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ENTERPRISE DIRECTORATE-GENERAL

Conformity and standardisation, new approach, industries under new approach  
**Mechanical and electrical engineering and radio and telecom terminal equipment industries**

# **GUIDELINES ON THE APPLICATION OF COUNCIL DIRECTIVE 73/23/EEC**

**(ELECTRICAL EQUIPMENT DESIGNED FOR USE WITHIN CERTAIN  
VOLTAGE LIMITS)**

February 2001

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## I. INTRODUCTION

1. These guidelines have been prepared with a view to assist all parties directly or indirectly involved in the application of Directive 73/23/EEC, the "Low Voltage" Directive<sup>1</sup>. They supersede guidance on the application of that Directive which was given in the Commission's communication of 15 December 1981<sup>2</sup> and the "Guidelines on the application of Council Directive 73/23/EEC" of July 1997.

They have been drawn up by European Commission services and discussed with a Working Party of Government Experts, representatives of European industry and European standardisation bodies. These guidelines reflect the consensus views reached between Commission services and representatives of the Member States in the Working Party of 20<sup>th</sup> February 2001.

2. Readers' attention is drawn to the fact that this Guide is intended only for facilitating the application of the "Low Voltage" Directive and it is the text of the Directive which is legally binding.

This document is not a legally binding interpretation of the Directive. However, it represents a reference for ensuring consistent application of the Directive by all those involved.

3. These guidelines are not exhaustive: they focus on certain issues only, which, in the light of the experience, are of direct and specific interest for the application of the "Low Voltage" Directive. They are intended to complement the "Guide to the implementation of Community harmonisation directives", edition 1999<sup>3</sup>, as far as issues related in particular to the application of this Directive are concerned. In particular, for the definitions of concepts like "placing on the market", "manufacturer", authorised representative", "importer or person responsible for placing the product on the market", the Guide mentioned above should be consulted.

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<sup>1</sup> Pursuant to the Agreement on the European Economic Area (EEA), the provisions of the European legislation incorporated therein are extended to the EFTA countries: Iceland, Liechtenstein and Norway. all references in this guide to the Community or the Community market must be understood to mean the EEA and its market.

<sup>2</sup> OJ n° C 59, 9.3.1982, p. 1

<sup>3</sup> European Commission "Guide to the implementation of Community harmonisation directives based on the new approach and the global approach – 1999 Edition" - Luxembourg: Office for Official Publications of the European Communities - ISBN 92-828-7500-8. The catalogue number is CO-22-99-014-EN-C. It can be obtained through sale points of the Official Journal of the EC.

The issues covered by these guidelines are:

- the scope of the "Low Voltage" Directive
  - the safety requirements applicable
  - the conformity assessment procedure applicable, including CE marking
  - the relationships with certain other Directives.
4. Reader's attention is drawn to the fact that certain products subject to the "Low Voltage" Directive are also subject to other directives. In order to be allowed on the EC market these products must comply also with the provisions of those directives. These guidelines refer to the application of the "Low Voltage" Directive and clarify the relationship between that Directive and certain other directives.

## II. THE "LOW VOLTAGE" DIRECTIVE

5. Directive 73/23/EEC<sup>4</sup> was adopted by the Council on 19 February 1973 with the aim of harmonising the laws of the Member States relating to electrical equipment designed for use within certain voltage limits.

In 1993 that Directive was amended by Directive 93/68/EEC<sup>5</sup>, the so-called "CE marking Directive", solely in respect of the procedures for conformity assessment and conformity marking. The objective of this amendment was to align the provisions concerning conformity assessment and the CE marking of electrical equipment on those introduced for the "new approach" directives.

The provisions introduced by the amendment mentioned become mandatory with effect from 1 January 1997.

6. The "Low Voltage" Directive is a "total" harmonisation directive in the sense that it has superseded existing national regulations in the field covered: electrical equipment may only be put on the market if it is in conformity with the requirements of the Directive and, on the other hand, Member States may not impede free circulation or the marketing of conforming equipment.

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<sup>4</sup> OJ No L 77, 26.3.1973, p. 29

<sup>5</sup> OJ No L 220, 30.3.1993, p. 1

### III. SCOPE OF THE “LOW VOLTAGE” DIRECTIVE

#### **Which products are covered?**

7. The Directive applies to all electrical equipment<sup>6</sup> designed for use with a voltage rating of between 50 and 1000 V for alternating current and between 75 and 1500 V for direct current. Voltage ratings refer to the voltage of the electrical input or output, not to voltages which may appear inside the equipment.

Following discussions with Member States the Commission has taken the position that the term “designed for use with a voltage range” shall be understood at equipment having either a rated input voltage or a rated output voltage inside this voltage range. Internally there may be higher voltages.

Battery operated equipment outside the voltage rating is obviously outside the scope of the LVD. Nevertheless, the accompanying battery-charger as well as equipment with integrated power supply unit within the voltage ranges of the Directive, are in the scope of the LVD. This applies also, in the case of battery-operated equipment with supply voltage rating under 50 V AC and 75 V DC, for their accompanying power supply unit (e.g. Notebooks).

However, the following are excluded from the scope of the “Low Voltage” Directive:

- Electrical equipment for use in a potentially explosive atmosphere
- Electrical equipment for radiology and medical purposes
- Electrical parts for lifts
- Electricity meters,

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<sup>6</sup> The term “electrical equipment” is not defined in the Directive. Therefore it is to be interpreted according to the internationally recognised meaning of this term. The definition in the “International Electrotechnical Dictionary” of IEC (International Electrotechnical Commission) is : “any item used for such purposes as generation, conversion, transmission, distribution or utilisation of electrical energy, such as machines, transformers, apparatus, measuring instruments, protective devices, wiring material, appliances.”

which are covered by other Community directives, and

- Plugs and socket outlets for domestic use<sup>7</sup>
- Electric fence controllers
- Specialised electrical equipment, for use on ships, aircraft or railways which complies with the safety provisions drawn up by international bodies in which the Member States participate,

which so far are not covered by any Community directive and therefore must not be CE marked.

8. Broadly, the Directive covers consumer and capital goods designed to operate within those voltage limits<sup>8</sup>, including in particular electrical appliances<sup>9</sup>, lighting equipment including ballasts, switch gear and control gear, electric wiring, appliance couplers and cord sets, electrical installation equipment<sup>10</sup>, etc. The Commission confirms, as already expressed in the Communication of 15 December 1982, that cable management systems are covered by the “Low Voltage” Directive.

**Are “components” included in the scope?**

9. In general, the scope of the Directive includes both electrical equipment intended for incorporation into other equipment and equipment intended to be used directly without being incorporated.

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<sup>7</sup> “Domestic” plugs and sockets are also used in commercial or industrial premises, for uses which do not require specialised industrial features.

<sup>8</sup> Tools for live working (like screwdrivers etc.) are not included. However, such tools are covered by standard EN 60900, not published under the LV Directive.

<sup>9</sup> The LVD Working Party has given the opinion that hand-held and transportable electrically driven tools such as power tool and lawnmowers are not covered by the LVD but by the Machinery Directive. See also chapter 29 of this guide.

<sup>10</sup> Insulating tapes, for which safety depends critically not only on their intrinsic characteristics but also on how they are used under very variable conditions, are not considered electrical equipment and are not covered by the Directive. A European standard, EN 60454, exists for such tapes, which is not published under the Low Voltage Directive.

However, some types of electrical devices, designed and manufactured for being used as basic components to be incorporated into other electrical equipment, are such that their safety to a very large extent depends on how they are integrated into the final product and the overall characteristics of the final product. These basic components include electronic and certain other components<sup>11</sup>.

Taking into account the objectives of the "Low Voltage" Directive, such basic components, the safety of which can only, to a very large extent, be assessed taking into account how they are incorporated, are not covered as such by the Directive. In particular, they must not be CE marked.

However, other electrical components which are intended for being incorporated into other electrical equipment, but for which a safety assessment is feasible<sup>12</sup>, like - for example - some types of transformers and electrical motors, are covered as such by the Directive and must be CE marked.

Moreover, the scope of the exclusion of basic components must not be misunderstood and extended to items like lamps, starters, fuses, switches for household use, elements of electrical installations, etc., which, even if they are often used in conjunction with other electrical equipment and have to be properly installed in order to deliver their useful function, are themselves to be considered electrical equipment in the sense of the Directive.

### **Which safety aspects are covered by the Directive?**

10. The Directive covers all risks arising from the use of electrical equipment, including not just electrical ones but also mechanical, chemical (such as, in particular, emission of aggressive substances) and all other risks. The Directive also covers health aspects of noise and vibrations, and ergonomic aspects as far as ergonomic requirements are necessary to protect against hazards in the sense of the Directive.

Article 2 and Annex I lay down eleven "safety objectives", which represent the essential requirements of this Directive.

11. It should be noted that electromagnetic compatibility (emission and immunity) aspects are excluded from the scope of this Directive and are separately regulated under Directive 89/336/EEC.

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<sup>11</sup> This includes, i.a., active components such as integrated circuits, transistors, diodes, rectifiers, triacs, GTO's, IGBT's, opto-semi-conductors; passive components such as capacitors, inductance, resistors, filters; electromechanical components such as connectors, devices for mechanical protection which are part of equipment, relays with terminals for printed circuit boards, micro switches.

<sup>12</sup> A further assessment of the safety aspects related to the way in which such components are incorporated is in general also necessary.

Radiation aspects referred to in Annex I to the Directive are limited to those directly relevant for health and safety of persons and domestic animals and do not cover electromagnetic disturbances in the sense of the EMC Directive.

The Commission interpret that all electromagnetic aspects relating to safety including functional safety are covered by the LVD. This covers also the effect of electromagnetic fields, emitted by electrical apparatus.

12. Finally, it should also be noted again that for certain electrical equipment, the provisions of other directives also apply.

#### **IV. SAFETY REQUIREMENTS FOR PLACING ON THE EU MARKET ELECTRICAL EQUIPMENT COVERED BY THE “LOW VOLTAGE” DIRECTIVE**

##### **Which are the mandatory safety requirements applicable in the EU?**

13. Article 2 of the Directive states:

“1. The Member States shall take all appropriate measures to ensure that electrical equipment may be placed on the market only if, having been constructed in accordance with good engineering practice in safety matters in force in the Community, it does not endanger the safety of persons, domestic animals or property when properly installed and maintained and used in applications for which it was made.

2. The principal elements of the safety objective referred to in paragraph 1 are listed in Annex 1.”

14. Member States must ensure the freedom to place on the market and the free movement of electrical equipment, which is in conformity with the requirements of the Directive.

As far as substantive safety requirements are concerned, eleven “objectives” are mentioned in Annex 1 to the directive.

These are the mandatory safety provisions which products must comply with in order to be allowed onto the EU market and benefit from freedom of movement in the Community (Articles 2 and 3). Consequently, any national standards or national specifications related to the safety of electrical equipment do not have a mandatory status and may not be a condition for its placing on the market.



15. Article 7 of the Directive provides for mutual recognition of national standards in case of absence of standards within the meaning of Articles 5 and 6. However, such national standards might, in certain cases, not cover all the "safety objectives" of the Directive. Therefore, manufacturers using those standards should carefully check compliance with all the safety requirements of the Directive.

The phrase at the end of Article 7 ("if it ensures a safety level equivalent to that required in their own territory") does not, per se, authorise Member States to require compliance with safety levels other than those resulting from the "safety objectives".

Nevertheless, compliance with the safety objectives of the Directive -which are henceforth identical for the whole Community- may imply in some cases compliance with different requirements from one Member State to another to take account of different objective situations, e.g. requirements resulting from supply systems which vary from one region of the Community to another.

16. In the light of the above, national laws or regulations requiring compliance with particular technical specifications (where they exist) may not be considered to be mandatory. They may only eventually have the status of specifications giving presumption of conformity, when appropriate.

It follows that manufacturers can no longer be obliged to comply with national specifications in the case of equipment otherwise satisfying the "safety objectives" of the Directive. Where the standards referred to in Articles 5 or 6 do not yet exist, manufacturers are, of course, entitled to comply with any appropriate specifications in order to facilitate demonstrating conformity with the "safety objectives".

The non mandatory nature of specifications in national rules is from the point of view of EC law confirmed by the rulings of the Court of Justice, according to which national authorities and courts must not apply national provisions which conflict with Community provisions<sup>13</sup>.

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<sup>13</sup> Judgements in Case 106/77 Simmenthal (ECR 1978, p. 645) and in Case 148/78 Ratti (ECR 1979, p. 1646).

17. The existence of national laws or regulations cannot prevent the drawing up of harmonised standards in accordance with Article 5.

Nor can such provisions be imposed in addition to, or instead of, the technical specifications contained in the harmonised standards, as they have ceased to be binding.

Within the field covered by the Directive there is therefore no longer any point in referring to such provisions under "A - deviations" in "harmonisation documents" (HD) or "European standards" (EN)<sup>14</sup>.

Keeping these provisions in the legal system of the Member States in the form of obligatory provisions would constitute an infringement to the Directive and expose the Member States in question to the procedure set out in Article 169 of the Treaty.

#### **How to ensure conformity to those requirements?**

18. Products are presumed to conform to the safety objectives of the “Low Voltage” Directive where the equipment has been manufactured in accordance with technical standards which, in the order laid down by the Directive, are as follows:
- European standards (EN or HD), which are referred to as harmonised standards in the Directive<sup>15</sup>, drawn up in accordance with Article 5 by the bodies notified by the Member States (in fact, these are standards made by CENELEC);
  - where standards as defined in Article 5 have not yet been drawn up and published, international rules issued by the two international bodies, the International Commission on the rules for the approval of electrical equipment (CEE)<sup>16</sup> or the International Electrotechnical Commission (IEC) (Article 6(1)), and published in accordance with the procedure laid down in Article 6(2) and (3);<sup>17</sup>
  - where standards as defined in Article 5 or international standards as defined in Article 6 do not yet exist, the national standards of the Member State of manufacturer (Article 7).

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<sup>14</sup> However, deviation may be justified in special cases by objective situations referred to at the end of paragraph 15.

<sup>15</sup> The differences between “harmonised standards” according to the new approach and harmonised standards under the “Low Voltage” Directive are explained in the “Guide to the implementation of Community harmonisation Directives based on the new approach”.

<sup>16</sup> “CEE” does not exist any longer, but its activities are now continued by CENELEC.

<sup>17</sup> The procedure laid down in Article 6(2) and (3) has never been applied!

The standards referred to in Articles 5, 6 and 7, the application of which remains voluntary, provide a presumption of conformity for equipment manufactured in accordance with those standards.

The presumption of conformity provided by harmonised standards arises at the moment of national publication of standards, according to article 5; the listing in the Official Journal of the EC is only for information

19. Alternatively, the manufacturer may construct the product in conformity with the essential requirements (safety objectives) of the directive, without applying harmonised, international or national standards. In such a case the product will not benefit from presumption of conformity conferred by the use of such standards and the manufacturer must include in the technical documentation (see chapter V) a description of the solutions adopted to satisfy the safety aspects of the Directive.

## V. CONFORMITY ASSESSMENT PROCEDURES UNDER THE “LOW VOLTAGE” DIRECTIVE

### What are the conformity assessment procedure to be applied?

20. Article 8 and Annex IV of the Directive describe the procedure by which the manufacturer or his authorised representative established in the Community ensures and declares conformity of the electrical equipment with the provisions of the Directive. This includes three main elements:
  - **Technical documentation.**

Before a product is placed on the market the manufacturer puts together the technical documentation which makes it possible to assess whether the electrical equipment complies with the requirements of the Directive (see below)<sup>18</sup>.
  - **Declaration of conformity.**

The manufacturer or his authorised representative established in the Community are also required, and are the only ones authorised to do so, to draw up in writing a declaration of conformity (see below) before placing the product on the market.

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<sup>18</sup> Annex IV of the “Low Voltage” Directive states that the manufacturer must take all measures necessary in order that the manufacturing process ensures compliance of the products with the technical documentation and the requirements of the Directive.

- **CE marking.**

Before it is placed on the market the electrical equipment must have the "CE" marking affixed. Only the manufacturer or his authorised representative established in the Community are authorised to affix the "CE" marking (see below).

**The responsibilities of the importer**

Unless the importer is also the manufacturer's authorised representative, he will not in general, have detailed knowledge of which directives have been considered by the manufacturer or which standards have been applied. As a consequence, the importer cannot:

- affix CE marking;
- draw up the EC declaration of conformity;
- compile the Technical File.

Where neither the manufacturer nor his authorised representative are established within the Community, the importer is the person first placing the product on the EC market and is therefore responsible for ensuring that the requirements of Annex IV section 2 and 3 are complied with.

21. Where no standards within the meaning of the Directive have been applied, the manufacturer has to provide within the technical documentation a description of the solutions adopted to satisfy the safety requirements of the Directive.

In case of challenge by the authorities in charge of market surveillance, a report in the sense of Article 8(2) (which however is not obligatory) is considered an element of proof. In fact, in addition to the three basic conformity assessment measures, mentioned above, Article 8(2) provides, in the event that conformity is challenged, for the possible submission to the market surveillance authority of a report drawn up by a notified body as evidence that the electrical equipment complies with the safety objectives (Article 2 and Annex I).

The manufacturer or his authorised representative established in the Community may wish in certain cases to ask in advance for a report to be drawn up by a notified body in accordance with the procedure provided for in Article 11 and to keep it together with the technical documentation. The availability of such a report would make matters easier and speedier in the event of a challenge by the authorities.

The main function of article 8.2 is to provide the conditions most favourable to progress and dynamism in the Electrotechnical industry. It thus facilitates the marketing of high-tech electrical equipment which, being such, cannot benefit from the support of any technical standards since often such standards are drawn up after the development of a technical innovation.

### **What must be included in the technical documentation?**

22. It must include details of the design, manufacture and operation of the electrical equipment in so far as these details are needed to assess the conformity of the electrical equipment with the requirements of the Directive.

Accordingly, it contains:

- a general description of the electrical equipment,
- design and manufacture drawings plus diagrams of components, sub-assemblies, circuits, etc.,
- descriptions and explanations needed to understand the above mentioned drawings and diagrams plus the operation of the electrical equipment,
- a list of the standards used, in full or in part, and a description of the solutions employed to meet the safety aspects of this directive when standards have not been applied,
- the results of design calculations and of checks carried out, etc.,
- test reports (in fact, the test reports which may be available, either established by the manufacturer or a third party).

### **Who must keep the technical documentation and where?**

23. The manufacturer or his authorised representative established in the Community must keep this documentation at the disposal of the national authorities for inspection purposes for at least ten years from the last date of manufacture of the product. The technical documentation may be kept on electronic support, provided that it is easily accessible for inspection. Where the manufacturer is not established in the Community and he has no authorised representative in the Community, this obligation is incumbent upon the importer or the person responsible for placing the product on the Community market.

This technical documentation must be kept within the Community.

### **Where must the CE marking be affixed?**

24. The "CE" conformity marking is placed by the manufacturer, or his authorised representative established in the Community, on the electrical equipment or, failing that, on the packaging, the instructions for use or the guarantee.

In spite of the differences in this point between the various linguistic versions of the Directive, in order to ensure consistency and prevent unjustified burdens, Article 10(2) of the Directive should be read as establishing the following order of priority: the "CE" marking must be placed on the product or, if this is not

feasible (under technical/economic conditions which are reasonable in the light of the proportionality principle) on the packaging, the instructions for use or the guarantee<sup>19</sup>.

### **What are the meaning of, and requirements for the CE marking?**

25. The CE marking declares conformity of an electrical equipment with the essential requirements and conformity assessment procedures set out under the “Low Voltage” Directive and all the other directives applicable to it.

The "CE" conformity marking must be affixed visibly, legibly and indelibly.

The affixing of markings which are likely to deceive third parties as to the meaning and form of the “CE” marking is prohibited.

### **Who must keep the declaration of conformity and where?**

26. The manufacturer, or his authorised representative established in the Community, or, when the manufacturer is not established in the Community and has no authorised representative in the Community, the importer or person responsible for placing the product on the market, must keep a copy of the declaration of conformity at the disposal of the national authorities for inspection purposes, in the same way as the technical documentation. Thus the national market surveillance authorities may, if appropriate, require a copy of the declaration of conformity.

### **What must be included in the declaration of conformity?**

27. Annex III.B of the Directive describes the content of the declaration of conformity as follows<sup>20</sup>:
- name and address of the manufacturer or his authorised representative established within the Community,
  - a description of the electrical equipment,
  - reference to the harmonised standards,
  - where appropriate, reference to the specifications on which conformity is declared,
  - identification of the signatory who has been empowered to enter into commitments on behalf of the manufacturer or his authorised representative established within the Community,

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<sup>19</sup> It has been agreed that where this principle has not yet been applied because of divergent interpretations due to the differences between the linguistic versions, a reasonable period of time will be allowed by national authorities to bring products in conformity.

<sup>20</sup> See also EN 45014 containing an example of a declaration of conformity.

- the last two digits of the year in which the CE marking was affixed (for the first time).

The declaration of conformity must be drawn up at least in one of the official languages of the Community.

## **VI. RELATIONSHIPS BETWEEN THE “LOW VOLTAGE” DIRECTIVE AND CERTAIN OTHER COMMUNITY DIRECTIVES**

### **What are the requirements applicable to electrical equipment which is also a “machine” (within the meaning of the “Machinery Directive”<sup>21</sup>)?**

28. Certain electrical equipment are also “machinery” within the meaning of Directive 98/37/EC as amended.

Both the “Low Voltage” Directive and the “Machinery” Directive cover a wide range of risks. Therefore, the scopes of the two Directives overlap in the case of certain electrical equipment, and a clarification on how to implement the Directives in those cases is necessary.

29. Certain electrical equipment which are also machinery, are excluded altogether from the scope of the “Machinery” Directive, by virtue of Article 1(5) of that Directive<sup>22</sup>.

Article 1(5) of the "Machinery" Directive states that:

"Where, for machinery, the risks are mainly of electrical origin, such machinery shall be covered exclusively by Council Directive 73/23/EEC of 19 February 1973 on the harmonisation of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits".

In general, in order to determine whether the exclusion from the scope of the “Machinery” Directive under Article 1(5) applies to a specific product which may be considered *to be* “machinery” in the sense of Directive 98/37/EC and an electrical equipment in the sense of Directive 73/23/EEC, the manufacturer has to perform a risk assessment of that product.

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<sup>21</sup> Directive 98/37/EC of the European Parliament and of the Council of 22 June 1998 on the approximation of the laws of the Member States relating to machinery (OJ No L 207, 23.07.1998) as amended by Directive 98/79/EC (OJ No L 331/1, 07.12.1998)

<sup>22</sup> These provisions should be seen in the light of the orientations expressed by the Council and the Commission when adopting the Directive. In a statement, those Institutions have declared: “The Council and the Commission agree that the free movement of goods already achieved on the basis of the “Low Voltage” Directive cannot be jeopardised by the present Directive.” The intention was to ensure that some machinery already covered by the LVD were unaffected by the adoption of the “Machinery” Directive.

The European Standard EN 1050 (Safety of Machinery - Principles for risk assessment) provides for principles which may be applied for performing such risk assessment.

When the results of the risk assessment by the manufacturer show that the risks are mainly of electrical origin, the machinery equipment will be covered exclusively by the “Low Voltage” Directive, which anyhow deals with all the safety aspects, including mechanical safety.

In determining whether the risks related to particular products are mainly of electrical origin, manufacturers may be assisted by risk assessment performed by the relevant standardisation bodies in relation to harmonised standards for the products considered, when it has led to publication of such standards under only the “Low Voltage” Directive<sup>23</sup> or only the “Machinery” Directive based on consideration of the dominant risks.

One example is the hand-held and transportable electrically driven tools. It has been agreed by the LVD Working Party that standards covering this type of equipment shall be published only under the “Machinery” Directive in the Official Journal of the European Communities, and hence it has been agreed to apply the conformity assessment procedures of the “Machinery” Directive rather than those of the LVD.

30. Apart from machinery covered by Article 1(5), all machinery having an electrical supply and designed to operate between 50 and 1000 V in AC or 75 and 1500 V in DC is covered by both the “Machinery” Directive and the “Low Voltage” Directive, applying in a complementary way.

In fact, paragraph 1.5.1 of Annex I of the “Machinery” Directive says:

“1.5.1 Electricity supply

Where machinery has an electricity supply it must be designed, constructed and equipped so that all hazards of an electrical nature are or can be prevented.

The specific rules in force relating to electrical equipment designed for use within certain voltage limits must apply to machinery which is subject to those limits.”

Therefore, in the case of machinery with an electrical supply within the voltage limits of the “Low Voltage” Directive:

- a) the essential requirements of the “Low Voltage” Directive related to electrical risks shall be complied with and compliance with the relevant

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<sup>23</sup> Publication in the Official Journal of the EC of the references of harmonised standards under the “Low Voltage” Directive is for information only. Such standards confer presumption of conformity independently from the publication in the Official Journal. Publication in the Official Journal may take some time. Therefore, manufacturers should also take into account the standards which have been presented to the Commission for publication, but are not yet published. This information should be available through European and national standardisation bodies.



harmonised standards published under the “Low Voltage” Directive shall give a presumption of conformity with such essential requirements.

- b) for all such machinery, including those falling under Annex IV of the “Machinery” Directive, the conformity assessment procedures set out in Article 8 of the “Machinery” Directive<sup>24</sup> shall apply. In the case where a type-examination of the machinery is required, the notified body will take into account the results of the conformity assessment procedures of the “Low Voltage” Directive which apply to the intrinsic electrical safety of the electrical components of the machinery, whereas direct examination by the notified body will apply, i.a., to all risks arising from the way in which the electrical components are incorporated into a machinery and ensure their proper functioning.

Obviously, the considerations made in paragraph 9 above for electrical components apply as appropriate to the electrical components of a machinery.

31. To ensure consistency of application, CEN & CENELEC, under a mandate of the Commission have been requested to ensure that all harmonised electrical equipment standards comply with all the relevant Essential Safety Requirements of both the “Low Voltage” Directive and the “Machinery” Directive.

**What are the requirements applicable to electrical equipment which is intended for being permanently incorporated in construction works?**

32. Some types of electrical equipment covered by the "Low Voltage" Directive are manufactured with a view to being permanently incorporated in construction works. Consequently, such equipment must also be fit for use and meet the essential requirements as provided for by Directive 89/106/EEC<sup>25</sup> and set out in the interpreting documents used as a reference to establish the harmonised standards under that Directive, and comply with the conformity assessment procedures set out in its Article 13.

As a result, application to such electrical equipment of the provisions of the "Construction Products" Directive presupposes the existence of both harmonised standards within the meaning of the “Construction Products” Directive and decisions concerning the conformity assessment procedures, again within the meaning of that Directive.

Should these essential conditions not be met, the provisions of Directive 89/106/EEC cannot in practice be applied to the relevant electrical equipment.

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<sup>24</sup> For “Annex IV” machinery, Article 8 of the Machinery Directive provides for the intervention of a Notified Body.

<sup>25</sup> Council Directive of 21.12.1988 concerning production products (89/106/EEC (OJ No L 40, 11.2.1989), as amended by Directive 93/68/EEC (OJ No L 220, 30.8.1993).

33. However, the "Low Voltage" Directive sets a wide range of safety objectives, overlapping with essential requirements in Annex I to Directive 89/106/EEC. In order to best ensure the objectives of both directives, existing harmonised standards (as published under the "Low Voltage" Directive) are being examined in order to ensure that they are also consistent with the relevant essential requirements of the "Construction Products" Directive.

**What is the relation with the "Radio equipment and telecommunications terminal equipment" directives**<sup>26</sup>

34. Equipment, or relevant components of equipment, falling under the R&TTED are covered by the provisions of that Directive regarding the essential requirements for health and safety. However, the R&TTED does not have its own detailed requirements, and refers to the safety objectives of the LVD, but with no voltage limit applying.

Harmonised standards listed in the OJEC under the LVD and identified as also applicable under the R&TTED give a presumption of conformity under that latter Directive, even for voltages outside the LVD limits. Safety standards for voltages outside the LVD range can be mandated and referenced under the R&TTED only, if required.

Manufacturers can choose to use the conformity assessment procedures of the LVD for equipment falling within the LVD voltage range.

Products that are subject to more than one Directive must meet the requirements of all applicable Directives. Where the R&TTE element of a product is integrated into the product, the product marking must include the appropriate R&TTE marking, including R&TTE equipment class identifiers and notified body numbers, if applicable.

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<sup>26</sup> Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (OJ L No L 91/10, 7. 4. 1999)

**What is the relation with the “Gas Appliances” Directive**<sup>27</sup>

35. Appliances covered by the “Gas Appliances” Directive often include electrical components which fall also under the “Low Voltage” Directive. In particular, Article 1 of the “Gas Appliances” Directive specifies that the Directive also applies to safety devices, controlling devices or regulating devices and subassemblies (separately marketed for trade use and designed to be incorporated into an appliance burning gaseous fuel or assembled to constitute such an appliance”. Some of these components, are or include electrical equipment. The “Gas Appliance” Directive and the “Low Voltage” Directive apply in a complementary way to electrical components (designed to be used in the voltage ranges of that Directive) incorporated (or to be incorporated) into gas appliances.

Conformity assessment within the framework of the “Gas Appliance” Directive shall be conducted in accordance with the procedure laid down in that Directive, taking into account the results of the conformity assessment procedures of the “Low Voltage” Directive, applied, in relation to the “Safety objectives” of this last Directive to electrical components of gas appliances. The safety aspects of the way in which the electrical components are incorporated into the gas appliances and ensure their proper functioning will be subject to direct examination by notified bodies.

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<sup>27</sup> Council Directive of 29 June 1990 concerning gas appliances (90/396/EEC (OJ No L 196, 26.7.1990), as amended by Directive 93/68/EEC (OJ No L 220, 30.8.1993).