GUIDANCE FOR THE IMPLEMENTATION OF EUROPEAN DIRECTIVE 2006/42/EC "MACHINERY"

ESYD GD-MACHINERY

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1. INTRODUCTION

This ESYD Guidance presents the key points of the European Directive 2006/42/EC (Machinery Directive – MD), emphasizing on the obligations of the manufacturer and the notified body. The purpose of this Guidance is to point out the critical parts of the conformity assessment process and facilitate the accreditation procedure of the bodies seeking notification.

The involved parties should always be informed about the requirements of the MD, the applicable standards and the respective Guidelines, issued by the European Commission, available on the web page www.newapproach.org.

This Guidance supplements guidance document EA 02/17, regarding the requirements for the assessment of certification / inspection bodies for the purpose of notification.

2. MAIN POINTS OF DIRECTIVE 2006/42/EC

2.1 Scope

The following products fall within the scope of the MD:

- machinery;
- interchangeable equipment (a device which, after the putting into service of machinery or of a tractor, is assembled with that machinery or tractor by the operator himself in order to change its function or attribute a new function, in so far as this equipment is not a tool);
- safety components (an indicative list of safety components is set out in Annex V of the MD, e.g., guards for removable mechanical transmission devices);
- lifting accessories;
- chains, ropes and webbing;
- removable mechanical transmission devices;
- partly completed machinery.

With the exception of partly completed machinery, all the previously mentioned products are referred in the text of the MD as "machinery".

The new version of the Directive (MD) clarifies the distinction between products falling within the scope of the Directive **"Machinery" and the Directive "Low Voltage"** (*see articles 1 (k) & (l)*). More specifically, the following, among others, are excluded from the scope of the Directive "Machinery":

A. Electrical and electronic products falling within the following areas, insofar as they are covered by the Low Voltage Directive, relating to electrical equipment designed for use within certain voltage limits:
— household appliances intended for domestic use,
— audio and video equipment,
— information technology equipment,
— ordinary office machinery,
— low-voltage switchgear and control gear,
— electric motors;
B. The following types of high-voltage electrical equipment:

— switch gear and control gear,
— transformers.

The fact that a product shall be covered by one of the two aforementioned Directives is not based anymore on the "main source of risks", as defined by the risk assessment. Instead, the MD indicates six categories of electrical machinery, which fall exclusively within the scope of the Low Voltage Directive. For every other type of machinery, the safety objectives of the Low Voltage Directive could be explicitly applied, regarding the risks associated with electricity, whereas all other essential requirements, as well as the obligations relating to the conformity assessment and the placing on the market, are exclusively defined by the MD.

In relation to **agricultural and forestry tractors**, the latter are covered by the MD, as well as the Directive 2003/37/EC. The MD supplements the Directive 2003/37/EC for agricultural and forestry tractors concerning the risks currently not covered by Directive 2003/37/EC.

The MD includes an analytical list of **safety components**, which fall within this Directive (Article 2 (c)). The safety components, intended to replace specific components and provided by the manufacturers of the standard machinery, do not fall within the scope of the MD.

Similarly, a clear distinction with the Directive "Lifts" (95/16/EC) is made: **lifting appliances whose speed is not greater than 0,15 m/s, as well as construction site hoists, fall hereafter within the scope of the MD.**

DEFINITIONS

Machinery means:

- An assembly, fitted with or intended to be fitted with a drive system other than directly applied human or animal effort, consisting of linked parts or components, at least one of which moves, and which are joined together for a specific application.

- An assembly of linked parts or components, at least one of which moves and which are joined together, intended for lifting loads and whose only power source is directly applied human effort.

'Interchangeable equipment' means a device which, after the putting into service of machinery or of a tractor, is assembled with that machinery or tractor by the operator himself in order to change its function or attribute a new function, in so far as this equipment is not a tool.

'Safety component' means a component which serves to fulfill a safety function, and the failure and/or malfunction of which endangers the safety of persons.

'Removable mechanical transmission device' means a removable component for transmitting power between self-propelled machinery or a tractor and another machine by joining them at the first fixed bearing.

'Partly completed machinery' means an assembly which is almost machinery but which cannot in itself perform a specific application.

2.2 Placing on the market and putting into service

- The MD describes the obligations of the manufacturer (who is responsible for placing the machinery on the market under his own name or trademark), which are common in all new approach directives (carrying out the conformity assessment of the machinery, drawing up the EC declaration of conformity, affixing the CE marking). According to the MD, in the absence of a manufacturer or an authorized representative, any natural or legal person who places on the market or puts into service machinery or partly completed machinery covered by the MD shall be considered a manufacturer.

- In order to be placed on the market, machinery shall be accompanied by the manufacturer's EC declaration of conformity, whereas partly completed machinery shall be accompanied by the manufacturer's declaration of incorporation.

2.3 Machinery conformity assessment procedures

The MD includes the typical conformity assessment modules, common in all new approach directives:

Modules	**Design Stage**	**Production Stage**	**Machinery NOT included in Annex IV**	**Machinery included in Annex IV with the use of harmonized standards**	**Machinery included in Annex IV without the use of harmonized standards**
A. ANNEX VII & VIII	Technical file for machinery (VII)	Internal checks on the manufacture of machinery (VIII)	*	* or	
B. ANNEX IX	EC type-examination			* Combined with internal checks (Annex VIII point 3) or	* Combined with internal checks (Annex VIII point 3) or
H. ANNEX X	Full quality assurance for design, manufacture, final inspection and testing			*	*

2.4 Partly completed machinery conformity assessment procedures

1. **The manufacturer of partly completed machinery** shall, before placing it on the market, ensure that:
(a) the relevant technical documentation described in Annex VII, part B is prepared;

(b) assembly instructions described in Annex VI are prepared;
(c) a declaration of incorporation described in Annex II, part 1, Section B has been drawn up.
2. The assembly instructions and the declaration of incorporation shall accompany the partly completed machinery until it is incorporated into the final machinery and shall then form part of the technical file for that machinery.

2.5 Essential Health and Safety Requirements

In Annex I of this Guidance, the key points of the essential health and safety requirements are listed.

The main modifications introduced by the MD are the following:

- the **risk assessment** requirements are more detailed
- the requirements relating to **ergonomics and emissions** are more clearly formulated
- new requirements were determined concerning **machinery serving fixed landings**
- the requirements concerning **seating and lightning protection**, so far restricted to mobile or lifting machinery, were incorporated in the general part of Annex I and therefore apply to all types of machinery.

3. OBLIGATIONS OF THE MANUFACTURER

3.1 General

The **"manufacturer"** may be any natural or legal person (i.e., person or legal entity e.g., company or union), who designs and/or manufactures machinery or partly completed machinery covered by the MD and is responsible for the conformity of the machinery or the partly completed machinery to the MD with a view to its being placed on the market, under his own name or trademark or for his own use.

In case that more than one person or company is involved in the design and manufacturing process, one person or company shall be defined as "manufacturer".

The **manufacturer** of machinery or his authorised representative must ensure that a risk assessment is carried out in order to determine the health and safety requirements which apply to the machinery. The machinery must then be designed and constructed taking into account the results of the risk assessment. By the iterative process of risk assessment and risk reduction referred to above, the **manufacturer** or his authorised representative shall:
— determine the limits of the machinery, which include the intended use and any reasonably foreseeable misuse thereof,
— identify the hazards that can be generated by the machinery and the associated hazardous situations,
— estimate the risks, taking into account the severity of the possible injury or damage to health and the probability of its occurrence,
— evaluate the risks,
— eliminate the hazards or reduce the risks associated with these hazards by application of protective measures.

Where the machinery is referred to in Annex IV and was manufactured in accordance with a harmonised standard covering all of the relevant essential health and safety requirements, the **manufacturer** or his authorised representative will not be obliged any more to have the conformity assessment of the machinery performed by a notified body.
Where the machinery is referred to in Annex IV and has not been manufactured in accordance with the harmonised standards, or only partly in accordance with such standards, or if the harmonised standards do not cover all the relevant essential health and safety requirements, then the **manufacturer** shall apply one of the following procedures:
A. the EC type-examination procedure
B. the full quality assurance procedure provided for in Annex X.

3.2 Preparing the technical file (Annex VII)

The technical file must demonstrate that the machinery complies with the requirements of the MD and must cover the design, manufacture and operation of the machinery to the extent necessary for this assessment.
The technical file must comprise the typical documentation for all New Approach Directives and moreover the following:

- The documentation on risk assessment, including:

(a) a list of the essential health and safety requirements which apply to the machinery,
(b) the description of the protective measures implemented to eliminate identified hazards or to reduce risks and, when appropriate, the indication of the residual risks associated with the machinery.

- The instructions for the machinery.

The respective **technical file for partly completed machinery must show which requirements of the MD are applied and fulfilled.**

3.3 Documentation of compliance with essential health and safety requirements

Machinery manufactured in conformity with harmonised standards shall be presumed to comply with the respective essential health and safety requirements.

Since the use of harmonised standards is not obligatory or if no harmonised standards exist, for the conformity assessment of machinery, it is permitted to use other relevant specifications or parts thereof, which cover the respective parts of essential health and safety requirements, provided that the aforementioned specifications are not in contradiction with the essential health and safety requirements (e.g., regarding the safety coefficients). Additionally, the manufacturer's technical documentation should demonstrate that the respective essential health and safety requirement is fulfilled. Moreover, the notified body shall be able to verify, through its own method, that the essential health and safety requirements are fulfilled.

4. OBLIGATIONS OF CERTIFICATION BODIES – NOTIFIED BODIES

4.1 Inspection procedures

The Notified Body should have a specific inspection procedure, for each Module it has activities, including testing, the performing of which is necessary for the conformity assessment of the machinery.

4.2 EC-type examination (Annex IX)

4.2.1 The Notified Body, among others, must have the means and procedures to carry out testing referred to in the previous paragraph. The performing of testing must satisfy the requirements of the Standard ELOT EN ISO/IEC 17020 and of the Guidance IAF/ILAC A4, regarding inspection methods and procedures. The equipment used for carrying out the testing must satisfy the requirements of the Standard ELOT EN ISO/IEC 17020 and of the Guidance IAF/ILAC A4, regarding facilities and equipment. In addition to the aforementioned requirements:

I. The Body must determine and properly record the testing required for the conformity assessment of the machinery, as well as all relevant equipment, necessary for the performing of the testing.

II. The respective Body auditors / inspectors must have in-depth and documented knowledge of the details of the testing and the use of the relevant equipment.

III. In cases when testing equipment of the manufacturer or equipment of third party is used, the responsibility for the suitability and the calibration status of the equipment used lies solely within the Body (according to par. 9.1 of the Guidance IAF/ILAC A4). The Body, among others, must have a documented procedure for the verification of the suitability of the equipment and retain relevant verification records. Therefore, for the conformity assessment of machinery, the Notified Body should be able to prove via suitable documented records that the equipment used was fulfilling the requirements of ELOT EN ISO/IEC 17020 and of the Guidance IAF/ILAC A4, regarding facilities and equipment.

4.2.2 The technical file and the EC-type examination certificate must be retained for 15 years.

4.2.3 The manufacturer shall request from the Notified Body the review of the validity of the EC type-examination certificate every five years.

4.3 Full quality assurance (Annex X)

4.3.1 The manufacturer's quality assurance system shall cover design, manufacture, final inspection and testing of the machinery and shall ensure the compliance of the machinery with the requirements of the MD.

4.3.2 The Notified Body assesses the quality system of the manufacturer, examines the technical file for every machinery model, including the testing required and performed under the manufacturer's responsibility, and makes the relevant decision.

4.4 Personnel – Training

The Notified Body shall determine personnel qualifications and employ personnel involved in the conformity assessment process fulfilling the respective requirements referred to in Annex XI of the MD.

The aforementioned personnel, for the position of the inspector / auditor must be Engineers, having Diploma or BSc Degree from Greek or other equivalent Universities, being holders of the Technical Chamber of Greece (T.E.E.) professional license, with documented 5-year working experience, relative to the grouping indicated in par. 5.2 of the present Guidance, in the fields of machinery design or manufacture or inspection or functioning or maintenance or audit. Alternatively, for the position of the inspector / auditor, Technologist Engineers can be employed, with corresponding 10-year working experience. For the position of the person making the certification decision, the Diploma or BSc Engineers must have a corresponding 10-year working experience and the Technologist Engineers must have a corresponding 15-year working experience.

The Notified Body must make arrangements for the training of the personnel, which must comprise:

- Machinery design, manufacture, inspection, functioning or maintenance issues, machinery defects and their significance towards health and safety requirements.
- Machinery design, manufacture and inspection standards.
- Relevant legal requirements.
- Audit and inspection techniques, including safety issues involved.

The Notified Body must retain records verifying the suitability of the personnel, including initial and periodic assessment conducted by the Body, as well as the scope of proven technical competence, according to par. 5.2 of the present Guidance.

5. MACHINERY GROUPING & FORMULATION OF THE SCOPE OF ACCREDITATION

5.1 Introduction

In order to simplify the assessment procedure, as well as determine the on-site assessments, the machinery, falling within the scope of the MD in Annex IV, is categorized into groups, according to the following Table A.

As further explained below, for machinery belonging to the same group, the certification / inspection body is presumed to have equivalent technical competence.

Applied principles for the formulation of the Scope of Accreditation are analysed in par. 5.4.

5.2 Machinery grouping, according to the MD, in the frame of the assessment procedure

Table A

GROUP	CATEGORY
A. Woodworking machinery	1. Circular saws (single- or multi-blade) for working with wood and material with similar physical characteristics or for working with meat and material with similar physical characteristics, of the following types: 1.1. sawing machinery with fixed blade(s) during cutting, having a fixed bed or support with manual feed of the work-piece or with a demountable power feed; 1.2. sawing machinery with fixed blade(s) during cutting, having a manually operated reciprocating saw-bench or carriage; 1.3 sawing machinery with fixed blade(s) during cutting, having a built-in mechanical feed device for the work-pieces, with manual loading and/or unloading; 1.4. sawing machinery with movable blade(s) during cutting, having mechanical movement of the blade, with manual loading and /or unloading. 2. Hand-fed surface planing machinery for woodworking. 3. Thicknessers for one-side dressing having a built-in mechanical feed device, with manual loading and/or unloading for woodworking. 4. Band-saws with manual loading and/or unloading for working with wood and material with similar physical characteristics or for working with meat and material with similar physical characteristics, of the following types: 4.1. sawing machinery with fixed blade(s) during cutting, having a fixed or reciprocating-movement bed or support for the work-piece; 4.2. Sawing machinery with blade(s) assembled on a carriage with reciprocating motion. 5. Combined machinery of the types referred to in points 1 to 4 and in point 7 for working with wood and material with similar physical characteristics. 6. Hand-fed tenoning machinery with several tool holders for woodworking. 7. Hand-fed vertical spindle moulding machinery for working with wood and material with similar physical characteristics.
B. Portable chainsaws for woodworking	8. Portable chainsaws for woodworking.
C. Presses & press-brakes for the working of metals	9. 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.
D. Machinery for plastic & rubber forming	10. Injection or compression plastics-moulding machinery with manual loading or unloading. 11. Injection or compression rubber-moulding machinery with manual loading or unloading.

E. Machinery for underground working	12. Machinery for underground working of the following types: 12.1. locomotives and brake-vans; 12.2. hydraulic-powered roof supports.
F. Trucks for the collection of household refuse & mechanical transmission devices	13. Manually loaded trucks for the collection of household refuse incorporating a compression mechanism. 14. Removable mechanical transmission devices including their guards. 15. Guards for removable mechanical transmission devices.
G. Lifting machinery	16. Vehicle servicing lifts. 17. Devices for the lifting of persons or of persons and goods involving a hazard of falling from a vertical height of more than three metres.
H. Portable cartridge-operated fixing and other impact machinery	18. Portable cartridge-operated fixing and other impact machinery.
I. Protective devices designed to detect the presence of persons	19. Protective devices designed to detect the presence of persons.
J. Power-operated interlocking movable guards designed to serve as safeguards in machinery referred to in points 9, 10 and 11	20. Power-operated interlocking movable guards designed to be used as safeguards in machinery referred to in points 9, 10 and 11.
K. Logic units to ensure safety functions	21. Logic units to ensure safety functions.
L. Protective structures (roll-over and falling-object)	22. Roll-over protective structures (ROPS). 23. Falling-object protective structures (FOPS).

5.3 Assessment procedure

5.3.1 The body is eligible to apply for accreditation by selecting groups / categories, simultaneously determining products and respective standards within the group, for which at least one client is available.

5.3.2 For the proof of technical competence in a group, the availability of at least one client in one of the categories is necessary and, if possible, conducting on-site assessment.

5.4 Scope of Accreditation formulation

According to the aforementioned grouping, the respective Scope of Accreditation will include the following information:

5.4.1 In the first column, all the categories of the group are mentioned, as analysed in Table A, describing the **documented competence** of the body. Below each category, respective products for which a client is available are mentioned.

5.4.2 In the second column, the respective Module is mentioned, as defined by the MD.

5.4.3 In the third column, the Directive 2006/42/EC is mentioned, as well as the standards which refer to the products that have been mentioned in column 1.

5.5 Extension of Scope of Accreditation within existing group

In case of adding a new product / standard in an already existing group, the extension of the Scope of Accreditation of a certification / inspection body follows the procedure below:

- The body informs ESYD in written for its intention to extend its Scope of Accreditation by adding new product (s). The body also determines the respective standards and in-house procedures, as well as the relevant clients.
- ESYD reviews the submitted documentation and, depending on the outcome of the review, recommends or not the granting of the requested extension of scope.
- In the next surveillance assessment or within one year from the submission of the application at the latest, the body must present a complete certification file of a client for the requested scope.

ANNEX I

Essential Health and Safety Requirements (key points)

The manufacturer or his authorised representative must:
— determine the limits of the machinery, which include the intended use and any reasonably foreseeable misuse thereof,
— identify the hazards that can be generated by the machinery and the associated hazardous situations,
— estimate the risks, taking into account the severity of the possible injury or damage to health and the probability of its occurrence,
— evaluate the risks, with a view to determining whether risk reduction is required, in accordance with the objective of the MD,
— eliminate the hazards or reduce the risks associated with these hazards by application of protective measures, in the order of priority established in section 1.1.2(b) of the MD.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

For the purpose of this Annex:
(a) **'hazard'** means a potential source of injury or damage to health;
(b) **'danger zone'** means any zone within and/or around machinery in which a person is subject to a risk to his health or safety;
(c) **'exposed person'** means any person wholly or partially in a danger zone;
(d) **'operator'** means the person or persons installing, operating, adjusting, maintaining, cleaning, repairing or moving machinery;
(e) **'risk'** means a combination of the probability and the degree of an injury or damage to health that can arise in a hazardous situation;
(f) **'guard'** means a part of the machinery used specifically to provide protection by means of a physical barrier;
(g) **'protective device'** means a device (other than a guard) which reduces the risk, either alone or in conjunction with a guard;
(h) **'intended use'** means the use of machinery in accordance with the information provided in the instructions for use;
(i) **'reasonably foreseeable misuse'** means the use of machinery in a way not intended in the instructions for use, but which may result from readily predictable human behaviour.

Principles of safety integration

(a) Machinery must be **designed** and **constructed** so that it is fitted for its function, and can be operated, adjusted and maintained without putting persons at risk when these operations are carried out under the conditions foreseen but also taking into account any reasonably foreseeable misuse thereof.
The aim of measures taken must be to eliminate any risk throughout the foreseeable lifetime of the machinery including the phases of transport, assembly, dismantling, disabling and scrapping.
(b) In selecting the most appropriate methods, **the manufacturer** or his authorised representative must apply the following principles, in the order given:
— eliminate or reduce risks as far as possible **(inherently safe machinery design and construction)**,

— take the necessary protective measures in relation to risks that cannot be eliminated,
— inform users of the residual risks due to any shortcomings of the protective measures adopted, indicate whether any particular training is required and specify any need to provide personal protective equipment.
(c) When **designing and constructing** machinery and when drafting the instructions, the **manufacturer** or his authorised representative must **envisage not only the intended use of the machinery but also any reasonably foreseeable misuse thereof.**

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1.2.3 Starting
It must be possible to start machinery only by voluntary actuation of a control device provided for the purpose.
The same requirement applies:
— when restarting the machinery after a stoppage, whatever the cause,
— when effecting a significant change in the operating conditions.

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1.5.4 Errors of fitting
Errors likely to be made when fitting or refitting certain parts which could be a source of risk must be made impossible by the **design and construction of such parts** or, failing this, by information given on the parts themselves and/or their housings. The same information must be given on moving parts and/or their housings where the direction of movement needs to be known in order to avoid a risk.

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1.5.13 Emissions of hazardous materials and substances
Machinery must be designed and constructed in such a way that risks of inhalation, ingestion, contact with the skin, eyes and mucous membranes and penetration through the skin of hazardous materials and substances which it produces can be avoided.

Where a hazard cannot be eliminated, the machinery must be so equipped that hazardous materials and substances can be contained, evacuated, precipitated by water spraying, filtered or treated by another equally effective method.

Where the process is not totally enclosed during normal operation of the machinery, the devices for containment and/or evacuation must be situated in such a way as to have the maximum effect.

1.6 MACHINERY MAINTENANCE

Adjustment and maintenance points must be located outside danger zones. It must be possible to carry out adjustment, maintenance, repair, cleaning and servicing operations while machinery is at a standstill.

In the case of automated machinery and, where necessary, other machinery, a connecting device for mounting diagnostic fault-finding equipment must be provided.

Automated machinery components which have to be changed frequently must be capable of being removed and replaced easily and safely. Access to the components must enable these tasks to be carried out with the necessary technical means in accordance with a specified operating method.

1.7.3 Marking of machinery

All machinery must be marked visibly, legibly and indelibly with the following minimum particulars:

— the business name and full address of the manufacturer and, where applicable, his authorised representative,

— designation of the machinery,

— the CE Marking (see Annex III of the MD),

— designation of series or type,

— serial number, if any,

— the year of construction, that is the year in which the manufacturing process is completed.

It is prohibited to pre-date or post-date the machinery when affixing the CE marking.

Furthermore, machinery designed and constructed for use in a potentially explosive atmosphere must be marked accordingly.

Machinery must also bear full information relevant to its type and essential for safe use. Such information is subject to the requirements set out in section 1.7.1 of Annex I of the MD.

Where a machine part must be handled during use with lifting equipment, its mass must be indicated legibly, indelibly and unambiguously.

2. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS FOR CERTAIN CATEGORIES OF MACHINERY

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2.1 FOODSTUFFS MACHINERY AND MACHINERY FOR COSMETICS OR PHARMACEUTICAL PRODUCTS

…….

2.2 PORTABLE HAND-HELD AND/OR HAND-GUIDED MACHINERY

…….

2.3 MACHINERY FOR WORKING WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS

…….

3. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS TO OFFSET HAZARDS DUE TO THE MOBILITY OF MACHINERY

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4. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS TO OFFSET HAZARDS DUE TO LIFTING OPERATIONS

Machinery presenting hazards due to lifting operations must meet all the relevant essential health and safety requirements described in this chapter (see General Principles of Annex I of the MD, point 4).

5. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS FOR MACHINERY INTENDED FOR UNDERGROUND WORK

Machinery intended for underground work must meet all the essential health and safety requirements described in this chapter (see General Principles of Annex I of the MD, point 4).

EXHAUST EMISSIONS
Exhaust emissions from internal combustion engines must not be discharged upwards.

6. SUPPLEMENTARY ESSENTIAL HEALTH AND SAFETY REQUIREMENTS FOR MACHINERY PRESENTING PARTICULAR HAZARDS DUE TO THE LIFTING OF PERSONS

6.4 MACHINERY SERVING FIXED LANDINGS

6.4.1 Risks to persons in or on the carrier

The carrier must be designed and constructed in such a way as to prevent risks due to contact between persons and/or objects in or on the carrier with any fixed or moving elements.

The machinery must be designed, constructed and, where necessary, equipped with devices in such a way as to prevent uncontrolled upward or downward movement of the carrier. These devices must be able to stop the carrier at its maximum working load and at the foreseeable maximum speed.

The stopping action must not cause deceleration harmful to the occupants, whatever the load conditions.

6.4.2 Controls at landings

Controls, other than those for emergency use, at landings must not initiate movements of the carrier when:

— the control devices in the carrier are being operated,

— the carrier is not at a landing.

6.4.3 Access to the carrier

The guards at the landings and on the carrier must be designed and constructed in such a way as to ensure safe transfer to and from the carrier, taking into consideration the foreseeable range of goods and persons to be lifted.

6.5 MARKINGS

The carrier must bear the information necessary to ensure safety including:

— the number of persons permitted on the carrier,

— the maximum working load.