities (EUR-OP). This section also includes any relevant updates forwarded to DGIII by Member States, prior to December 1998.

The CELEX database is accessible at the internet site : http://www.cc.cec/clxint/index.htm

NATIONAL PROVISIONS COMMUNICATED BY THE MEMBER STATES CONCERNING:

Council Directive 89/392/EEC of 14 June 1989 on the approximation of the laws of the Member States relating to machinery, amended by Directives 91/368/EEC of 20 June 1991, 93/44/EEC of 14 June 1993 and 93/68/EEC of 22 July 1993.
(Codified version CF 398L0037)

Belgium

01. Arrêté royal du 31/03/1995 concernant l'agrément des organismes qui sont notifiés à la Commission des Communautés européennes pour l'application de certaines procédures dans le cadre de la fabrication de machines, des appareils à pression simples et des équipements de protection individuelle - Koninklijk besluit van 31/03/1995 betreffende de erkenning van de instanties die aangemeld worden bij de Commissie van de Europese Gemeenschappen voor de toepassing van bepaalde procedures in het kader van de fabricatie van machines, drukvaten van eenvoudiges vorm en persoonlijke beschermingsmiddelen, Moniteur belge du 31/05/1995 Page 15268.
02. Arrêté royal du 05/05/1995 portant exécution de la directive du Conseil de Communautés européennes concernant le rapprochement des législations des Etats membres relatives aux machines - Koninklijk besluit van 05/05/1995 tot uitvoering van de richtlijn van de Raad van de Europese Gemeenschappen inzake de onderlinge aanpassing van de wetgevingen van de Lid-Staten betreffende machines, Moniteur belge du 31/05/1995 Page 15273
03. Ministère des Affaires économiques- Institut belge de normalisation (IBN)- Liste des normes belges transposant les normes européennes harmonisées dans le cadre de la Directive " Machines" (89/392/CEE) - (Mise à jour au 01/04/1997) - Ministerie van Economische Zaken - Belgisch instituut voor normalisatie (BIN) - Lijst van Belgische normen die geharmoniseerde Europeese normen omzetten in het kader van de Richtlijn "Machines" (89/392/EEG), (Bijgewerkt tot 01/04/1997), Moniteur belge du 26/07/1997 Page 19369

Denmark

01. Lov Bekendtgørelse nr. 643 af 18/12/1985
02. Lov nr. 220 af 22/04/1987 om ændring af lov om arbejdsmiljø. Arbejdsmin.3.kt.j.nr. 86-3200-2-2. Lovtidende A hæfte 29 udgivet den 29/04/1987 s.755
03. Lov nr. 380 af 13/06/1990 om ændring af lov om arbejdsmiljø. Arbejdsmin. 3. kt. j.nr. 89-3200-2-18. Lovtidende A 1990 hæfte nr. 63 udgivet den 14/06/1990 s. 1270. ALOV
04. Bekendtgørelse nr. 694 af 07/08/1992 om indretning af tekniske hjælpemidler. Arbejdstilsynet, j.nr. 1992-20-4. Lovtidende A 1992 hæfte nr. 113 udgivet den 18/08/1992 s. 3006 ABEK
05. Bekendtgørelse nr. 646 af 18/12/1985 af Lov om arbejdsmiljø. Arbejdsmin. 3. kt. j.nr. 3201-6. Lovtidende A 1985 hæfte nr. 89 udgivet den 07/01/1986 s. 2036
06. Lov nr. 474 af 24/06/1992 om ændring af Lov om arbejdsmiljø. Arbejdsmin. 3. kt. j.nr. 3200-2-46. Lovtidende A 1992 hæfte nr. 84 udgivet den 26/06/1992 s. 1951. ALOV
07. Energistyrelsens bekendtgørelse nr. 605 af 15/07/1993 om indretning af tekniske hjælpemidler på faste havanlæg. Energistyrelsen, j.nr. 4012-0006. Lovtidende A hæfte 109 udgivet den 23/07/1993 s.3240. EBEK.
08. Bekendtgørelse nr. 561 af 24/06/1994 om indretning af tekniske hjælpemidler. Arbejdstilsynet j.nr. 1994-29-46. Hæfte nr. 107 udgivet den 01/07/1994 s. 3039. ABEK

09. Arbejdsministeriets lovbekendtgørelse nr. 184 af 22/03/1995. Bekendtgørelse af lov om arbejdsmiljø, Arbejdsmin. 3.kt., j.nr. 1992-2100-20. Lovtidende A hæfte 41 udgivet den 31/03/1995 s. 960. ALOV.
10. Bekendtgørelse nr. 669 af 07/08/1995 om ændring af bekendtgørelse om indretning af tekniske hjælpemidler. Dir. f. Arbejdstilsyn., j.nr. 1995-20-32. Lovtidende A hæfte 127 udgivet den 15/08/1995 s.3530. ABEK.
11. Dyreværnslov, jf. lovbekendtgørelse nr. 386 af 06/06/1991, Justitsmin. 4.kt., j.nr. 1989-39301-46. Lovtidende A hæfte 76 udgivet den 07/06/1991 s.1520. JLOV.
12. Bekendtgørelse nr. 646 af 18/12/1985 af Lov om arbejdsmiljø. Arbejdsmin. 3. kt. j.nr. 3201-6. Lovtidende A 1985 hæfte nr. 89 udgivet den 07/01/1986 s. 2036
13. Bekendtgørelse af lov om arbejdsmiljø. Arbejdsministeriets lovbekendtgørelse nr. 184 af 22/03/1995.
14. Bekendtgørelse nr. 561 af 24/06/1994 om indretning af tekniske hjælpemidler. Arbejdstilsynet j.nr. 1994-29-46. Hæfte nr. 107 udgivet den 01/07/1994 s. 3039. ABEK
15. Bekendtgørelse nr. 564 af 24/06/1994 om ændring af bekendtgørelse om indretning af tekniske hjælpemidler. Arbejdstilsynets j.nr. 1994-29-48. Lovtidende A 1994 haefte nr. 107 udgivet den 01/07/1994 s. 3083. ABEK
16. Bekendtgørelse nr. 694 af 07/08/1992 om indretning af tekniske hjælpemidler. Arbejdstilsynet, j.nr. 1992-20-4. Lovtidende A 1992 hæfte nr. 113 udgivet den 18/08/1992 s. 3006. ABEK
17. Bekendtgørelse nr. 184 af 22/03/1995 af lov om arbejdsmiljø. Arbejdsmin. 3.kt., j.nr. 1992-2100-20. Lovtidende A hæfte 41 udgivet den 31/03/1995 s. 960. ALOV.
18. Bekendtgørelse nr. 651 af 24/06/1994
19. Arbejdsministeriets lovbekendtgørelse nr. 184 af 22/03/1995. Bekendtgørelse af lov om arbejdsmiljø, Arbejdsmin. 3.kt., j.nr. 1992-2100-20. Lovtidende A hæfte 41 udgivet den 31/03/1995 s. 960. ALOV.

Germany

01. Zweites Gesetz zur Änderung des Gerätesicherheitsgesetzes vom 26/08/1992, Bundesgesetzblatt Teil I vom 01/09/1992 Seite 1564
02. Bekanntmachung der Neufassung des Gerätesicherheitsgesetzes vom 23/10/1992, Bundesgesetzblatt Teil I vom 30/10/1992 Seite 1793
03. Verordnung zum Gerätesicherheitsgesetz und zur Änderung von Verordnungen zum Gerätesicherheitsgesetz vom 19/05/1993, Bundesgesetzblatt Teil I vom 19/05/1993 Seite 704
04. Bekanntmachung des BNA III B6-35000-I -Änderung des Gerätesicherheitsgesetzes vom 01/01/1993, Bundesgesetzblatt Teil I Nr. 2/1993 Seite 98
05. Erster Nachtrag zur UVV Feuerwehr GUV 7.13
06. Erster Nachtrag zur UVV Schneiden, Schneiden und Verwandte Verfahren GUV 3.8
07. Erster und zweiter Nachtrag zur UVV Kraftbetriebenearbeitsmittel GUV 3.0
08. Amtliche Mitteilung der TBG 1/1993
09. Zweiter Nachtrag zur Unfall-Verhütungsvorschrift (UVV) 1.1 vom 28/09/1992, Staatanzeiger Nr. 40 vom 26/10/1992 S. 1038
10. Amtliche Bekanntmachung Allgemeine Vorschriften (UVV) 1.1 vom 23/10/1992
11. Zweiter Nachtrag zur Unfall-Verhütungsvorschrift (UVV) 1.1 vom 03/12/1992
12. Zweiter Nachtrag zur Unfall-Verhütungsvorschrift (UVV) 1.1 vom 27/10/1992, Bayerischer-Staatanzeiger Nr. 47/1992 vom 20/11/1992
13. Unfall-Verhütungsvorschrift Allgemeine Vorschriften (UVV) 1.1 vom 01/01/1993
14. Veröffentlichungshinweis des WiBG - Zweiter Nachtrag zur Unfall-Verhütungsvorschrift (UVV) 1.1, Sicher Leben vom Dezember 2/1992 S. 7
15. Allgemeine Verwaltungsvorschrift vom 10. Januar 1996, Bundesanzeiger vom 17. Januar 1996 und Bundesarbeitsblatt 3/96 S. 91
16. Bekanntmachung der ersten Änderung des Gerätesicherheitsgesetzes (BNA III B 6 - 3500) vom 01/01/1993, Bundesgesetzblatt Teil I Nr. 2 Seite 98/99

17. Zweiter Nachtrag zur Unfallverhütungsvorschrift Allgemeine Vorschriften UVV 1.1 vom 03/12/1992.
18. Zweite Verordnung zur Änderung von Verordnungen zum Gerätesicherheitsgesetz vom 28/09/1995, Bundesgesetzblatt Teil I vom 05/10/1995 Seite 1213
19. Zweite Verordnung zur Änderung der Eichordnung vom 21/06/1994, Bundesgesetzblatt Teil I Nr. 37 vom 28/06/1994 Seite 1293
20. Bekanntmachung vom 24/05/1994, Bundesanzeiger Nr. 104 vom 08/06/1994 Seite5961
21. Zweite Verordnung zur Änderung von Verordnungen zum Gerätesicherheitsgesetz vom 28/09/1995, Bundesgesetzblatt Teil I vom 05/10/1995 Seite 1213

Greece

01. Décret présidentiel numéro 377 du 03/09/1993, FEK numéro 160 du 15/09/1993 Page 4283
02. Décret présidentiel numéro 18 du 18/01/1996, FEK A numéro 12 du 18/01/1996 Page 113
03. Décision ministérielle numéro 8881/94 du 03/06/1994, FEK A numéro 450 du 16/06/1994 Page 3965
04. Décision ministérielle numéro 94649/8682/93 du 25/08/1994, FEK B numéro 688 du 13/09/1994 Page 6367
05. Décret présidentiel numéro 18/96 du 18/01/1996, FEK A numéro 12 du 18/01/1996 Page 113.

Spain

01. Real Decreto número 1435/92 de 27/11/1992, por el que se dictan las disposiciones de aplicación de la Directiva 89/392/CEE, relativa a la aproximación de las legislaciones de los Estados miembros sobre máquinas, Boletín Oficial del Estado número 297 de 11/12/1992 Página 41972
02. Real Decreto número 56/95 de 20/01/1995, por el que se modifica el Real Decreto 1435/92, de 27 de noviembre, relativo a las disposiciones de aplicación de la Directiva del Consejo 89/392/CEE sobre máquinas, Boletín Oficial del Estado número 33 de 08/02/1995 Página 4053 (Marginal 3323)
03. Real Decreto número 2370/96 de 18/11/1996, por el que se aprueba la Instrucción técnica complementaria MIE-AEM del Reglamento de Aparatos de Elevación y Manutención referentes a "grúas móviles autopropulsadas usadas", Boletín Oficial del Estado número 309 de 24/12/1996 Página 38375 (Marginal 28742)
04. Real Decreto número 414/96 de 01/03/1996, por el que se regula los productos sanitarios, Boletín Oficial del Estado número 99 de 24/04/1996 Página 14670 (Marginal 9089).

France

01. Loi Numéro 91-1414 du 31/12/1991 modifiant le code du travail et le code de la santé publique en vue de favoriser la prévention des risques professionnels et portant tranposition de directives européennes relatives à la santé et à la sécurité du travail, Journal Officiel du 07/01/1992 Page 319 (Articles L. 233-5 à L. 233-6 du ode de travail)
02. Décret Numéro 92-765 du 29/07/1992 déterminant les équipements de travail et moyens de protection soumis aux obligations définis au I de l'article L. 233.5 du code du travail et modifiant le Code de travail (deuxième partie: Décrets en Conseil d'Etat), Journal Officiel du 07/08/1992 Page 10689 (Articles R. 233-83 à R. 233-83-2 du code de travail)
03. Décret Numéro 92-766 du 29/07/1992 définissant les procédures de certification de conformité et diverses modalités du contrôle de conformité des équipements de travail et moyens de protection et modifiant le Code du travail (Deuxième partie: Conseil d'Etat), Journal Officiel du

07/08/1992 Page 10690 (Articles R. 233-49 à R. 233-57, R.233-59 à R. 233-65, R. 233-73 à R. 233-76-1 et R. 233-78 à R. 233-81-2 du code de travail)

04. Décret Numéro 92-767 du 29/07/1992 relatif aux règles techniques et aux procédures de certification de conformité applicables aux équipements de travail visés au 1°,3°,4° et 5° de l'article R.233-83 du Code du travail et aux moyens de protection visés aux 1° et 2° de l'article R. 233-83-2 du Code du travail et modifiant le Code du travail (Deuxième partie: Décrets au Conseil d'Etat), Journal Officiel du 07/08/1992 Page 10696 (Articles R. 233-84, l'annexe I au livre II, et les articles R. 233-85 à R. 233-89 du code de travail)
05. Arrêté ministériel du 16/11/1992 fixant les caractéristiques de l'avertissement exigées par l'article L.233-5-3(III) du Code du travail, Journal Officiel du 27/11/1992 Page 16235
06. Arrêté ministériel du 18/12/1992 relatif aux coefficients d'épreuve et aux coefficients d'utilisation applicables aux machines, accessoires de levage et autres équipements de travail soumis à l'article L. 233-5 du Code du travail pour la prévention des risques liés aux opérations de levage, Journal Officiel du 31/12/1992 Page 18162
07. Arrêté ministériel du 18/12/1992 fixant le contenu de la déclaration de conformité CE relative aux équipements de travail et moyens de protection soumis au décret Numéro 92-767 du 19/07/92, Journal Officiel du 31/12/1992 Page 18158
08. Décret Numéro 96-725 du 14/08/1996 relatif aux règles techniques et aux procédures de certification de conformité applicables aux équipements de travail et moyens de protection soumis à l'article L.233-5 du Code du travail, modifiant le Code du travail (deuxième partie : Décrets en Conseil d'Etat) et portant transposition de diverses directives européennes, Journal Officiel du 18/08/1996 Page 12476
09. Arrêté du 07/02/1997 relatif au marquage CE des équipements de travail et des équipements de protection individuelle, Journal Officiel du 28/02/1997 Page 3245

Ireland

01. European Communities (Machinery) Regulations, 1992, Statutory Instruments number 246 of 1992
02. European Communities (Machinery) Regulations, 1994, Statutory Instruments number 406 of 1994.

Italy

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