THE RULEBOOK

ON SAFETY OF MASHINERY

("Official Gazette of Republic of Serbia", NO 58/2016 and 21/2020)

I INTRODUCTORY PROVISIONS

Article 1

This Rulebook sets out: the essential health and safety requirements related to design and construction of machinery, and other requirements and conditions that shall be met prior to placing machinery on the market or putting into service; the contents of Declaration of Conformity of the machinery and Declaration of Incorporation of partly completed machinery; the contents of technical documentation; conformity assessment procedures; criteria that shall be met by conformity assessment bodies to be notified; conformity mark and conformity marking; confidentiality and safeguard clause.

Scope

Article 2

This Rulebook shall apply to the following machines and products:

1) machinery;

2) interchangeable equipment;

3) safety components;

4) lifting accessories;

5) chains, ropes and textile slings;

6) removable mechanical transmission devices;

7) partly completed machinery.

Products excluded from the scope of this Rulebook

Article 3

This Rulebook shall not apply to the following machines and products:

1) safety components intended to be used as spare parts to replace identical components and supplied by the manufacturer of the original machinery;

2) specific equipment for use in fairgrounds and/or amusement parks;

3) machinery specially designed or put into service for nuclear purposes which, in the event of failure, may result in an emission of radioactivity;

4) weapons, including firearms;

5) the following means of transport:
(1) agricultural and forestry tractors for the risks covered by relevant regulations, with the exclusion of machinery mounted on these vehicles;

(2) motor vehicles and their trailers covered by relevant regulations, with the exclusion of machinery mounted on these vehicles;

(3) two or three-wheel motor vehicles covered by relevant regulations, with the exclusion of machinery mounted on these vehicles;

(4) motor vehicle exclusively intended for competition;

(5) means of transport by air, on water and on rail networks with the exclusion of machinery mounted on these means of transport.

6) seagoing vessels and mobile offshore units and machinery installed on board on such vessels and/or units;

7) machinery specially designed and constructed for military or police purposes;

8) machinery specially designed and constructed for research purposes for temporary use in laboratories;

9) mine winding gear;

10) machinery intended to move performers during artistic performances;

11) electrical and electronic products or groups of such products falling under application of special regulations relating to electrical equipment designed for use within certain voltage limits as follows:

(1) household appliances intended for domestic use;

(2) audio and video equipment;

(3) information technology equipment;

(4) ordinary office machinery;

(5) low-voltage switchgear and control gear;

(6) electric motors.

12) High-voltage electrical equipment as follows:

(1) switchgear and control gear;

(2) transformers.

If the hazards from Annex 1 are essential health and safety requirements related to designing and construction of machinery, which is printed with this Rulebook as its integral part, fully or partially covered by other regulations, this Rulebook shall not apply to machinery with relation to these hazards.

Definitions

Article 4

Terms used in this Rulebook shall have the following meaning:

1) „machinery" means machines or products listed in Article 2 (1), Points (1) to (6) of this Rulebook, and also:

(1) 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;

(2) an assembly referred to in the first subparagraph of this Point, missing only the components to connect it on the site or to sources of energy and motion;

(3) an assembly referred to in the first and second subparagraphs of this Point ready to be installed and able to function only if mounted on a means of transport, or installed in a building or a structure;

(4) an assembly referred to in the first, second and thirds subparagraphs of this Point or partially completed machinery which, in order to achieve the same goal, are arranged and controlled so that they function as an integral whole;

(5) an assembly of linked parts or components, at least of which one moves, intended for lifting loads and whose only power source is directly applied human effort.

2) „interchangeable equipment" means devices (not tools) mounted on machinery or tractor by the operator in order to change its function or attribute a new function;

3) „safety components" means a component:

(1) which serves to fulfil safety functions;

(2) which is independently placed on the market;

(3) the failure and/or malfunction of which endangers the safety of persons;

(4) which is not necessary in order for the machinery to function, or for which normal components may be substituted in order for the machinery to function.

An indicative list of safety components is listed in Annex 5 – List of safety components, printed with this Rulebook and its integral part;

4) „lifting accessory" means a component or equipment, including lifting hooks and their components not attached to the lifting machinery and which is placed between the machinery and the load or on the load itself, or which is intended to constitute an integral part of the load and which is independently placed on the market; slings and their components are also regarded as lifting accessories;

5) „chains, ropes and textile slings" means chains, ropes and textile slings designed and constructed for lifting purposes as part of lifting machinery or lifting accessories;

6) „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. When it is placed on the market with the guard, it shall be regarded as one product;

7) „partly completed machinery" means an assembly which is almost machinery but which cannot in itself perform a specific application; but is only intended to be incorporated into or assembled with other machinery or partly completed machinery or equipment, thereby forming machinery to which this Rulebook applies. A drive system is partly completed machinery;

8) „placing on the market" means making available for the first time on the market in the Republic of Serbia machinery or partly completed machinery with a view to distribution or use, in return for payment or free of charge;

9) „manufacturer" means any entrepreneur or legal person who designs and/or manufactures machinery or partly completed machinery with a view to its being placed on the market, under his own business name or trademark or other recognizable label or for his own use. In the absence of a manufacturer as defined above, any entrepreneur or legal person who places on the market or puts into service machinery or partly completed machinery shall be considered a manufacturer;

10) „authorised representative" means any entrepreneur or legal person registered in the Republic of Serbia or natural person who is a resident of the Republic of Serbia who has been authorised by the manufacturer to perform on his behalf all or part of the obligations under this Rulebook;

11) „putting into service" means the first use of machinery for its intended purpose in the Republic of Serbia;

12) „harmonised standard" is a European standard, which was adopted at the request of the European Commission for implementation in the harmonised legislation of the European Union;

13) „essential health and safety requirements" are mandatory requirements for the design and manufacture of the products to which this Rulebook applies, in order to ensure a high level of protection of health and safety of humans, domestic animals, and property and, as appropriate, the environments listed in Annex 1. Essential health and safety requirements relating to environmental protection apply to the machinery referred to in section 2.4. Annex 1.

Terms used in this Rulebook which are not defined under Paragraph 1 of this Article, shall have

meanings stipulated by acts regulating technical requirements for products, general safety of products and standardisation.

II PLACING INTO THE MARKET AND/OR PUTTING INTO SERVICE

Placing into the market and/or putting into service

Article 5

Before placing machinery on the market and/or putting it into service, the manufacturer shall:

1) ensure that it satisfies the relevant essential health and safety requirements set out in Annex I;
2) ensure that the technical documentation referred to in Annex VII, Chapter A – Technical documentation for machinery and partially completed machinery, printed with this Rulebook and its integral part, is available;

3) provide, in particular, the necessary information (such as instructions) on machinery;

4) carry out the appropriate procedures for assessing conformity in accordance with Article 8 of this Rulebook;

5) draw up the Declaration of Conformity in accordance with Annex 2, Chapter A - Declaration of Conformity of machinery and Declaration of Incorporation of partly completed machinery, printed in this Rulebook as its integral part and ensure that it accompanies the machinery;

6) affix the conformity mark on machinery in accordance with Article 12 of this Rulebook.

Obligations under Paragraph 1, Points (2), (3), (5) and (6) the manufacturer may transfer to its authorised representative.

Machinery with conformity marks being affixed to it and accompanied by a Declaration of Conformity is considered to comply with the provisions of this Rulebook.

Where machinery is also the subject to other regulations governing other aspects and providing for the affixing of the conformity mark, the conformity mark shall indicate that the machinery also complies with the provisions of those other regulations.

Information on regulations referred to in Paragraph 4 of this Article shall be stated in the Declaration of Conformity.

Before placing a partially completed machine on the market, the manufacturer or his representative shall provide the documentation and other documents referred to in Article 9 of this Rulebook.

For the purposes of the conformity assessment referred to in Article 8 of this Rulebook, the manufacturer or his authorised representative shall have, all necessary technical, test and professional means of ensuring that the machinery satisfies the essential health and safety requirements, or shall have access to such means.

Free movement

Article 6

Machinery shall, when is properly installed and maintained and when is used for the intended purpose and under conditions that can be reasonably foreseen, and satisfies the relevant requirements and terms of this Rulebook, does not endanger the health and safety of people, domestic animals and the environment.

Machinery that complies with provisions referred to in Paragraph 1 of this Article shall be placed on the market and/or put into service freely, without any restrictions.

Partly completed machinery shall be placed on the market without restrictions where the manufacturer or his authorised representative draws up and issues a Declaration of Incorporation referred to in Annex 2, Chapter B. This Declaration shall state that partly completed machinery is intended for incorporation into machinery or assembly with other partly completed machinery in order to form machinery.

Machinery or partly completed machinery which does not conform to provisions and conditions under this Rulebook may be shown at trade fairs, exhibitions, demonstrations, and such like, provided that a visible sign clearly indicates that it does not conform to provisions under this Rulebook and that it will not be placed on the market and /or put into service until it has been brought into conformity.

During demonstrations of machinery or partly completed machinery referred to in Paragraph 4 of this Article, adequate safety measures shall be taken to ensure the protection of people.

III PRESUMPTION OF CONFORMITY

Serbian standards transposing harmonized standards

Article 7

Machinery shall be presumed to comply with the essential health and safety requirements set out in Annex 1, if it is constructed in accordance with Serbian standards relating to machinery which transposed relevant harmonised standards, the list of which (hereinafter referred to as: List of standards) is made and published in accordance with the law governing technical requirements for products and conformity assessment and the regulation adopted on the basis of that Law.

IV CONFORMITY ASSESSMENT PROCEDURES

Procedures for assessing the conformity of machinery

Article 8

The manufacturer or his authorised representative shall, in order to certify the conformity of machinery with provisions of this Rulebook, apply one of the conformity assessment procedures described in Paragraphs 2, 3 and 4 of this Article.

Where the machinery is not referred to in Annex 4 – Type of machinery to which conformity assessment in the manner described in Article 8 (3) and (4) is applicable, printed with this Rulebook and its integral part, the manufacturer shall apply the procedure for conformity assessment - internal production control under Annex 8 – Conformity assessment procedure carried out by the manufacturer (internal production control), printed with this Rulebook as its integral part.

Where the machinery is specified in Annex 4 and manufactured in accordance with the Serbian standards referred to in Article 7 of this Rulebook, and provided that those standards cover all of the relevant health and safety requirements, the manufacturer shall apply one of the following procedures:

1) Conformity assessment procedure applying internal production control from Annex 8;

2) Type-examination procedure provided for in Annex 9 – Type examination, printed with this Rulebook as it's integral part, and internal production control as per Annex 8, Point 3;

3) Full quality assurance procedure provided for in Annex 10 – Full quality assurance procedure,

printed with this Rulebook as its integral part.

If the machinery is specified in Annex 4 and was not manufactured in accordance with the Serbian standards of the Article 7 of this Rulebook, or only partly in accordance with such standards or if the standards do not cover all the relevant essential health and safety requirements or if there is no standards applicable to machinery concerned, the manufacturer shall apply one of the following procedures:

1) Type-examination procedure provided for in Annex 9 and internal production control of the machinery provided for in Annex 8, Point 3;

2) Full quality assurance procedure referred to in Annex 10.

Procedure for assessing the conformity of partly completed machinery

Article 9

The manufacturer of partly completed machinery or his authorised representative, prior to placing it on the market shall:

1) provide relevant technical documentation referred to in Annex 7, Chapter B;

2) provide assembly instructions referred to in Annex 6 – Assembly instructions for partly completed machinery, printed with this Rulebook as its integral part;

3) draw up a Declaration of Incorporation of partly completed machinery referred to in Annex 2, Chapter B.

The assembly instructions and the Declaration of Incorporation of partly completed machinery shall accompany the partly completed machinery until it is incorporated into machinery, and then shall form the integral part of the technical documentation for that machinery.

V DESIGNATED BODY FOR ASSESSING THE CONFORMITY OF MACHINERY

Designated body

Article 10

Conformity assessment body may carry out the conformity assessment of machinery referred to in Article 8 (3) and (4) of this Rulebook, if it fulfils the requirements for conformity assessment set out in Annex 11 - Requirements that shall be met by conformity assessment body to be notified for conformity assessment, printed with this Rulebook as its integral part, and if such body (hereinafter referred to as: Designated body) is notified in accordance with the law governing technical requirements for products and conformity assessment and the regulation adopted on the basis of such law.

The Designated body shall carry out the assessment of conformity of machinery in a manner described in Annexes 9 and 10.

Confirmation of conformity

Article 11

The manufacturer or his authorised representative or importer if the manufacturer or his authorised representative is not registered in the Republic of Serbia, prior to placing on the market machinery to which this Rulebook applies and for which conformity assessment procedure was applied as per Annex 8, as: portable tools with electric motors of nominal alternating voltage up 250 V for domestic use and alike, shall communicate to the Designated body, a original copy of Declaration of Conformity of that machinery or certified copy with accompanying technical documentation with a view of certifying the conformity of the machinery with the requirements under this Rulebook.

If the Designated body, on the basis of documents referred to in Paragraph 1 of this Article, establishes conformity of the machinery, shall issue a Confirmation of conformity with the essential requirements stipulated in Annex 1.

Confirmation of conformity of machinery shall contain, in particular: a business name or name of the manufacturer; the title of this Rulebook and number of the Official Gazette where this Rulebook was published; type of machinery and designation of the type of machinery which is the subject of conformity assessment.

Confirmation of conformity referred to in Paragraph 2 of this Article shall be valid for the same type or type of machinery of the same manufacturer for the period of five years from the date of

issue of this confirmation.

The Designated body shall keep a record on issued confirmations referred to in Paragraph 2 of this Article, and shall issue an excerpt from the record upon request by the manufacturer or his authorised representative or importer; the excerpt shall contain in particular information on business name of the manufacturer and type of machinery for which confirmation was issued and its validity period.

The Designated body shall publish the records on the issued confirmation on its official website.

Documentation as per Paragraph 1 of this Article does not need to be submitted to the Designated body for new delivery of machinery of the same manufacturer and the same type for which Confirmation of conformity was issued; and excerpt from the records under Paragraph 5 of this Article shall be regarded as evidence of validity of issued confirmation.

The manufacturer or his authorised representative shall affix the Serbian conformity mark on the basis of the confirmation of conformity or the excerpt from the records issued by the Designated body.

The Applicant under Paragraph 1 of this Article shall bear costs related to the review of documentation and issuance of the confirmation of conformity.

Amount of costs referred to in Paragraph 9 of this Article shall be determined by the price list provided by the Designated body and it shall be proportional to the scope and complexity of documentation to be reviewed and time required for carrying out such review.

Costs related to issuing of excerpts from the records referred to in Paragraph 5 of this Article may be charged up to the amount of costs necessary for issuing the excerpt, which is determined by the price list of the Designated body.

VI CONFORMITY MARK

Conformity marking

Article 12

The machinery in conformity with the requirements of this Rulebook shall be marked with conformity mark, with its form and contents as stipulated in Annex 3 – Conformity mark, printed with this Rulebook as its integral part.

The manufacturer, or his authorised representative, shall affix the conformity mark so as to be visible, easily legible and indelible, in accordance with the regulation governing the manner of affixing and use of conformity marks.

Exceptionally, if the manufacturer, or his authorised representative is not established in the Republic of Serbia, the importer shall affix the conformity mark, or if it is not suitable, on its packaging and/or documentation which is followed during distribution.

Other marks, symbols and designations may be placed on machinery provided that they do not affect visibility, legibility and/or meaning of the conformity mark.

Marks, symbols and designations whose placing on machinery is forbidden by the act governing technical requirements and conformity assessment shall be prohibited to be placed.

Unduly marking

Article 13

Unduly marking shall be considered as placing of marks, symbols and other designations whose placing is forbidden by the act governing technical requirements for products and conformity assessment, as well as:

1) affixing conformity mark on machinery or products which this Rulebook does not apply to;

2) lack of conformity mark on machinery which is in conformity with requirements under this Rulebook.

Affixing and use of conformity mark, and other marks, symbols and designations referred to in Article 12 of this Rulebook and Paragraph 1 of this Article, shall be provided in accordance with the act governing technical requirements for products and conformity assessment.

VII CONFIDENTIALITY OF DATA AND SAFEGUARD CLAUSE

Confidentiality of data

Article 14

Data and information regarding assessment of conformity of machinery available to the Designated bodies, the competent authorities and other persons whom this Rulebook apply to, shall be treated as confidential, unless the divulging of such information is necessary in order to protect the health and safety of people.

Confidential data and information referred to in Paragraph 1 of this Article shall be considered, in particular, any business, professional and trade secrets in accordance with this Rulebook and other regulations.

Mutual exchange of confidential data and information referred to in Paragraph 2 of this Article between the competent authorities and the Notified Bodies shall be performed in accordance with the law and other regulations governing the confidentiality of data and information.

Safeguard clause

Article 15

Supply or use of machinery being placed on the market, which meets requirements under this Rulebook, with conformity mark affixed on, accompanied by the Declaration of Conformity of machinery followed by the instructions and security information and used in compliance with prescribed use or in conditions which can be reasonably foreseen, which is found to be risk to the health and safety of people, domestic animals, property or the environment, may be restricted or prohibited or machinery can be withdrawn or revoked in accordance with the act governing technical requirements for products and conformity assessment and market surveillance and this Rulebook.

Conformity with EU regulations

Article 16

This Rulebook is in compliance with all the principles and essential requirements from the European Parliament and Council Directive No. 2006/42/EC regarding machinery of 17 May 2006, which was amended by the Directive No. 2009/127/EC of the European Parliament and of the Council of 21st October 2009.

VIII TRANSITIONAL AND FINAL PROVISIONS

Article 17

From the day when the ratified international agreement on conformity assessment and acceptance of industrial products with the EU comes into force (ACAA agreement), for machinery to which this Rulebook applies, or if the agreement shall not be concluded, from the date of the Republic of Serbia's accession to the EU, in all provisions and titles referred to this Rulebook, the term: "Declaration of Conformity" shall mean: "EC Declaration of Conformity of machinery"; the term: "conformity
mark" shall mean: "CE mark"; the term: "Type-examination" shall mean: "EC Type-examination"; and the term: "Type-examination certificate" shall mean: "EC Type-examination certificate".

From the date of the Republic of Serbia's accession to the EU, in the Article 4 of this Rulebook, the term: "the Republic of Serbia" shall mean: "European Union".

From the date of the Republic of Serbia's accession to the EU, paragraph 3 of the Article 12 of this Rulebook, is deleted.

Article 18

From the day when this Rulebook enters into force till the day when ACAA agreement for machinery which this Rulebook applies to enters into force, or if that agreement is not concluded, until the day of the accession of the Republic of Serbia to the EU, conformity marking shall be performed by affixing the Serbian conformity mark in accordance with this Rulebook and relevant regulations.

From the day when ACAA agreement for machinery which this Rulebook applies to enters into force, or if the agreement is not concluded, from the date of the Republic of Serbia's accession to the EU, conformity marking shall be performed by affixing CE mark in accordance with this Rulebook and relevant regulations.

Article 19

On the day when ACAA agreement enters into force for machines which this Rulebook applies to or, if that contract is not concluded, from the day of the Republic of Serbia's accession to the European Union.The provisions of Article 12, paragraph 3 and item 2 of Annex 3 to this Rulebook shall cease to apply.

Article 20

Rulebook on Safety of Machinery (Official Gazette of RS", No.13/10) shall cease to be valid from the day when this Rulebook starts to apply.

Following regulations shall cease to be valid from the day when this Rulebook enters into force:

1) Rulebook on technical and other requirements for drawn steel wire for ropes for cranes ("Official Gazette of RS", No. 56/09);

2) Rulebook on technical and other requirements for firefighting trailers ladders ("Official Gazette of RS", No. 56/09);

3) Rulebook on technical and other requirements for drawn steel wire ("Official Gazette of RS", No. 56/09);

4) Rulebook on technical and other requirements for chain for steel ("Official Gazette of RS", No. 56/09);

5) Rulebook on technical and other requirements for vehicles for rescue from heights ("Official Gazette of RS", No. 74/09);

Conformity assessment bodies which were designated in accordance with the regulation referred to in paragraph 1 of this Article shall perform such activities, in accordance with paragraph 4 of Article 8 and Article 11 of this Rulebook, from the date when this Rulebook started to be applied to the termination of the procedure of designation in accordance with this Rulebook.

Conformity assessment bodies referred to in paragraph 3 of this Article may submit to the authority responsible for the designation, a request for designation in accordance with this Rulebook no later than three months after the date of its application.

Conformity assessment bodies referred to in paragraph 3 of this Article, that do not apply for the designation within the period referred to in paragraph 4 of this Article or the conformity assessment body for which the authority in charge for designation, upon the submitted request, determine that they do not meet the requirements of this Rulebook, they will not be able to perform conformity assessment activities as Designated bodies in accordance with this Rulebook.

The conformity documents issued by the bodies referred to in paragraph 3 of this Article, until the date of application of this Rulebook, shall be valid until the expiration of the period they are

issued.

Article 21

This Rulebook shall enter into force on the eighth day following its publication in the „Official Gazette of the Republic of Serbia”, and shall start to apply on September 1st , 2016.

Independent members of the Rulebook on change of

the Rulebook on machine safety

("Official Gazette of RS", No. 21/2020)

Article 3

The provision of Article 11 of the Rulebook on Machine Safety ("Official Gazette of RS", No. 58/16) ceases to be valid on January 1, 2022.

Article 4

This Rulebook shall enter into force on the eighth day from the day of its publication in the "Official Gazette of the Republic of Serbia".

ANNEX 1

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS RELATING TO THE DESIGN AND CONSTRUCTION OF MACHINERY

GENERAL PRINCIPLES

1. The manufacturer of machinery 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 repeating the risk assessment procedure and reducing the risk reached in the manner referred to in paragraph 1 of this item, the manufacturer shall:

1) determine the limits of the machinery, which include the intended use and any reasonably foreseeable misuse thereof,

2) identify the hazards that can be generated by the machinery and the associated hazardous situations,

3) estimate the risks, taking into account the severity of the possible injury or damage to health and the probability of its occurrence,

4) evaluate the risks, with a view to determining whether risk reduction is required, in accordance with the objective of this Rulebook,

5) eliminate the hazards or reduce the risks associated with these hazards by application of protective measures, in the order of priority established in point 1.1.2 b) of this Annex.

2. The obligations determined by the essential health and safety requirements only apply when the corresponding hazard exists for the machinery in question when it is used under the conditions foreseen by the manufacturer or his authorised representative or in foreseeable abnormal situations. In any event, the principles of safety integration referred to in point 1.1.2 and the obligations concerning marking of machinery and instructions referred to in points 1.7.3 and 1.7.4 apply.

3. The essential health and safety requirements laid down in this Annex are mandatory. However, taking into account the state of thedevelopment of tecnology, it may not be possible to meet the objectives set by them. In that event, the machinery must, as far as possible, be designed and constructed with the purpose of approaching these objectives.

4. This Annex consists of several parts. The first one is general and applies to all types of machinery, and the other parts of thisAnnex prescribe certain types of specific hazards. When designing the machinery, the requirements of the general part and the requirements of one or more other parts must be taken into account, depending on the results of the risk assessment carried out in accordance with point 1 of the general principles. The essential health and safety requirements relating to the protection of the environment apply only to the machinery referred to in section 2.4. of the stated Annex.

1. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

1.1 GENERAL REMARKS

1.1.1. Definitions

Certain terms used in this Annex have the following meaning:

(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 people 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 predictable human behaviour.

1.1.2. 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 people 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 risks 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 must apply the following principles, in the order given:

- elimination or reduction of the risks as far as possible in the phase of machinery design and construction,

- undertaking the necessary protective measures which refer to the risks that cannot be eliminated,

- informing the users of the residual risks due to any shortcomings of the undertaken protective measures, indicating whether any particular training is required and specifying any need to provide personal protective equipment.

(c) When designing and constructing machinery and when drafting the instructions, the manufacturer must envisage not only the intended use of the machinery but also any reasonably foreseeable misuse thereof.

The machinery must be designed and constructed in such a way as to prevent the misuse, if such use would cause a risk. Where appropriate, the instructions must warn the user of the ways in which the machine should not be used, and experience has shown that this can also happen.

(d) The machinery must be designed and constructed in such a way as to take account of the operator's limitations, for the necessary or foreseeable use of his personal protective equipment.

(e) Machinery must be supplied with all the special equipment and accessories essential to enable its adjustment, maintainance and safe use.

1.1.3. Materials and products

The materials used to construct machinery or products used or created during its use must not endanger people's safety and/or health. In particular, where fluids are used, machinery must be designed and constructed to prevent risks due to filling, use, recovery or draining.

1.1.4. Lighting

Machinery must be supplied with integral lighting suitable for the operations concerned where the absence thereof is likely to cause a risk despite ambient lighting of normal intensity.

Machinery must be designed and constructed so that there is no area of shadow likely to cause nuisance, that there is no irritating dazzle and that there are no dangerous stroboscopic effects on moving parts due to the lighting.

The internal parts requiring frequent inspection and adjustment, and maintenance areas must be provided with appropriate lighting.

1.1.5. The designing of the machinery to facilitate its handling

Machinery, or each component part thereof, must:

- be capable of being handled and transported safely,

- be packaged or designed in such manner so that it can be stored safely and without damage (e.g. adequate stability, special carriers, etc.).

During the transportation of the machinery and/or its component parts, there must be no possibility of sudden movements or of hazards due to instability as long as the machinery and/or its integral parts are handled in accordance with the instructions.

Where the weight, size or shape of machinery or its various component parts prevents them from being moved by hand, the machinery and/or each component part must:

- either be fitted with attachments for lifting gear, or
- be designed in such manner so that it can be fitted with such attachments, or
- be shaped in such a way that standard lifting gear can easily be attached.

If machinery or one of its component parts is to be moved by hand,in such case,
they must:

- either be easily moveable, or
- be equipped for picking up and moving safely.

Special arrangements must be made for the handling of tools and/ or machinery parts which, including even those of the lightweight, could be hazardous (shape, material etc.).

1.1.6. Ergonomics

When the machinery is used under the intended conditions, the discomfort, fatigue as well as the physical and psychological stress which the operator is faced with, must be reduced to the minimum possible extent, taking into account ergonomic principles, especially that:

- the operator may be of various physical dimensions, strength and stamina;
- the operator has enough space for movements of the parts of his body,
- avoiding a machine-determined work rate,
- avoiding monitoring of the operation of the machine that requires a longer concentration of the operator;
- adapting the man/machine interface to the foreseeable characteristics of the operators.

1.1.7. Operating positions

The operating position must be designed and constructed in such a way as to avoid any risk due to exhaust gases and/or lack of oxygen.

If the machinery is intended to be used in a hazardous environment presenting risks to the health and safety of the operator or if the machinery itself gives rise to a hazardous environment, adequate means must be provided to ensure that the operator has good working conditions and is protected against any foreseeable hazards.

Where appropriate, the operating position must be fitted with an adequate cabin designed, constructed and/or equipped to fulfil the above requirements. The exit must allow rapid evacuation. Moreover, when applicable, an emergency exit must be provided in a direction which is different from the usual exit.

1.1.8. Seating

Where appropriate and where the working conditions permit, work stations constituting an integral part of the machinery must be designed for the installation of seats.

If the operator is intended to sit during operation and the operating position is an integral part of the machinery, the seat must be provided with the machinery.

The operator's seat must enable him to maintain a stable position. Furthermore, the seat and its distance from the control devices must be capable of being adapted to the operator.

If the machinery is subject to vibrations, the seat must be designed and constructed in such a way as to reduce the vibrations transmitted to the operator to the lowest level that is reasonably

possible. The seat mountings must withstand all stresses to which they can be subjected. Where there is no floor beneath the feet of the operator, footrests covered with a slip-resistant material must be provided.

1.2. CONTROL SYSTEMS

1.2.1. Safety and reliability of control systems

Control systems must be designed and constructed in such a way as to prevent hazardous situations from arising. Above all, they must be designed and constructed in such a way that:

- They can withstand the intended operating stresses and external influences,
- A fault in the hardware or the software of the control system does not lead to hazardous situations,
- The errors in the control system logic do not lead to hazardous situations,
- Reasonably foreseeable human error during operation does not lead to hazardous situations.

Particular attention must be given to the following points:

- the machinery must not start to work unexpectedly,
- the parameters of the machinery must not change in an uncontrolled way, where such change may lead to hazardous situations,
- the machinery must not be prevented from stopping if the stop command has already been given,
- no moving part of the machinery or piece held by the machinery must fall or be ejected,
- automatic or manual stopping of the moving parts, whatever they may be, must be unimpeded,
- the protective devices must remain fully effective or give a stop command,
- the safety-related parts of the control system must apply in a coherent way to the whole of an assembly of machinery and/or partly completed machinery.

For cable-less control, an automatic stop must be activated when correct control signals are not

received, including loss of communication.

1.2.2. Control devices

Control devices must be:

- clearly visible and identifiable, using pictograms where appropriate,

- positioned in such a way as to be operated safely without hesitation or loss of time and without ambiguity,

- designed in such a way that the movement of the control device is consistent with its effect,

- placed outside the danger zones, except for certain commands when necessary, such as an emergency stop command or a mobile (hanging) control console;

- positioned in such a way that their operation cannot cause additional risk,
- designed or protected in such a way that the desired effect, where a hazard is involved, can only be achieved by a deliberate action,

- made in such a way as to withstand foreseeable forces; particular attention must be paid to emergency stop devices liable to be subjected to considerable forces.

When a control device is designed and constructed to perform several different actions, namely when there is no one-to-one correspondence, the action to be performed must be clearly displayed and subject to confirmation, where necessary.

Control devices must be arranged in such manner so that their layout, travel and resistance to operation are compatible with the action to be performed, taking ergonomic principles into account .

The machine must be equipped with indicators (dials, signaling devices, etc.) that are necessary for safe operation, and the operator must be able to read them from the control position.

From each control position, the operator must be able to ensure that no-one is in the danger zones, or the control system must be designed and constructed in such a way so that starting is prevented while someone is in the danger zone.

If the operator cannot ensure or if neither of these possibilities referred to in Paragraph 5 of this

point is applicable, before the machinery starts, an acoustic and/or visual warning signal must be given. The exposed persons must have time to leave the danger zone or prevent the machinery from starting up.

If necessary, means must be provided to ensure that the machinery can be controlled only from control positions located in one or more predetermined zones or locations.

Where there is more than one control position, the control system must be designed in such a way so that the use of one of them excludes the use of the others, except for stop controls and emergency stops.

When machinery has two or more control positions, each control position must be provided with all the required control devices without the operators hindering or putting each other into a hazardous situation.

1.2.3. Starting the machinery

It must be possible to start machinery only by voluntary activation of a control device provided for that purpose.

The same requirement applies:

- when restarting the machinery after a stoppage, whatever the cause,
- when effecting a significant change in the operating conditions (for example speed, pressure, etc.).

However, the restarting of the machinery or a change in operating conditions may be affected by voluntary actuation of a device other than the control device provided for the purpose, on condition that this does not lead to a hazardous situation.

For machinery functioning in automatic mode, the starting of the machinery, restarting after a stoppage, or a change in operating conditions may be possible without intervention, provided this does not lead to a hazardous situation.

Where machinery has several starting control devices and the operators can therefore put each other in danger, additional devices must be fitted to rule out such risks. If safety requires that starting and/or stopping must be performed in a specific sequence, there must be devices which ensure that these operations are performed in the correct order.

1.2.4. Stop

1.2.4.1. Normal stop

Every machinery must be fitted with a control device whereby the machinery can be brought safely to a complete stop.

Each workstation must be fitted with a control device to stop some or all of the functions of the machinery, depending on the existing hazards, so that the machinery is rendered safe.

The machinery's stop control must have priority over the start controls.

Once the machinery or its hazardous functions have stopped, the energy supply to the actuators concerned must be cut off.

1.2.4.2. Operational stop

Where, for operational reasons, a stop control that does not cut off the energy supply to the actuators is required, the stop condition must be monitored and maintained.

1.2.4.3. Emergency stop

Each machinery must be fitted with one or more emergency stop devices to prevent actual or potential danger, except:

- machinery in which an emergency stop device would not lessen the risk, either because it would not reduce the stopping time or because it would not enable the special measures required to deal with the risk to be taken,
- portable hand-held and/or hand-guided machinery.

The device must:

- have clearly identifiable, clearly visible and quickly accessible control devices,
- stop the hazardous process as quickly as possible, without creating additional risks,
- where necessary, trigger or permit the triggering of certain safeguard movements.

Once active operation of the emergency stop device has ceased following a stop command, that

command must be sustained by engagement of the emergency stop device until that engagement is specifically overridden; it must not be possible to engage the device without triggering a stop command; it must be possible to disengage the device only by an appropriate operation, and disengaging the device must not restart the machinery but only permit restarting.

The emergency stop function must be available and operational at all times, regardless of the operating mode.

Emergency stop devices must be a support to other safety measures, not a substitute for them.

1.2.4.4. The Assembly of machinery

In the case of machinery or parts of machinery designed to work together, the machinery must be designed and constructed in such a way that the stop controls, including the emergency stop devices, can stop not only the machinery itself but also all related equipment, if its continued operation may be dangerous.

1.2.5. Selection of control or operating modes

The control or operating mode selected must override all other control or operating modes, with the exception of the emergency stop.

If machinery has been designed and constructed to allow its use in several control or operating modes requiring different protective measures and/or work procedures, it must be fitted with a mode selector which can be locked in each position. Each position of the selector must be clearly identifiable and must correspond to a single operating or control mode.

The selector may be replaced by another selection method which restricts the use of certain functions of the machinery to certain categories of operator.

If, for certain operations, the machinery must be able to operate with a guard displaced or removed and/or a protective device disabled, the control or operating mode selector must simultaneously:

- disable all other control or operating modes,
- permit operation of hazardous functions only by control devices requiring sustained action,
- permit the operation of hazardous functions only in reduced risk conditions while preventing

hazards from linked sequences,

- prevent any operation of hazardous functions by voluntary or involuntary action on the machine's sensors.

If the four conditions specified in Paragraph 4 of this Item cannot be fulfiled simultaneously, the control or operating mode selector must activate other protective measures designed and constructed to ensure a safe intervention zone.

In addition, the operator must be able to control operation of the parts he is working on from the adjustment point.

1.2.6. Failure of the power supply

Power failure, re-establishment after interruption or any oscillation in the power supply of the machinery must not cause dangerous situations. In doing so, special attention must be paid to the following:

- the machinery must not start unexpectedly,
- the parameters of the machinery must not be changed in an uncontrolled way when such change can lead to hazardous situations,
- the machinery must not be prevented from stopping if the command has already been given, no moving part of the machinery or piece held by the machinery must fall or be ejected,
- automatic or manual stopping of the moving parts, whatever they may be, must be unimpeded,
- the protective devices must remain fully effective or give a stop command.

1.3. PROTECTION AGAINST MECHANICAL HAZARDS

1.3.1. Risk of loss of stability

Machinery and its components and fittings must be stable enough to avoid overturning, falling or uncontrolled movements during transportation, assembly, dismantling and any other action involving the machinery.

If the shape of the machinery itself or its intended installation does not offer sufficient stability,

appropriate means of anchorage must be incorporated and indicated in the instructions.

1.3.2. Risk of break-up during operation

The various parts of machinery and their linkages must be able to withstand the stresses to which they are subject when used.

The durability of the materials used must be adequate for the nature of the working environment foreseen by the manufacturer or his authorised representative, in particular as regards the phenomena of fatigue, ageing, corrosion and abrasion.

The instructions must indicate the type and frequency of inspections and maintenance required for safety reasons. They must, where appropriate, indicate the parts subject to wear and the criteria for replacement.

Where a risk of rupture or disintegration remains despite the measures taken, the parts concerned must be mounted, positioned and/or guarded in such a way that any fragments will be contained, preventing hazardous situations.

Both rigid and flexible pipes carrying fluids, particularly those under high pressure, must be able to withstand the foreseen internal and external stresses and must be firmly attached and/or protected to ensure that no risk is posed by a rupture.

Where the material to be processed is fed to the tool automatically, the following conditions must be fulfiled to avoid risks to people:

- when the workpiece comes into contact with the tool, the latter must have attained its normal working condition,
- when the tool starts and/or stops (intentionally or accidentally), the feed movement and the tool movement must be coordinated.

1.3.3. Risks due to falling or ejected objects

Precautions must be taken to prevent risks from falling or ejected objects.

1.3.4. Risks due to surfaces, edges or angles

Insofar as their purpose allows, accessible parts of the machinery must have no sharp edges, no sharp angles and no rough surfaces likely to cause injury.

1.3.5. Risks related to combined machinery

Where the machinery is intended to carry out several different operations with manual removal of the piece between each operation (combined machinery), it must be designed and constructed in such a way as to enable each element to be used separately without the other elements constituting a risk for exposed people.

For this purpose, it must be possible to start and stop separately any elements that are not protected.

1.3.6. Risks related to variations in operating conditions

Where the machinery performs operations under different conditions of use, it must be designed and constructed in such a way that selection and adjustment of these conditions can be carried out safely and reliably.

1.3.7. Risks related to moving parts

The moving parts of machinery must be designed and constructed in such a way as to prevent risks of contact which could lead to accidents or must, where risks persist, be fitted with guards or protective devices.

All necessary steps must be taken to prevent accidental blockage of moving parts involved in the work. In cases where, despite the precautions taken, a blockage is likely to occur, the necessary specific protective devices and tools must, when appropriate, be provided to enable the equipment to be safely unblocked.

The instructions and, where possible, a sign on the machinery shall identify these specific protective devices and how they are to be used.

1.3.8. Choice of protection against risks arising from moving parts

Guards or protective devices designed to protect against risks arising from moving parts must be selected on the basis of the type of risk. The following guidelines must be used as help to make the choice:

1.3.8.1 Moving transmission parts

Guards designed to protect persons against the hazards generated by moving transmission parts

must be:

- either fixed guards as referred to in point 1.4.2.1 of this Annex or
- interlocking movable guards as referred to in point 1.4.2.2.

Interlocking movable guards should be used where frequent access is envisaged.

1.3.8.2 Moving parts involved in the process

Guards or protective devices designed to protect people against the hazards generated by moving parts involved in the process must be:

- either fixed guards as referred to in point 1.4.2.1 of this Annex or
- interlocking movable guards as referred to in point 1.4.2.2 of this Annex or
- protective devices as referred to in point 1.4.3 of this Annex or
- a combination of all the above solutions from the first three indents of paragraph 1 of this point.

However, when certain moving parts directly involved in the process cannot be made completely inaccessible during operation owing to operations requiring operator intervention, such parts must be fitted with:

- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work;
- adjustable guards as referred to in point 1.4.2.3 of this Annex restricting access to those sections of the moving parts where access is necessary.

1.3.9 Risks of uncontrolled movements

When a part of the machinery has been stopped, any drift away from the stopping position, for whatever reason other than action on the control devices, must be prevented or must be such that it does not present a hazard.

1.4 Required characteristics of guards and protective devices

1.4.1 General requirements

Guards and protective devices must:

- be of robust construction;
- be securely fixed;
- not give rise to any additional hazard;
- not be easy to by-pass or render non-operational;
- be located at an adequate distance from the danger zone;
- cause minimum obstruction to the view of the production process;
- enable essential work to be carried out on the installation and/or replacement of tools and for maintenance purposes by restricting access exclusively to the area where the work has to be done, if possible without the guard having to be removed or the protective device having to be disabled.

In addition to the requirements referred to in Paragraph 1 of this point, guards must, where possible, be protected against the ejection or falling of materials or objects and against emissions generated by the machinery.

1.4.2. Special requirements for guards

1.4.2.1 Fixed guards

Fixed guards must be fixed by systems that can be opened or removed only with tools.

Their fixing systems must remain attached to the guards or to the machinery when the guards are removed.

Where possible, guards must be incapable of remaining in place if not being fixed.

1.4.2.2 Interlocking movable guards

Interlocking movable guards must:

- remain attached to the machinery when open, as far as possible;
- be designed and constructed in such a way that they can be adjusted only by an intentional

action. Interlocking movable guards must be associated with an interlocking device that:

- prevents the start of hazardous machinery functions until they are closed;
- gives a stop command whenever they are no longer locked.

Where it is possible for an operator to reach the danger zone before the risk due to the hazardous machinery functions has ceased, movable guards must be associated with a guard locking device in addition to an interlocking device that:

- prevents the start of hazardous machinery functions until the guard is closed and locked;
- keeps the guard closed and locked until the risk of injury from the hazardous machinery functions has ceased.

Interlocking movable guards must be designed in such a way that the absence or failure of one of their components prevents starting or stopping the hazardous machinery functions.

1.4.2.3 Adjustable guards restricting access

Adjustable guards restricting access to those areas of the moving parts strictly necessary for the work must be:

- adjustable manually or automatically, depending on the type of work involved;
- easily adjustable without the use of tools.

1.4.3 Special requirements for protective devices

Protective devices must be designed and incorporated into the control system in such a way that:

- moving parts cannot start up while they are within the operator's reach,
- people cannot reach moving parts while the parts are moving, and
- the absence or failure of one of their components prevents starting or stops the moving parts.

Protective devices must be adjustable only by an intentional action.

1.5 Risks due to other hazards

1.5.1 Electricity supply

Where machinery is supplied by electricity, it must be designed, constructed and equipped in such a way that all hazards of an electrical nature are or can be prevented.

The safety objectives set out in the regulation governing the electrical machinery intended for use within certain voltage limits shall apply to machinery.

Requirements relating to assessment of conformity of machinery and placing machinery on the market and/or putting into service, with regard to hazards of electrical nature must be governed solely by the regulation referred to in Paragraph 1 of this point.

1.5.2 Static electricity

Machinery must be designed and constructed in order to prevent or limit the build-up of potentially dangerous electrostatic charges and /or be fitted with a discharging system.

1.5.3 Energy supply other than electricity

Where machinery is powered by a source of energy other than electricity (for example hydraulic, pneumatic or heat), it must be designed, constructed and equipped in order to avoid all potential risks associated with such sources of energy.

1.5.4 Errors of fitting

The errors likely to be made when fitting or refitting certain parts which could be a source of risk must be prevented 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.

Where appropriate, the instructions must give further information on the risks under Paragraph 1 of this point.

Where a faulty connection can be the source of risk, improper connections must be made impossible by design or, failing this, by information given on the elements to be connected and, where appropriate, on the means of connection.

1.5.5 Extreme temperatures

Measures must be taken to eliminate any risks of injury arising from contact with or proximity to

machinery parts or materials at high or very low temperatures.

The necessary measures must also be taken to avoid or protect against the risk of hot or very cold material being ejected.

1.5.6 Fire

Machinery must be designed and constructed in such a way as to avoid any risks of fire or overheating posed by the machinery itself or by gases, liquids, dust, vapours or other substances produced or used by the machinery.

1.5.7 Explosion

Machinery must be designed and constructed in such a way as to avoid any risks of explosion posed by the machinery itself or by gases, liquids, dust, vapours or other substances produced or used by the machinery.

Machinery must comply, as far as the risk of explosion due to its use in a potentially explosive atmosphere is concerned, with the provisions of the specific regulations.

1.5.8 Noise

Machinery must be designed and constructed in such a way that risks resulting from the emission of airborne noise are reduced to the lowest level, taking account of technical progress and the availability of means of reducing noise, in particular at source.

The level of noise emission may be assessed with reference to comparative emission data for similar machinery.

1.5.9 Vibrations

Machinery must be designed and constructed in such a way so that risks resulting from vibrations produced by the machinery are reduced to the lowest level, taking into account the technical progress and the availability of means of reducing vibration, in particular at source.

The level of vibration emission may be assessed with reference to comparative emission data for similar machinery.

1.5.10 Radiation

Machinery must be designed and constructed in such a way that all undesirable radiation emissions from the machinery are eliminated or reduced to levels that do not have adverse effects on persons.

All functional emissions of ionizing radiation must be limited to the lowest level sufficient for the proper functioning of the machinery during its adjustment, operation and cleaning. When there is a risk, the necessary protection measures must be taken.

Any functional non-ionising radiation emissions during setting, operation and cleaning of the machinery must be limited to levels that do not have adverse effects on people.

1.5.11 External radiation

Machinery must be designed and constructed in such a way that external radiation does not interfere with its operation.

1.5.12 Laser radiation

Where laser equipment is used, the following must be taken into account:

- laser equipment on machinery must be designed and constructed in such a way as to prevent any accidental radiation;
- laser equipment on machinery must be protected in such a way so that effective radiation, radiation produced by reflection or diffusion and secondary radiation do not damage health;
- optical equipment for the observation or adjustment of laser equipment on machinery must be such that no health risk is created by laser radiation.

1.5.13 Emissions of hazardous materials and substances

The 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.

The machinery must be designed and constructed in such a way as to avoid the risk of inhalation, ingestion, contact with skin, eyes and mucous membranes, as well as penetration through the skin of hazardous materials and substances created by the machinery.

Where a hazard cannot be eliminated, the machinery must be so equipped that hazardous materials and substances can be contained, removed, 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.

1.5.14 Risk of being trapped in a machine

Machinery must be designed, constructed or equipped with a means of preventing a person from being enclosed within it or, if that is impossible, with a means of calling for help.

1.5.15 Risk of slipping, tripping or falling

Parts of the machinery where people are liable to move about or stand must be designed and constructed in such a way as to prevent people from slipping, tripping or falling on or off these parts.

Where appropriate, the parts specified in Paragraph 1 of this point must be fitted with handholds that are fixed relative to the user and that enable them to maintain their stability.

1.5.16 Lightning

Machinery in need of protection against the effects of lightning while being used, must be fitted with a system for conducting the resultant electrical charge to earth-earth termination system.

1.6. Maintenance

1.6.1 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.

If, due to technical reasons, one or more of the conditions referred to in Paragraph 1 of this point cannot be met, measures must be taken to perform safely the actions referred to in Paragraph 1 of this point (see point 1.2.5).
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.

1.6.2 Access to operating positions and servicing points

Machinery must be designed and constructed in such a way as to allow access in safety to all areas where intervention is necessary during operation, adjustment and maintenance of the machinery.

1.6.3 Isolation of energy sources

Machinery must be fitted with means to isolate it from all energy sources. Such devices must be clearly identified. They must be capable of being locked if reconnection could endanger people.

Devices specified in Paragraph 1 of this point must also be capable of being locked where an operator is unable, from any of the points to which he has access, to check that the energy is still cut off.

In the case of machinery capable of being plugged into an electricity supply, removal of the plug is sufficient, provided that the operator can check from any of the points to which he has access that the plug remains removed.

After the energy is cut off, it must be possible to dissipate normally any energy remaining or stored in the circuits of the machinery without risk to persons.

As an exception to the requirement laid down in Paragraphs 1 to 4 of this point, certain circuits may remain connected to their energy sources in order, for example, to hold parts, to protect information, to light interiors, etc. In this case, special steps must be taken to ensure operator safety.

1.6.4 Intervention by the Operator

Machinery must be designed, constructed and equipped so that the need for operator intervention is limited. If operator intervention cannot be avoided, it must be possible to carry it out easily and safely.

1.6.5 Cleaning of internal parts

The machinery must be designed and constructed in such a way that it is possible to clean internal parts which contain dangerous substances or preparations without entering them. Any necessary unblocking must also be possible from the outside. If it is impossible to avoid entering the machinery, it must be designed and constructed in such a way as to allow cleaning to take place safely.

1.7. Information

1.7.1 Information and warnings on the machinery

Information and warnings on the machinery must be above all provided in the form of readily understandable symbols or pictograms. Any written or verbal information and warnings must be expressed in Serbian language regarding the machinery which is to be placed on the market and/or to be put into service in the Republic of Serbia.

1.7.1.1 Information and information devices

The information required to control machinery must be provided in a form that is unambiguous and easily understood. It must not be excessive to the extent of overloading the operator.

Visual display units or any other interactive means of communication between the operator and the machine must be easily understood and easy to use.

1.7.1.2 Warning devices

If the health and safety of people may be endangered by a fault in the operation of unsupervised machinery, the machinery must be equipped in such a way as to give appropriate acoustic or light signals as a warning.

If machinery is equipped with warning devices, they must be unambiguous and easily perceived. The operator must have facilities to check the operation of such warning devices at all times.

Warning devices must be complied with requirements of the specific regulations regulating colours and safety signals.

1.7.2 Warning of residual risks

When the design of the machinery, safety protection and appropriate additional protection measures do not eliminate all risks, the necessary warnings about the remaining risks must be provided, including the devices for warning of such risks.

1.7.3 Marking of machinery

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

- The business name, or name and full address of the manufacturer and, where applicable, his authorised representative,
- Machinery designation;
- Conformity mark;
- Designation of series or type;
- Serial number, if any;
- The real year of construction (i.e. the year in which the manufacturing process is completed).

Machinery designed and constructed for use in a potentially explosive atmosphere must be marked accordingly.

Machinery must also bear all the information relevant to its type and essential for safe use.

The information under Paragraph 3 of this point is subject to the requirements set out in point 1.7.1 of this Annex.

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

1.7.4 Instructions

Every machine placed on the market of the Republic of Serbia or put into use in the Republic of Serbia must be accompanied by the original instructions of the manufacturer or his representative in Serbian with the indication "original instruction", or a translation of that instruction into Serbian with the indication "translation of the original instruction" together with the original instruction in the language of the manufacturer or his representative, if the machine is imported into the Republic of Serbia.

The instructions referred to in Paragraph 1 of this point, must be made by the manufacturer or his authorised representative or the importer.

Exceptionally, the maintenance instructions intended for use by specialised personnel who are foreign citizens and employed by the manufacturer or his authorised representative may be provided in one of the European Community languages which the specialised personnel

understand.

The instructions referred to in Paragraphs 1 to 3 must be drafted in accordance with the principles set out in points 1.7.4.1, 1.7.4.2 and 1.7.4.3 of this Annex.

1.7.4.1 General principles for compiling instructions

(a) The instructions for machinery being placed on the market or put into service in the Republic of Serbia must be drafted in accordance with point 1.7.4 of this Annex.

(b) The instructions for machinery being exported from the Republic of Serbia to the market of the Member States of the European Community or other states must be drafted in one or more official languages of the state where the machinery is to be placed on the market and/or put into service.

The wording 'Original instructions' must appear in the same language as it is instructions made by the manufacturer or his authorised representative.

(c) If the original instructions for machinery being exported from the Republic of Serbia are made in Serbian language, such instructions must be accompanied by a translation into the official language of the state where the machinery is to be placed on the market and/or put into service or into another language acceptable for that state. The translations must bear the wording 'Translation of the original instructions'.

Translation of instructions referred to in Paragraph 1 of this point must be provided by the manufacturer or his authorised representative or a person importing such machinery from the Republic of Serbia.

(d) The contents of the instructions must cover not only the intended use of the machinery but also take into account any reasonably foreseeable misuse thereof.

(e) In the case of machinery intended for use by non-professional operators, the wording and layout of the instructions for use must take into account the level of general education and acumen that can reasonably be expected from such operators.

In the case where the machine is intended for use by non-professional operators, the text and layout of the instructions for its use must take into account the level of general education and intellectual level that can reasonably be expected from such operators.

1.7.4.2 Contents of the instructions

Each instruction manual must include, where applicable, in particular the following information:

a) The business name or name and full address of the manufacturer and his authorised representative;

b) The machinery designation as marked on the machinery itself, except for the serial number (see point 1.7.3);

c) The Declaration of Conformity, or a document setting out the contents of the Declaration of Conformity, showing the characteristics of the machinery, excluding the serial number and the signature of person drawn up that Declaration;

d) General description of the machinery;

e) Drawings, diagrams, descriptions and explanations necessary for the use, maintenance and repair of the machinery and for checking its correct functioning;

f) Description of the workstation(s) likely to be occupied by operators;

g) Description of the intended use of the machinery;

h) Warnings concerning ways in which the machinery must not be used that experience has shown might occur;

i) Assembly, installation and connection instructions, including drawings, diagrams and the means of fixing and the designation of the base or installation on which the machinery is to be mounted;

j) Instructions relating to installation and assembly for reducing noise or vibration;

k) Instructions for the putting into service and use of the machinery and, if necessary, instructions for the training of operators;

l) Information about the residual risks that remain despite the inherent safe design measures, safeguarding and complementary protective measures adopted;

m) Instructions on the safety measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided;

n) The essential characteristics of tools which may be fitted to the machinery;

o) The conditions in which the machinery meets the requirement of stability during use,

transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns;

p) Instructions with a view to ensuring that transport, handling and storage operations can be made safely, giving the mass of the machinery and of its various parts where these are regularly to be transported separately;

r) The operating method to be followed in the event of accident, malfunction or breakdown, in the event of blockage, as well as the operating method to be followed so as to enable the equipment to be safely unblocked;

(s) The description of the adjustment and maintenance operations that should be carried out by the user and the preventive maintenance measures that should be observed;
t) Instructions designed to enable adjustment and maintenance to be carried out safely, including the protective measures that should be taken during these operations;

u) Specifications of the spare parts to be used, when these affect the health and safety of operators;

v) The following information on airborne noise emissions:

- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A); where this level does not exceed 70 dB(A), this fact must be indicated;

- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 μPa);

- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A).

These values must be either those actually measured for the machinery in question or those established on the basis of measurements taken for technically compatible machinery which is representative of the machinery to be produced.

In the case of very large machinery, instead of the A-weighted sound power level, the A-weighted emission sound pressure levels at specified positions around the machinery may be indicated.

Where the corresponding Serbian standards under Article 7 of this Rulebook are not applied, sound levels must be measured using the most appropriate method for the machinery. Whenever sound emission values are indicated the uncertainties surrounding these values must be specified.

The operating conditions of the machinery during measurement and the measuring methods used must be described.

Where the workstation(s) is (are) undefined or cannot be defined, A-weighted sound pressure levels must be measured at a distance of 1 metre from the surface of the machinery and at a height of 1,6 metres from the floor or access platform. The position and value of the maximum sound pressure must be indicated.

Where specific regulation lays down other requirements for the measurement of sound pressure levels or sound power levels, such regulations must be applied not the corresponding provisions of this Item;

v) Information for operators and exposed persons regarding radiation emission where machinery is likely to emit non-ionising radiation which may cause harm to people, in particular persons with active or non-active implantable medical devices, information concerning the radiation emitted for the operator and exposed persons.

1.7.4.3 Sales literature

Sales literature describing the machinery must not contradict the instructions as regards health and safety aspects. Sales literature describing the performance characteristics of machinery must contain the same information on emissions as is contained in the instructions.

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

Foodstuffs machinery, machinery for cosmetics or pharmaceutical products, handheld and/or hand guided machinery, portable fixing and other impact machinery, machinery for wood processing and material with similar physical characteristics must meet all the essential health and safety requirements described in this Point (see General Principles, Point 4).

2.1 Foodstuffs machinery and machinery for cosmetics and pharmaceutical products

2.1.1 General

Machinery intended for use with foodstuffs or with cosmetics or pharmaceutical products must be designed and constructed in such a way as to avoid any risk of infection, sickness or contagion.

The following requirements must be satisfied:

(a) Materials in contact with, or intended to come into contact with, foodstuffs or cosmetics or pharmaceutical products must satisfy the conditions set down in the relevant regulations. The machinery must be designed and constructed in such a way that these materials can be cleaned before each use. Where this is not possible disposable parts must be used;

(b) All surfaces, including their connections, in contact with foodstuffs or cosmetics or pharmaceutical products, other than surfaces of disposable parts, must:

- be smooth and have no ridges, crevices or cracks which could harbour organic materials.

- be designed and constructed in such a way as to reduce the projections, edges and recesses of assemblies to a minimum,

- be easily cleaned and disinfected, where necessary after removing easily dismantled parts. The inside surfaces must have curves with a radius sufficient to allow thorough cleaning.

(c) It must be possible for liquids, gases and aerosols deriving from foodstuffs, cosmetics or pharmaceutical products as well as from cleaning, disinfecting and rinsing fluids to be completely discharged from the machinery (if possible, in a 'cleaning' position);

(d) Machinery must be designed and constructed in such a way as to prevent any substances or living creatures, in particular insects, from entering, or any organic matter from accumulating in, areas that cannot be cleaned;

(e) Machinery must be designed and constructed in such a way that no ancillary substances hazardous to health, including the lubricants used, can come into contact with foodstuffs, cosmetics or pharmaceutical products. Where necessary, machinery must be designed and constructed in such a way that continuing compliance with this requirement can be checked.

2.1.2 Instructions

The instructions for foodstuffs machinery and machinery for use with cosmetics or pharmaceutical products must indicate recommended products and methods for cleaning, disinfecting and rinsing, not only for easily accessible areas but also for areas to which access is impossible or inadvisable.

2.2 Portable hand-held and/or hand-guided machinery

2.2.1 General

Portable hand-held and/or hand-guided machinery must:

- depending on the type of machinery, have a supporting surface of sufficient size and have a sufficient number of handles and supports of an appropriate size, arranged in such a way as to ensure the stability of the machinery under the intended operating conditions;
- except where technically impossible, or where there is an independent control device, in the case of handles which cannot be released in complete safety, be fitted with manual start and stop control devices arranged in such a way that the operator can operate them without releasing the handles;
- be designed, constructed and equipped in such a way to present no risks of accidental starting and/or continued operation after the operator has released the handles. Equivalent steps must be taken if this requirement is not technically feasible,
- be designed and constructed in such a way to permit, where necessary, visual observation of the danger zone and of the action of the tool with the material is being processed.

The handles of portable machinery must be designed and constructed in such a way as to make starting and stopping straightforward.

2.2.1.1 Instructions

The instructions must include the data relating to the vibrations transmitted by the portable hand-held machinery and the hand-guided machinery, as follows:

- The total vibration value to which the hand-arm system is subjected, if it exceeds 2,5 m/s^2. Where this value does not exceed 2,5 m/s^2, this must be indicated;
- The uncertainty of measurement.

These values must be either those actually measured for the machinery in question or those established on the basis of measurements taken for technically comparable machinery which is representative of the machinery to be produced.

If the corresponding Serbian standards under Article 7 of this Rulebook are not applied, the vibration data must be measured using the most appropriate measurement method for the

machinery.

The operating conditions during measurement and the methods used for measurement, or the reference of the corresponding Serbian standards applied under Article 7 of this Rulebook, must be specified.

2.2.2 Portable fastening machinery and other impact machinery

2.2.2.1 General

Portable fastening machinery and other impact machinery must be designed and constructed in such a way so that:

- energy is transmitted to the impacted element by the intermediary component that does not leave the device;
- an enabling device prevents the impact unless the machinery is positioned correctly with adequate pressure on the base material;
- accidentally triggering is prevented. Where necessary, an appropriate sequence of actions on the enabling device and the control device must be required to trigger an impact;
- accidental triggering is prevented during handling or in case of a shock;
- loading and unloading operations can be carried out easily and safely.

Where necessary, it must be possible to fit the device with splinter guard(s) and the appropriate guard(s) must be provided by the manufacturer of the machinery.

2.2.2.2 Instructions

The instructions must contain the necessary information on:

- the accessories and interchangeable equipment that can be used with the machinery,
- appropriate fasteners or other impact elements used with the machinery
- appropriate charges to be used, where appropriate.

2.3 Machinery for processing of wood and materials with similar physical properties

Machinery for processing of wood and materials with similar physical properties must comply

with the following requirements:

(a) the machinery must be designed, constructed or equipped in such a way that the piece being processed can be placed and guided in safety. When the piece is handheld on a work-bench, it should be sufficiently stable during the work and must not impede the movement of the piece;

(b) where the machinery is likely to be used in conditions involving the risk of ejection of workpieces or parts of them, it must be designed, constructed, or equipped in such a way as to prevent such ejection, or, if this is not possible, so that the ejection does not engender risks for the operator and/or exposed persons;

(c) the machinery must be equipped with an automatic brake that stops the tool in a sufficiently short time if there is a risk of contact with the tool whilst it runs down;

(d) where the tool is incorporated into a non-fully automated machine, such tool must be designed and constructed in such a way as to eliminate or reduce the risk of accidental injury.

2.4. MACHINERY FOR PESTICIDE APPLICATION

2.4.1. Definition

'Machinery for pesticide application' means machinery specifically intended for the application of plant protection products.

2.4.2. General

The manufacturer of machinery for pesticide application or his authorised representative must ensure that an assessment is carried out of the risks of unintended exposure of the environment to pesticides, in accordance with the process of risk assessment and risk reduction referred to in the General Principles, point 1 of this Annex.

Machinery for pesticide application must be designed and constructed taking into account the results of the risk assessment referred to in the first paragraph so that the machinery can be operated, adjusted and maintained without unintended exposure of the environment to pesticides.

Leakage of the pesticide must be prevented at all times.

2.4.3. Controls and monitoring

It must be possible to easily and accurately control, monitor and immediately stop the pesticide application from the operating positions.

2.4.4. Filling and emptying

The machinery must be designed and constructed to facilitate precise filling with the necessary quantity of pesticide and to ensure easy and complete emptying, while preventing spillage of pesticide and avoiding the contamination of the water source during such operations.

2.4.5. Application of pesticides

2.4.5.1. Application rate

The machinery must be fitted with means of adjusting the application rate easily, accurately and reliably.

2.4.5.2. Distribution, deposition and drift of pesticide

The machinery must be designed and constructed to ensure that pesticide is deposited on target areas, to minimise the losses to other areas and to prevent drift of pesticide to the environment. Where appropriate, an even distribution and homogeneous deposition must be ensured.

2.4.5.3. Tests

In order to verify that the relevant parts of the machinery comply with the requirements set out in sections 2.4.5.1 and 2.4.5.2 the manufacturer or his authorised representative must, for each type of machinery concerned, perform appropriate tests, or have such tests performed.

2.4.5.4. Losses during stoppage

The machinery must be designed and constructed to prevent losses while the pesticide application function is stopped.

2.4.6. Maintenance

2.4.6.1. Cleaning

The machinery must be designed and constructed to allow its easy and thorough cleaning without contamination of the environment.

2.4.6.2. Servicing

The machinery must be designed and constructed to facilitate the changing of worn parts without contamination of the environment.

2.4.7. Inspections

It must be possible to easily connect the necessary measuring instruments to the machinery to check the correct functioning of the machinery.

2.4.8. Marking of nozzles, strainers and filters

Nozzles, strainers and filters must be marked so that their type and size can be clearly identified.

2.4.9. Indication of pesticide in use

Where appropriate, the machinery must be fitted with a specific mounting on which the operator can place the name of the pesticide in use.

2.4.10. The Instructions

The instruction must provide the following information:

(a) precautions to be taken during mixing, loading, application, emptying, cleaning, servicing and transport operations in order to avoid contamination of the environment;

(b) detailed conditions of use for the different operating environments envisaged, including the corresponding preparation and adjustments required to ensure the deposition of pesticide on target areas while minimising losses to other areas, to prevent drift to the environment and, where appropriate, to ensure an even distribution and homogeneous deposition of pesticide;

(c) the range of types and sizes of nozzles, strainers and filters that can be used with the machinery;

(d) periodic checks and the criteria and method for the replacement of parts subject to wear that affect the correct functioning of the machinery, such as nozzles, strainers and filters;

(e) specification of calibration, daily maintenance, winter preparation and other checks necessary to ensure the correct functioning of the machinery;

(f) types of pesticides that may cause incorrect functioning of the machinery;

(g) an indication that the operator should keep updated the name of the pesticide in use on the

specific mounting referred to in point 2.4.9 of this Annex;

(h) the manner of connection and use of special equipment and accessories on the machine, including the protection measures that must be taken on that occasion;

(i) an indication that the machinery may be subject to regular inspection, as provided for in regulation regarding the use of pesticides;

(j) the parts of the machinery which must be inspected to ensure its correct functioning;

(k) instructions for connecting the necessary measuring instruments.

3. ADDITIONAL ESSENTIAL REQUIREMENTS FOR HEALTH AND SAFETY TO REMOVE HAZARD DUE TO MOBILITY OF THE MACHINERY

Machinery presenting hazards due to its mobility must meet all the essential health and safety requirements described in this point (see General Principles, Point 4 of this Annex).

3.1 General

3.1.1 Definitions

a) “Machinery presenting hazards due to its mobility” is:

- machinery where its operation requires either mobility while working, or continuous or semi-continuous movement between a succession of fixed working positions, or

- machinery which is operated without being moved, but which may be equipped in such a way as to enable it to be moved more easily from one place to another.

(b) “Driver” is an operator responsible for the movement of a machinery. The driver may be transported by the machinery or may accompany the machinery on foot, or may guide the machinery by a remote control.

3.2 Work positions

3.2.1 Driving positions

Visibility from the driving position must be such that the driver can, in complete safety for himself and the exposed people, operate the machinery and its tools in their foreseeable conditions of use.

Where necessary, appropriate devices must be provided to remedy hazards due to inadequate direct vision.

Machinery on which the driver is transported must be designed and constructed in such a way that, from the driving positions, there is no risk to the driver from inadvertent contact with the wheels and tracks.

The driving position of the driver who rides the machine must be designed and constructed in such a way so that the driver's cab can be fitted, provided that it does not increase the risk and that there is sufficient space for it. There must be a designated place in the cab for the instructions needed by the driver.

3.2.2 Seating

When there is a risk that the operators or other people driving on the machinery may be crushed between the parts of the machinery and the surface on which the machinery is, when there is a risk of the machinery turning or rolling over, especially when it is equipped with a protective structure referred to in item 3.4.3 or item 3.4.4 of this Annex, the seats of the operator or other people driving on the machinery must be designed or equipped with a system for retaining people on their seats, without restricting the movements required to operate or move the seat structure. Such a restraint system should not be fitted in their seat if it increases the risk.

3.2.3 Positions for other people

If the conditions in which the machinery is used provide that people other than the driver may occasionally or regularly be transported by the machinery or work on it, appropriate positions must be provided which enable them to be transported or to work on it without risk.

Paragraphs 2 and 3 of point 3.2.1 must apply to the places provided for people other than the driver.

3.3 Control system

If necessary, steps must be taken to prevent unauthorised use of controls.

In the case of remote controls, each control unit must clearly identify the machinery to be controlled from that unit.

The remote control system must be designed and constructed in such a way as to affect only the machinery in question and the functions in question.

Remote controlled machinery must be designed and constructed in such a way that it will respond only to signals from the intended control units.

3.3.1 Control devices

The driver must be able to actuate all control devices required to operate the machinery from the driving position, except for functions which can be safely actuated only by using control devices located elsewhere. These functions include, in particular, those for which operators other than the driver are responsible or for which the driver has to leave the driving position in order to control them safely.

Where there are pedals, they must be so designed, constructed and fitted as to allow safe operation by the driver with the minimum risk of incorrect operation. They must have a slip-resistant surface and be easy to clean.

Where use of pedals can lead to hazards, and in particular, notably dangerous movements, the control devices, except for those with preset positions, must return to the neutral position as soon as they are released by the operator.

In the case of wheeled machinery, the steering system must be designed and constructed in such a way as to reduce the force of sudden movements of the steering wheel or the steering lever caused by shocks to the guide wheels.

Any control that locks the differential must be designed and arranged so that it allows the differential to be unlocked when the machinery is moving.

Paragraph 6 of point 1.2.2, concerning acoustic and/or visual warning signals, applies only in the case of reversing.

3.3.2 Starting/moving

All movements of self-propelled machinery with a ride-on driver must be possible only if the driver is at the controls.

When, for operating purposes, machinery is fitted with devices which exceed its normal clearance zone (e.g. stabilisers, jib, etc.), the driver must be provided with the means of checking easily,

before moving the machinery, that such devices are in a particular position which allows safe movement.

The provision of Paragraph 2 of this Item must also apply to all other parts which, to allow safe movement, have to be in particular positions, locked if necessary.

Where it does not give rise to other risks, movement of the machinery must depend on safe positioning of the parts referred to in Paragraph 3 of this point.

It must not be possible for unintentional movement of the machinery to occur while the engine is being started.

3.3.3 Travelling function

Without prejudice to road traffic regulations, self-propelled machinery and its trailerr must meet the requirements for slowing down, stopping, braking and immobilisation so as to ensure safety under all the operating, load, speed, ground and gradient conditions allowed for.

The driver must have the option to slow down or stop self-propelled machinery by means of a central device. Where safety is so required, in case of failure of the central device or failure of power supply for starting the central device, a control device fitted with totally independent and easily accessible commands for slowing down or stopping the machinery must be provided for in the case of hazard.

Where safety so requires, a parking device must be provided to render stationary machinery immobile. This device may be combined with one of the devices referred to in Paragraph 2 of this item provided that it is purely mechanical.

Remote-controlled machinery must be equipped with devices for stopping operation automatically and immediately and for preventing potentially dangerous operation in the following situations:

- if the driver loses control,
- if it receives a stop signal,
- if a fault is detected in a safety-related part of the system,
- if no validation signal is detected within a specified time.

Provisions of point 1.2.4 of this Annex do not apply to the travelling function.

3.3.4 Movement of pedestrian-controlled machinery

Movement of pedestrian-controlled self-propelled machinery must be possible only through sustained action on the relevant control device by the driver. In particular, it must not be possible for movement to occur while the engine is being started.

The control systems for pedestrian-controlled machinery must be designed in such a way as to minimise the risks arising from inadvertent movement of the machine towards the driver, in particular:

a) crushing;
b) injury from rotating tools.

The speed of travel of the machinery must be compatible with the pace of a driver on foot.

In the case of machinery on which a rotary tool may be fitted, it must not be possible to actuate the tool when the reverse control is engaged, except where the movement of the machinery results from movement of the tool. In that case, the reversing speed must be such that it does not endanger the driver- pedestrian.

3.3.5 Control circuit failure

A failure in the power supply to the power-assisted steering, where fitted, must not prevent machinery from being steered during the time required to stop it.

3.4 Protection against mechanical hazards

3.4.1 Uncontrolled movements

Machinery must be designed, constructed and where appropriate placed on its mobile support in such a way as to ensure that, when moved, uncontrolled oscillations of its centre of gravity do not affect its stability or exert excessive strain on its structure.

3.4.2 Moving transmission parts

By way of exception to point 1.3.8.1 of this Annex, in the case of engines, moveable guards preventing access to the moving parts in the engine compartment need not have interlocking devices if they have to be opened either by the use of a tool or key or by a control located in the driving position, providing the latter is in a fully enclosed cab with a lock to prevent unauthorised

access.

3.4.3 Roll-over and tip-over

If, in the case of self-propelled machinery with a ride-on driver, operator(s) or other person (people), there is a risk of rolling or tipping over, the machinery must be fitted with an appropriate protective structure, unless this increases the risk.

Protective structure referred to in Paragraph 1 of this point must be such that in the event of rolling or tipping over it affords the ride-on person(people) an adequate deflection limiting volume.

In order to verify that the structure complies with the requirement laid down in Paragraph 2 of this point, the manufacturer or his authorised representative must, for each type of structure concerned, perform appropriate tests or have such tests performed.

3.4.4 Falling objects

Where, in the case of self-propelled machinery with a ride-on driver, operator(s) or other person(people), there is a risk due to falling objects or material, the machinery must be designed and constructed in such a way as to take account of this risk and fitted, if its size allows, with an appropriate protective structure.

The structure referred to in Paragraph 1 of this point must be such that, in the event of falling objects or material, it guarantees the ride-on person (people) an adequate deflection-limiting volume.

In order to verify that the structure under Paragraph 1 of this point complies with the requirement laid down in Paragraph 2 of this point, the manufacturer or his authorised representative must, for each type of structure concerned, perform appropriate tests or have such tests performed.

3.4.5 Means of access

Handholds and stair treads must be designed, constructed and arranged in such a way so that the operators use them instinctively and do not use the control devices to assist access.

3.4.6 Towing devices

All machinery used to tow or to be towed must be fitted with towing or coupling devices designed, constructed and arranged in such a way as to ensure easy and secure connection and disconnection

and to prevent accidental disconnection during use.

Insofar as the tow bar load so requires, the machinery referred to in Paragraph 1 of this point must be equipped with a support with a bearing surface suited to the load and the ground.

3.4.7 Transmission of power between self-propelled machinery (or tractor) and recipient machinery

Removable mechanical transmission devices linking self-propelled machinery (or a tractor) to the first fixed bearing of recipient machinery must be designed and constructed in such a way so that any part that moves during operation is protected over its whole length.

On the side of the self-propelled machinery (or tractor), the power take-off to which the removable mechanical transmission device is attached must be protected either by a guard fixed and linked to the self-propelled machinery (or tractor) or by any other device offering equivalent protection.

It must be possible to open this guard for access to the removable transmission device. Once it is in the place, there must be enough room to prevent the drive shaft damaging the guard when the machinery (or the tractor) is moving.

On the recipient machinery side, the input shaft must be enclosed in a protective casing fixed to the machinery.

Torque limiters or freewheels may be fitted to universal joint transmissions only on the side adjoining the driven machinery.

The removable mechanical transmission device must be marked accordingly.

All recipient machinery, the operation of which requires a removable mechanical transmission device to connect it to self-propelled machinery (or a tractor), must have a system for attaching the removable mechanical transmission device so that, when the machinery is uncoupled, the removable mechanical transmission device and its guard are not damaged by contact with the ground or part of the machinery.

The outside parts of the guard must be so designed, constructed and arranged that they cannot turn with the removable mechanical transmission device. The guard must cover the transmission to the ends of the inner jaws in the case of simple universal joints and at least to the centre of the outer

joint or joints in the case of wide-angle universal joints.

If means of access to working positions are provided near to the removable mechanical transmission device, they must be designed and constructed in such a way so that the shaft guards cannot be used as steps, unless designed and constructed for that purpose.

3.5 Protection against other hazards

3.5.1 The Batteries

The battery housing must be designed and constructed in such a way as to prevent the electrolyte being ejected onto the operator in the event of rollover or tip over and to avoid the accumulation of vapours in places occupied by operators.

Machinery must be designed and constructed in such a way that the battery can be disconnected with the aid of an easily accessible device provided for that purpose.

3.5.2 Fire

Depending on the hazards anticipated by the manufacturer, machinery must, where its size permit either allow easily accessible fire extinguishers to be fitted, or be provided with the built-in extinguisher systems.

3.5.3 Emissions of hazardous substances

Provisions of Paragraphs 2 and 3 of point 1.5.13 of this Annex do not apply where the main function of the machinery is the spraying of products. However, the operator must be protected against the risk of exposure to such hazardous emissions.

3.6 Information and indications

3.6.1 Signs, signals and warnings

All machinery must have signs and/or instruction plates concerning use, adjustment and maintenance, wherever necessary, so as to ensure the health and safety of persons. They must be chosen, designed and constructed in such a way as to be clearly visible and indelible.

Without prejudice to the provisions of road traffic regulations, machinery with a ride on driver must have the following equipment:

- an acoustic warning device;
- a system of light signals relevant to the intended conditions of use. This requirement does not apply to machinery intended solely for underground working and having no electrical power,
- where necessary, there must be an appropriate connection between a trailer and the machinery for the operation of signals.

Remote-controlled machinery which, under normal conditions of use, exposes people to the risk of impact or crushing must be fitted with appropriate means to signal its movements or with means to protect people against such risks. The same applies to machinery which involves, when in use, the constant repetition of a forward and backward movement on a single axis where the area to the rear of the machine is not directly visible to the driver.

Machinery must be constructed in such a way so that the warning and signalling devices cannot be disabled unintentionally. When it is essential for safety, such devices must be provided with the means to check that they are in good working order and their failure must be made apparent to the operator.

Where the movement of machinery or its tools is particularly hazardous, signs on the machinery must be provided to warn against approaching the machinery while it is working. These signs must be legible at a sufficient distance to ensure the safety of people who have to be in the vicinity.

3.6.2 Marking

The following must be shown legibly and indelibly on all machinery:

- nominal power expressed in kilowatts (kW),
- mass of the most usual configuration, in kilograms (kg);

and, where appropriate:

- maximum drawbar pull provided for at the coupling hook, in Newton (N),
- maximum vertical load provided for on the coupling hook, in Newton (N).

3.6.3 Instructions

3.6.3.1 Vibrations

The instructions must give the following information concerning vibrations transmitted by the machinery to the hand-arm system or to the whole body:

- The total vibration value to which the hand-arm system is subjected, if it exceeds 2,5 m/s^2. Where this value does not exceed 2,5 m/s^2 this must be indicated;
- The highest root mean square value of weighted acceleration to which the whole body is subjected, if it exceeds 0,5 m/s^2. Where this value does not exceed 0,5 m/s^2, this must be indicated;
- The uncertainty of measurement.

The values referred to in Paragraph 1 of this point must be either those actually measured for the machinery in question or those established on the basis of measurements taken for technically compatible machinery which is representative of the machinery to be produced.

Where Serbian standards under Article 7 of this Rulebook are not applied, the vibration must be measured using the most appropriate measurement method for the machinery concerned.

The operating conditions during measurement and the measurement methods used must be described.

3.6.3.2 Multiple uses

The instructions for machinery allowing several uses depending on the equipment used and the instructions for the interchangeable equipment must contain the information necessary for safe assembly and use of the basic machinery and the interchangeable equipment that can be fitted.

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

Machinery presenting hazards due to lifting operations (for example hazards due to falling of load or crushing, or due to rolling over caused by lifting and alike) must meet all the relevant essential health and safety requirements described in this Chapter (see General Principles, Point 4 of this Annex).

4.1 General

4.1.1 Definitions

a) “Lifting operation” means a movement of unit loads consisting of goods and/or people that, at a given moment, need a change of level;

b) “Guided load” means a load where the total movement is made along rigid or flexible guides whose position is determined by fixed points;

c) “Working coefficient” means the arithmetic ratio between the load guaranteed by the manufacturer or his authorised representative up to which a component is able to hold it and the maximum working load marked on the component;

d) “Test coefficient” means the arithmetic ratio between the load used to carry out the static or dynamic tests on lifting machinery or a lifting accessory and the maximum working load marked on the lifting machinery or lifting accessory;

e) “Static test” means the test during which lifting machinery or a lifting accessory is first inspected and subjected to a force corresponding to the maximum working load multiplied by the appropriate static test coefficient and then re-inspected once the said load has been released to ensure that no damage has occurred;

f) “Dynamic test” means the test during which lifting machinery is operated in all its possible configurations at the maximum working load multiplied by the appropriate dynamic test coefficient with account being taken of the dynamic behaviour of the lifting machinery in order to check that it functions properly;

g) “Carrier” means a part of the machinery on or in which people and/or goods are supported in order to be lifted.

4.1.2 Protection against mechanical hazards

4.1.2.1. Risks due to the lack of stability

Machinery must be designed and constructed in such a way so that the stability required by point 1.3.1of this Annex is maintained both in service and out of service, including all stages of transportation, assembly and dismantling, during foreseeable component failures and also during the tests carried out in accordance with the Instruction handbook. To that end, the manufacturer or his authorised representative must use the appropriate verification methods.

4.1.2.2 Machinery running on guide rails and rail tracks

Machinery must be provided with the devices which act on the guide rails or tracks to prevent derailment.

If, despite such devices mentioned in Paragraph 1 of this point, there is a risk of derailment or of failure of a rail or of a running component, devices must be provided which prevent the equipment, component or load from falling or the machinery from overturning.

4.1.2.3 Mechanical strength

Machinery, lifting accessories and their components must be capable of withstanding the stresses to which they are subjected, both in and, where applicable, out of use, under the installation and operating conditions provided for and in all relevant configurations, with due regard, where appropriate, to the effects of atmospheric factors and forces exerted by people. This requirement must also be met during transport, assembly and dismantling.

Machinery and lifting accessories must be designed and constructed in such a way as to prevent failure from fatigue and wear, taking due account of their intended use.

The materials used must be chosen on the basis of the intended working environments, with particular regard to corrosion, abrasion, impacts, extreme temperatures, fatigue, brittleness and ageing.

Machinery and lifting accessories must be designed and constructed in such a way as to withstand the overload in the static tests without permanent deformation or patent defect. Strength calculations must take account of the value of the static test coefficient chosen to guarantee an adequate level of safety. That coefficient has, as a general rule, the following values:

(a) manually-operated machinery and lifting accessories: 1,5;

(b) other machinery: 1,25.

Machinery must be designed and constructed in such a way as to undergo, without failure, the dynamic tests carried out using the maximum working load multiplied by the dynamic test coefficient. This dynamic test coefficient is chosen so as to guarantee an adequate level of safety: the coefficient is, as a general rule, equals to 1,1. As a general rule, the tests will be performed at the nominal speeds provided for.

If the control circuit of the machinery allows a number of simultaneous movements, the tests must be carried out under the least favourable conditions, as a general rule by combining the movements concerned.

4.1.2.4 Pulleys, drums, wheels, ropes and chains

Pulleys, drums and wheels must have a diameter commensurate with the size of the ropes or chains which they can be fitted with.

Drums and wheels must be designed, constructed and installed in such a way that the ropes or chains with which they are equipped can be wound without coming off.

Ropes used directly for lifting or supporting the load must not include any splicing other than at their ends. Splicings are, however, tolerated in installations which are intended by design to be modified regularly according to needs of use.

Complete ropes and their endings must have a working coefficient chosen in such a way as to guarantee an adequate level of safety. As a general rule, this coefficient equals 5.

Lifting chains must have a working coefficient chosen in such a way as to guarantee an adequate level of safety. As a general rule, this coefficient equals 4.

In order to verify that an adequate working coefficient has been attained, the manufacturer or his authorised representative must, for each type of chain and rope used directly for lifting the load and for the rope ends, perform the appropriate tests or have such tests performed.

4.1.2.5 Lifting accessories and their components

Lifting accessories and their components must be sized with due regard to fatigue and ageing processes for a number of operating cycles consistent with their expected life-span as specified in the operating conditions for a given application.

Moreover:

a) The working coefficient of wire-rope and rope-end combination must be chosen in such a way as to guarantee an adequate level of safety. This coefficient, as a general rule, equals 5. Ropes must not comprise any splices or loops other than at their ends;

b) When chains with welded links are used, they must be of the short-link type. The working

coefficient of chains must be chosen in such a way as to guarantee an adequate level of safety. This coefficient, as a general rule, equals 4;

c) The working coefficient for textile ropes or slings is dependent on the material, method of manufacture, dimensions and use. This coefficient must be chosen in such a way as to guarantee an adequate level of safety. This coefficient is, as a general rule, equal to 7, provided the materials used are shown to be of very good quality and the method of manufacture is appropriate to the intended use. Should this not be the case, the coefficient is, as a general rule, set at a higher level in order to secure an equivalent level of safety. Textile ropes and slings must not include any knots, connections or splicing other than at the ends of the sling, except in the case of an endless sling;

d) All metallic components making up, or used with, a sling must have a working coefficient chosen in such a way as to guarantee an adequate level of safety; this coefficient, as a general rule, equals 4;

e) The maximum working load of a multi-legged sling is determined on the basis of the working coefficient of the weakest leg, the number of legs and a reduction factor which depends on the slinging configuration;

f) In order to verify that an adequate working coefficient has been attained, the manufacturer or his authorised representative must, for each type of component referred to in Points a), b), c) and d), perform the appropriate tests or have such tests performed.

4.1.2.6 Control of movements

Devices for controlling movements must act in such a way so that the machinery on which they are installed is kept safe.

a) Machinery must be designed and constructed or fitted with devices in such a way that the amplitude of movement of its components is kept within the specified limits. The operation of such devices must, where appropriate, be preceded by a warning.

b) When several fixed or rail-mounted machines can be manoeuvred simultaneously in the same place, with risks of collision, such machinery must be designed and constructed in such a way as to make it possible to fit systems enabling these risks to be avoided.

c) Machinery must be designed and constructed in such a way so that the loads cannot creep dangerously or fall freely and unexpectedly, even in the event of partial or total failure of the power supply or when the operator stops operating the machine.

d) It must not be possible, under normal operating conditions, to lower the load solely by friction brake, except in the case of machinery whose function requires it to operate in that way.

(e) Holding devices must be designed and constructed in such a way so that inadvertent dropping of the loads is avoided.

4.1.2.7 Movements of loads during handling

The operating position of machinery must be located in such a way as to ensure the widest possible view of trajectories of the moving parts, in order to avoid possible collisions with persons, equipment or other machinery which might be manoeuvring at the same time and liable to constitute a hazard.

Machinery with guided loads must be designed and constructed in such a way as to prevent people from being injured by movement of the load, the carrier or the counterweights, if any.

4.1.2.8 Machinery operating among fixed landings

4.1.2.8.1 Movements of the carrier

The movement of the carrier of machinery operating among fixed landings must be rigidly guided to and at the landings. The scissor systems are also regarded as rigid guidance.

4.1.2.8.2 Access to the carrier

Where people have access to the carrier, the machinery must be designed and constructed in such a way as to ensure that the carrier remains stationary during access, in particular while it is being loaded or unloaded.

The machinery must be designed and constructed in such a way as to ensure that the difference in level between the carrier and the landing being served does not create a risk of tripping.

4.1.2.8.3 Risks due to contact with the moving carrier

Where necessary in order to fulfil the requirement expressed in Paragraph 2 of the point 4.1.2.7, the travel zone must be rendered inaccessible during normal operation.

When, during inspection or maintenance, there is a risk that people situated under or above the carrier may be crushed between the carrier and any fixed parts, sufficient free space must be provided either by means of physical buffers or by means of mechanical devices blocking the movement of the carrier.

4.1.2.8.4 Risk due to the load falling off the carrier

Where there is a risk due to the load falling off the carrier, the machinery must be designed and constructed in such a way as to prevent this risk.

4.1.2.8.5 The landings

Risks due to contact of people at landings with the moving carrier or other moving parts must be prevented.

Where there is a risk due to people falling into the travel zone when the carrier is not present at the landings, guards must be fitted in order to prevent this risk. Such guards must not open in the direction of the travel zone. They must be fitted with an interlocking device controlled by the position of the carrier that prevents:

- hazardous movements of the carrier until the guards are closed and locked;
- hazardous opening of the guards until the carrier stops at the corresponding landing.

4.1.3 Convenience for use

When lifting machinery or lifting accessories are placed on the market or are first time put into service, the manufacturer or his authorised representative must ensure, by taking appropriate measures or having them taken, that the machinery or the lifting accessories which are ready for use, whether manually or power-operated, can fulfil their specific functions safely.

The static and dynamic tests referred to in point 4.1.2.3 of this Annex must be performed on all lifting machinery ready to be put into operation.

Where the machinery cannot be assembled in the manufacturer's premises or in the premises of his authorised representative, the appropriate measures must be taken at the place of use.

4.2 Requirements for machinery whose power source is other than manual effort

4.2.1 Operating the machinery by moving .

Control devices held by the operator during operation must be used to control the movement of the machine or its equipment.

However, for partial or complete movements in which there is no risk of the load or the machinery colliding, the devices under Paragraph 1 of this point, may be replaced by control devices authorising automatic stops at pre-selected positions without the operator holding a hold-to-run control device.

4.2.2 Loading control

Machinery with a maximum working load of not less than 1000 kilograms or an overturning moment of not less than 40.000 Nm must be fitted with devices to warn the driver and prevent dangerous movements in the event of overloading, either as a result of the maximum working load or the maximum working moment due to the load being exceeded, or of the overturning moment being exceeded.

4.2.3 Installations guided by ropes

Rope carriers, tractors or tractor carriers must be held by counterweights or by a device allowing permanent control of the tension.

4.3 Information and markings

4.3.1 Chains, ropes and textile slings

The length of each lifting chain, rope or textile slings not forming part of an assembly must bear a mark or, where this is not possible, a plate or irremovable ring bearing the name and address of the manufacturer or his authorised representative and the identifying reference of the relevant certificate.

The certificate mentioned in Paragraph 1 of this item must contain the following information, in particular:

a) The business name or name and address of the manufacturer and, if appropriate, his authorised representative;

b) The description of the chain or rope which includes:

- its nominal size,

- its production method,
- the material from which it is made, and
- any special metallurgical treatment applied to the material;

c) The test method used;

d) The maximum load to which the chain or rope should be subjected in service. A range of values may be given on the basis of the intended applications.

4.3.2 Lifting accessories

Lifting accessories must show the following:

- identification of the material where this information is needed for safe use,
- the datum of the maximum working load.

In the case of lifting accessories on which marking is physically impossible, the particulars referred to in Paragraph 1 of this item must be displayed on a plate or other equivalent means and securely affixed to the accessory.

The information referred to in Paragraphs 1 and 2 of this Item must be legible and located in a place where they are not liable to disappear as a result of wear or jeopardise the strength of the accessory.

4.3.3 Lifting machinery

The maximum working load must be prominently marked on the machinery. This mark must be legible and must not be in encrypted form.

If the maximum working load depends on the configuration of the machinery, each operating position must be provided with a load plate indicating, preferably in diagrammatic form or by means of tables, the working load permitted for each configuration.

Machinery intended for lifting goods only, equipped with a carrier which allows access to people, must bear a clear and indelible warning prohibiting the lifting of people. This warning must be visible at each place where access is possible.

4.4 Instructions

4.4.1 Lifting accessories

Lifting accessory or each commercially indivisible batch of lifting accessories must be accompanied by the instructions containing the following in particular:

(a) The data on the intended use;

(b) The limitation of use (particularly for lifting accessories such as magnetic or vacuum pads which do not fully comply with Item 4.1.2.6 d) of this Annex;

(c) Instructions for assembly, use and maintenance;

(d) The applied static test coefficient.

4.4.2 Lifting machinery

Lifting machinery must have the instructions which contain:

a) The technical characteristics of the machinery, particularly:

- the maximum working load and, where appropriate, a copy of the load plate or load table described in paragraph 2, point 4.3.3 of this Annex,
- the reactions at the supports or bearings and, where applicable, characteristics of the tracks;
- where applicable, the definition and the means of installation of the ballast;

b) The contents of the logbook, if it is not delivered with the machinery;

c) Advice for use, particularly to offset the lack of direct vision of the load by the operator if such lack exists;

d) Where applicable, a test report detailing the static and dynamic tests carried out by or for the manufacturer or his authorised representative or someone else who was nominated by the manufacturer;

(e) For machinery which is not assembled on the premises of the manufacturer in the form in which it is to be used, the necessary instructions for performing the measures referred to in Item 4.1.3 before it is put into service.

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 Point (see General Principles, Point 4 of this Annex).

5.1 Risks due to the lack of stability

Powered roof supports must be designed and constructed in such a way as to maintain a given direction when moving and not slip before and while they come under load and after the load has been removed. They must be equipped with anchorages for the top plates of the individual hydraulic props.

5.2 Movement

Powered roof supports must allow for unhindered movement of people.

5.3 Control devices

The accelerator and brake controls for movement of machinery running on rails must be hand-operated. However, enabling devices may be foot-operated.

The control devices of powered roof supports must be designed and positioned in such a way so that, during displacement operations, operators are sheltered by a support in place. The control devices must be protected against any accidental release.

5.4. Stopping

A self-propelled machine that moves on rails and is intended for underground work, must be equipped with such an activation device that acts on the control circuits for moving the machine by which the machine is stopped, in case its movement is no longer under the driver's control.

5.5 Fire

Indent 2 of point 3.5.2 of this Annex is mandatory in respect of machinery which comprises highly flammable parts.

The braking system of machinery intended for use in the underground work must be designed and constructed in such a way so that it does not produce sparks or cause fires.

Machinery with internal combustion engines for use in the underground work must be fitted only

with engines using fuel with a low vaporising pressure and which exclude any spark of electrical origin.

5.6 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 PEOPLE

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

6.1 General

6.1.1 Mechanical strength

The carrier, including, possibly,any automatic doors, must be designed and constructed in such a way as to offer the space and strength corresponding to the maximum number of people permitted on the carrier and the maximum working load.

The working coefficients for components set out in Items 4.1.2.4 and 4.1.2.5 are inadequate for machinery intended for the lifting of people and must, as a general rule, be doubled. Machinery intended for lifting person or people and goods must be fitted with a suspension or supporting system for the carrier designed and constructed in such a way as to ensure an adequate overall level of safety and to prevent the risk of the carrier falling.

If ropes or chains are used to suspend the carrier, as a general rule, at least two independent ropes or chains are required, each with its own fixing point.

6.1.2 Loading control for machinery moved by power other than human strength

The requirements of Item 4.2.2 of this Annex apply regardless of the maximum working load and overturning moment, unless the manufacturer demonstrates that there is no risk of overloading or overturning.

6.2 Control devices

Where safety requirements do not impose other solutions, the carrier must, as a general rule, be designed and constructed in such a way so that people in the carrier have means of controlling upward and downward movements and, if appropriate, other movements of the carrier.

In operation, the control devices referred to in Paragraph 1 of this Item must override any other devices controlling the same movement with the exception of emergency stop devices.

The control devices for movements referred to in Paragraph 1 of this item must be such that they should be held during operation, except when the carrier is completely closed.

6.3 Risks for people on the carrier

6.3.1 Risks due to movements of the carrier

Machinery for lifting people must be designed, constructed or equipped in such a way so that the acceleration or deceleration of the carrier does not engender risks for people.

6.3.2 Risk of people falling from the carrier

The carrier must not tilt to an extent which creates a risk of the people falling, including when the machinery and carrier are moving.

Where the carrier is designed as a workstation, provision must be made to ensure stability and to prevent hazardous movements.

If the measures referred to in point 1.5.15 of this Annex are not adequate, carriers must be fitted with a sufficient number of suitable fixing points for the number of people permitted on the carrier. The fixing points must be strong enough for the use of personal protective equipment against falls from the height.

Any automatic doors in floors or ceilings or side doors must be designed and constructed in such a way as to prevent inadvertent opening and must open in a direction that obviates any risk of falling, if they open unexpectedly.

6.3.3 Risk due to objects falling on the carrier

Where there is a risk of objects falling on the carrier and endangering people, the carrier must be equipped with a protective roof.

6.4 Machinery operating among landings

6.4.1 Risks for people on the carrier.

The carrier must be designed and constructed in such a way as to prevent risks due to contact between people and/or objects in or on the carrier with any fixed or moving elements. Where necessary in order to fulfil this requirement, the carrier itself must be completely enclosed with doors fitted with an interlocking device that prevents hazardous movements of the carrier unless the doors are closed. The doors must remain closed if the carrier stops between landings where there is a risk of falling from the carrier.

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 braking effect must not cause a deceleration which may endanger people regardless of the size of the load.

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 and/or the carrier is not at the 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 perople to be lifted.

6.5 Markings

The carrier must bear the information necessary to ensure safety including the number of people permitted on the carrier and the maximum working load.

Annex 2

DECLARATION OF CONFORMITY OF MACHINERY AND DECLARATION OF

INCORPORATION OF PARTLY COMPLETED MACHINERY

1. CONTENT

A. Declaration of Conformity of machinery

This Declaration and translations thereof must be drawn up under the same conditions as the instructions (see Annex I, Item 1.7.4.1 a) and b)), and must be typewritten or else handwritten in capital letters.

The Declaration referred to in Paragraph 1 of this Chapter relates exclusively to the machinery in the state in which they were placed on the market, and excludes components which are added and/or operations carried out subsequently by the final user.

The Declaration of conformity must contain the following information:

1) The business name , or name and full address of the manufacturer and, where appropriate, his authorised representative;

2) The name and address of the person authorised to compile the technical documentation,

3) The description and designation of the machinery, including generic denomination, function, model, type, serial number and commercial name;

4) Explicitly stating that the machinery conforms to all relevant provisions of this Rulebook and where appropriate, stating about conformity with other regulations and/or relevant provisions to which the machinery conforms. Such stating must include a reference to the regulation applied and number of the Official Gazette where such regulation was published;

5) Where appropriate, the business name, or name and address and identification number of the Designated body from the relevant Registry in accordance with specific regulation or the relevant identification number of the Designated body Designated body which carried out the EC type-examination referred to in Annex 9, if the machinery being imported in the Republic of Serbia, and the number of the EC type-examination certificate;

6) Where appropriate, the business name, or name, address and identification number of the Designated body referred to in Point 5 of this Chapter which approved the full quality assurance system referred to in Annex X;

7) Where appropriate, a reference to the Serbian standards used, as referred to in Article 7 of this Rulebook;

8) Where appropriate, the reference to other technical standards and specifications used;

9) The place and the date of the issuing of Declaration;

10) The identification and signature of the person empowered to draw up the Declaration of conformity of the machinery on behalf of the manufacturer or his authorised representative.

B. The Declaration of incorporation of partly completed machinery

The Declaration of incorporation of partly completed machinery and its translations thereof must be made under the same conditions as the instructions (see Annex 1, point 1.7.4.1 a) and b)), and must be typewritten or else handwritten in capital letters.

The Declaration of incorporation must contain the following data:

1) The business name, or name and address of the manufacturer of the partly completed machinery and, where appropriate, his authorised representative;

2) The name and address of the person authorised to compile the relevant technical documentation;

3) The description and designation of the partly completed machinery including generic denomination, function, model, type, serial number and commercial name;

4) The statements on the essential requirements under this Rulebook which were applied and fulfiled, and that the technical documentation is conformity with Annex 7, Chapter B and, where appropriate, a statement on conformity of partly completed machinery with other relevant regulations if these were applied. These statements must include a reference to the regulation applied and number of the Official Gazette of the Republic of Serbia where that regulation was published;

5) The statement about undertaking the obligations relating to submission of relevant information on partly completed machinery in response to a request by the competent inspector. This statement shall include a method of submission; this submission is mandatory and must be without prejudice to the intellectual property rights of the manufacturer of the partly completed machinery;

6) The statement that the partly completed machinery must not be put into service until the final machinery into which it is to be incorporated, has been established that it is conformity with the provisions of this Rulebook;

7) The place and date of the issuing of the Declaration of Incorporation of partly completed machinery;

8) The identity and signature of the person empowered to make the Declaration on behalf of the manufacturer or his authorised representative.

2. CUSTODY

The manufacturer of machinery or his authorised representative shall keep the original Declaration of Conformity for a period of at least 10 years from the last date of manufacture of the machinery.

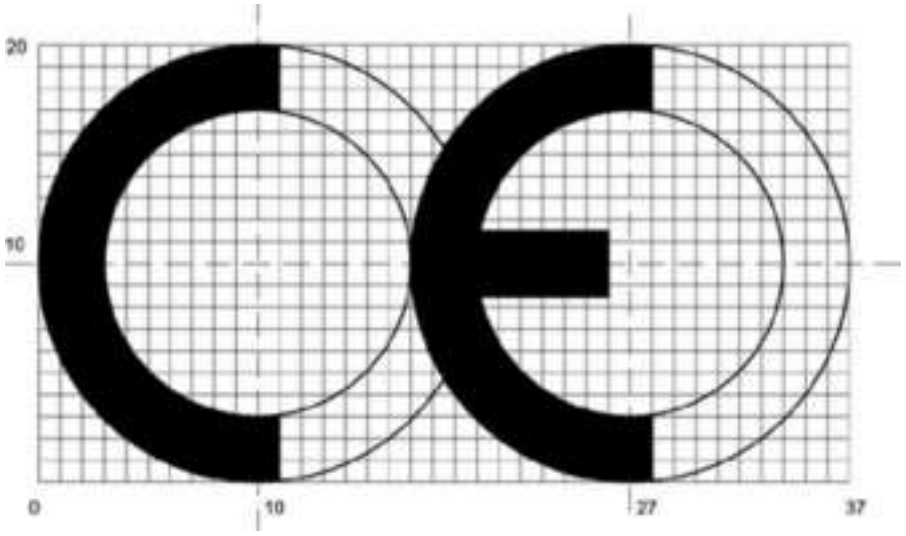
The manufacturer of partly completed machinery or his authorised representative shall keep the original Declaration of Incorporation for a period of at least 10 years from the last date of manufacture of the partly completed machinery.

Annex 3

THE CONFORMITY MARK

1. CE marking

The CE conformity mark consists of the initials ‘CE’ taking the following form:



If the CE mark is reduced or enlarged the proportions shown in the above drawing must be

respected.

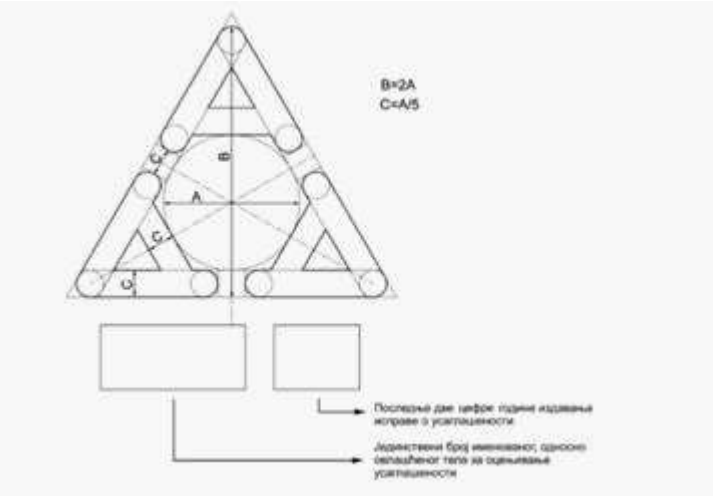
The various components of the CE mark must have substantially the same vertical dimension, which may not be less than 5 mm. The minimum dimension may be waived for small-scale machinery.

The CE mark must be affixed in the immediate vicinity of the name of the manufacturer or his authorised representative, using the same technique.

In case of application of the procedure for full quality assurance referred to in Article 8, paragraph 3, point 3) and Article 8, paragraph 4, point 2) of this Rulebook, the CE mark must be accompanied by the identification number of the conformity assessment body that carried out that procedure.

2. SERBIAN CONFORMITY MARK

The Serbian conformance mark consists of three capital letters "A" interconnected in the shape of an equilateral triangle (3A), of appearance and contents as in the figure below:



Size of the mark shall be determined by the height B of the mark which may only have values of standard numbers rounded up, to the order of magnitude R10 expressed in millimetres (mm), as per Serbian standard – Standard numbers, numerical values and definitions – SRPS A.A0.001.

The height B of the mark is, as a rule, at least 5 millimetres.

The identification number of the Designated body from the Registry of designated bodies for conformity assessment, and the last two digits of the year of issue of the conformity document, if

this body performed, or participated in, conformity assessment, must be placed next to the Serbian mark.

Annex 4

TYPES OF MACHINES TO WHICH CONFORMITY ASSESSMENT IS APPLIED IN THE MANNER OF ARTICLE 8, Paragraphs 3 and 4 of THIS RULEBOOK

1. Circular saws (single-blade or multi-blade) for wood processing and materials with similar physical properties or for working with meat and material with similar physical properties, 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 workpiece 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 workpieces, 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 levelling machinery for woodworking.

3. Thicknesser (planer) 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 workpiece;

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 of this Annex 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.

8. Portable chainsaws for woodworking.

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.

10. Injection or compression plastics-moulding machinery with manual loading or unloading.

11. Injection or compression rubber-moulding machinery with manual loading or unloading.

12. Machinery for underground working of the following types:

12.1. Locomotives and brake-vans;

12.2. Hydraulic-powered roof supports.

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 devices specified in Point 14 of this Annex.

16. Vehicle servicing lifts.

17. Devices for the lifting of people or of people and goods involving a hazard of falling from a vertical height of more than three metres.

18. Portable cartridge-operated fixing and other impact machinery.

19. Protective devices designed to detect the presence of people.

20. Power-operated interlocking movable guards designed to be used as safeguards in machinery referred to in Points 9, 10 and 11.

21. Logic units to ensure safety functions.

22. Roll-over protective structures (ROPS).

23. Falling-object protective structures (FOPS).

Annex 5

LIST OF THE SAFETY COMPONENTS

1. Protective devices designed to detect the presence of people.

2. Power-operated interlocking movable guards designed to be used as safeguards in machinery referred to in Points 9, 10 and 11 of Annex 4.

3. Logic units to ensure safety functions.

4. Valves with additional means for failure detection intended for the control of dangerous movements on machinery.

5. Extraction systems for machinery emissions.

6. Guards and protective devices designed to protect persons against moving parts involved in the process on the machinery.

7. Monitoring devices for loading and movement control in lifting machinery.

8. Restraint systems to keep people on their seats.

9. Emergency stop devices.

10. Discharging systems to prevent the build-up of potentially dangerous electrostatic charges.

11. Energy limiters and relief devices referred to in Items 1.5.7, 3.4.7 and 4.1.2.6 of Annex 1.

12. Systems and devices to reduce the emission of noise and vibrations.

13. Roll-over protective structures (ROPS).

14. Falling-object protective structures (FOPS).

15. Two-hand control devices.

16. Components for machinery designed for lifting and/or lowering people between different landings and included in the following list:

a) devices for locking landing doors;

b) devices to prevent the load-carrying unit from falling or unchecked upwards movement;

c) overspeed limitation devices;

d) energy-accumulating shock absorbers,

- non-linear, or
- with damping of the return movement;

e) energy-dissipating shock absorbers;

f) safety devices fitted to jacks of hydraulic power circuits where these are used as devices to prevent falls;

g) electric safety devices in the form of safety switches containing electronic components.

17. Guards for removable mechanical transmission devices.

Annex 6

ASSEMBLY INSTRUCTIONS FOR PARTLY COMPLETED MACHINERY

The assembly instructions for partly completed machinery must contain a description of the conditions which must be met with a view to correct incorporation in the machinery, so as not to compromise safety and health of people.

The original assembly instructions for partly completed machinery must be written in Serbian language.

Where partly completed machinery is imported in the Republic of Serbia to be assembled or incorporated, the instructions must be also provided in Serbian language.

Where partly completed machinery is exported from the Republic of Serbia, the assembly instructions must be written in one of the official languages of the Member States of the EU or the official language of other state acceptable for the manufacturer of the machinery in which the partly completed machinery will be assembled, or to his authorised representative.

Annex 7

TECHNICAL FILE FOR MACHINERY AND PARTLY COMPLETED MACHINERY

A. TECHNICAL DOCUMENTATION FOR MACHINERY

This part describes the procedure for compiling a technical documentation.

The technical file must demonstrate that the machinery complies with the requirements of this Rulebook.

It must cover the design, manufacture and operation of the machinery to the extent necessary for this assessment.

The technical file must be written in Serbian language, or one of the official languages of the EU, with adequate translation into Serbian language as per provisions of Annex 1, point 1.7.4.1.

1. The technical file contains:

a) The construction documentation which contains:

(1) The general description of the machinery;

(2) The overall drawing of the machinery and drawings of the control circuits, as well as the relevant descriptions and explanations necessary for understanding the operation of the machinery;

(3) The completely detailed drawings, accompanied by any calculation notes, test results, certificates, etc., required to check the conformity of the machinery with the essential health and safety requirements;

(4) The documentation on risk assessment demonstrating the procedure followed, including:

(i) A list of the essential health and safety requirements which apply to the machinery,

(ii) 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,

(5) The standards and other technical specifications used, indicating the essential health and safety requirements covered by these standards and specifications;

(6) All technical report giving the results of the tests carried out either by the manufacturer or by a Designated body chosen by the manufacturer or his authorised representative;

(7) A copy of the instructions for the machinery;

(8) Where necessary, the Declaration of incorporation of partly completed machinery and the relevant assembly instructions for such machinery;

(9) Where necessary, copies of the Declaration of conformity of machinery or other products incorporated into the machinery;

(10)A copy of the Declaration of conformity;

b) In the case of series production, the internal measures of the manufacturer to be applied to ensure that the machinery complies with the requirements of this Rulebook.

The manufacturer must carry out necessary research and tests on components, fittings or the completed machinery to determine whether by its design or construction it is capable of being assembled and put into service safely. The relevant reports and results shall be included in the technical documentation.

2. The technical file referred to in point 1 of thisAnnex must be made available to the competent inspectors for at least 10 years following the date of manufacture of the machinery or, in the case of series manufacture, of the last unit produced.

The technical file neither has to be kept in the territory of the Republic of Serbia, nor it has to be permanently available in material form.

Person designated in the Declaration of Conformity of machinery must be capable to draw up a technical file and make it available at the request of the competent inspector.

The technical file does not have to include detailed plans or any other specific information as regards the subassemblies used for the manufacture of the machinery unless knowledge of them is essential for verification of conformity with the essential health and safety requirements.

3. The failure to present the technical file in response to a duly reasoned request by the competent inspector may constitute sufficient grounds for doubting the conformity of the machinery in question with the essential health and safety requirements.

B. TECHNICAL DOCUMENTATION FOR PARTLY COMPLETED MACHINERY

This part describes the procedure for compiling relevant technical documentation.

The documentation referred to in Paragraph 1 must confirm that partly completed machinery meets requirements under this Rulebook.

Technical documentation for partly completed machinery must cover the design, manufacture and operation of the partly completed machinery to the extent necessary for the assessment of conformity with the essential health and safety requirements applied.

The technical documentation referred to in Paragraph 3 of this Section must be written in Serbian language or a translation thereof must be provided into one of the official languages of the Member States of the EU or other official language acceptable for the manufacturer of the machinery in which the partly completed machinery will be installed.

Technical documentation for partly completed machinery contains:

a) construction documentation which contains:

(1) The overall drawing of the partly completed machinery and drawings of the control circuits,

(2) Completely detailed drawings, accompanied by the calculation notes, test results, certificates, etc., required to check the conformity of the partly completed machinery with the applied essential health and safety requirements,

(3) The risk assessment documentation showing the procedure thatwas applied,
including:

- The list of the essential health and safety requirements applied and fulfiled;
- The description of the protective measures implemented to eliminate identified hazards or to reduce risks and, where applicable, to indicate the residual risks;
- The standards and other technical specifications which were applied, indicating the essential health and safety requirements covered by these standards and specifications;
- All technical reports giving the results of the tests carried out either by the manufacturer or by a Designated body chosen by the manufacturer or his authorised representative,
- A copy of the assembly instructions for the partly completed machinery,

b) for series manufacture, the internal measures of the manufacturer that will be implemented to ensure that the partly completed machinery remains in conformity with the essential health and safety requirements applied.

The manufacturer must carry out necessary research and tests on components, fittings or the partly completed machinery to determine whether by its design or construction it is capable of being assembled and used safely. The relevant reports and results shall be included in the technical documentation.

The relevant technical documentation must be available for at least 10 years following the date of manufacture of the partly completed machinery or, in the case of series manufacture, of the last unit produced, and on request presented to the competent inspectors.

The technical documentation does not have to be kept in the territory of the Republic of Serbia, nor does it have to be permanently available in material form.

A person designated in the Declaration of incorporation of partly completed machinery must be capable to draw up technical documentation and make it available at the request of the competent inspector.

The failure to present the relevant technical documentation in response to a duly reasoned request by the competent inspector may constitute the sufficient grounds for doubting the conformity of the partly completed machinery with the essential health and safety requirements applied and attested.

Annex 8

CONFORMITY ASSESSMENT PROCEDURE CARRIED OUT BY THE MANUFACTURER (INTERNAL PRODUCTION CONTROL)

1. This Annex describes the procedure by which the manufacturer, who carries out the obligations laid down in Points 2 and 3, ensures and declares that the machinery concerned satisfies the relevant requirements of this Rulebook.

2. For each representative type of the series in question, the manufacturer makes the technical file referred to in Annex VII, Section A.

3. The manufacturer must take all measures necessary so that the manufacturing process ensures compliance of the manufactured machinery with the technical file referred to in Annex VII, Section A, and with the requirements of this Rulebook.

Annex 9

TYPE-EXAMINATION

Type-examination is the procedure whereby the Designated ascertains and certifies that a representative model of machinery referred to in Annex IV (hereafter referred to as: type) satisfies the provisions of this Rulebook.

1. The manufacturer or his authorised representative must, for each type, make the technical file referred to in Annex VII, Section A.

2. For each type, the application for a type-examination shall be submitted by the manufacturer or his authorised representative to the Notified Body of his choice.

The application for type-examination shall include:

1) The business name, or the name and address of the manufacturer and, where appropriate, his authorised representative;

2) A written statement that the application has not been submitted to another Designated body;

3) the technical documentation.

Moreover, the Applicant shall place at the disposal of the Designated body a sample of the type. The Designated body may ask for further samples if the test programme so requires.

The Designated body shall:

3.1. Examine the technical documentation, check that the type was manufactured in accordance with it and establish which elements have been designed in accordance with the relevant provisions of the standards under Article 7 of this Rulebook, and those elements whose design is not based on the relevant provisions of those standards;

3.2. Carry out or provide appropriate inspections, measurements and tests to ascertain whether the solutions adopted comply with the essential health and safety requirements of this Rulebook, when the standards under Article 7 were not applied;

3.3. Where standards under Article 7 of this Rulebook were applied, carry out or provide appropriate inspections, measurements and tests to verify that those standards were actually applied;

3.4 Agree with the Applicant on the place where the verification that the type was manufactured in accordance with the examined technical file and the necessary inspections, measurements and tests will be carried out.

4. If the type complies the provisions of this Rulebook, the Designated body shall issue the Applicant with a type-examination certificate. The certificate shall include the business name, or the name and address of the manufacturer and his authorised representative, the data necessary for identifying the approved type, the conclusions of the examination and the conditions to which its issue may be subject.

The manufacturer and the Designated body shall retain a copy of this certificate, the technical file and all the relevant documents for the period of 15 years from the date of issue of the certificate.

5. If the type does not meet the requirements of this Rulebook, the Designated body shall refuse to issue a Type Examination Certificate to the applicant and shall state the detailed reasons for the refusal and shall inform the applicant and the other designated bodies accordingly.

6. The Applicant shall inform the Designated body which retains the technical file relating to the type examination certificate of all modifications to the approved type.

The Designated body referred to in Paragraph 1of this point shall examine these modifications and shall then either confirm the validity of the existing type examination certificate or issue a new one if the modifications are liable to compromise conformity with the essential health and safety requirements or the intended working conditions of the type.

7. The Designated body that issued the Type Examination Certificate must deliver the copy of it to the competent inspector or other Designated body on their request.

The Designated body that issued the Type Examination Certificate and which keeps the technical documentation relating to that examination, must deliver the copy of the technical documentation and test results to the competent inspector on his/her request.

8. The documentation and correspondence referring to the type examination procedures shall be written in Serbian language or in any other official language of the state where the Designated body is established, accompanied with the adequate translation into Serbian language.

9. The validity of the Type Examination Certificate

9.1. The Designated body has the ongoing responsibility of ensuring that the Type Examination Certificate remains valid.

The manufacturer shall inform the Designated body about all the changes of the approved type which would have an implication on the validity of the Certificate, and if the Designated body issues a new Type Examination Certificate, the previously issued Certificate is no longer valid.

9.2. The manufacturer of the machinery concerned has the ongoing responsibility of ensuring that the machinery meets the corresponding state of the technique.

9.3. The manufacturer shall request from the Designated body the review of the validity of the Type Examination Certificate every five years.

If the Designated body establishes that the Type Examination Certificate remains valid, taking into account the state of the technique, it shall renew the certificate for a further five years.

The manufacturer and the Designated body shall retain a copy of the Type Examination Certificate, of the technical file and of all the relevant documents for a period of 15 years from the date of issue of the Certificate.

9.4. In the event that the validity of the Type Examination Certificate is not renewed, the manufacturer shall cease to place the machinery concerned on the market.

Annex 10

FULLY QUALITY ASSURANCE

This Annex describes the conformity assessment of machinery referred to in Annex 4, manufactured using a full quality assurance system, and the procedure whereby the Designated Body assesses and approves the quality system and monitors its application.

1. The manufacturer must apply an approved quality system for design, manufacture, final inspection and testing, as specified in point 2 of this Annex, and shall provide the verification of approved quality system to the Designated body in accordance with point 3 of this Annex.

2. Quality system

2.1 The manufacturer or his authorised representative shall submit an application for assessment of his quality system to the Designated body of his/her choice.

The application for assessment of quality contains:

- The business name, or the name and address of the manufacturer and, where necessary, his authorised representative;
- Places of design, manufacture, inspection, testing and storage of the machinery,
- The technical documentation described in Annex 7, Section A, for one model of each category of machinery referred to in Annex 4 which he intends to manufacture,
- The documentation on the quality system,
- A written statement that the application has not been submitted to another Designated body.

2.2. The quality system must ensure the conformity of machinery with the provisions of this Rulebook. All the elements, requirements and provisions adopted by the manufacturer must be documented in a systematic and orderly manner, in the form of measures, procedures and written instructions. The documentation on the quality system must permit a uniform interpretation of the procedural and quality measures, such as quality programmes, plans, manuals and records.

It must contain, in particular, an adequate description of:

- The quality objectives, the organisational structure, and the responsibilities and powers of the management with regard to the design and quality of the machinery;
- The technical design specifications, including standards that will be applied and, where the standards referred to in Article 7 of this Rulebook are not applied in full, the means that will be used to ensure that the essential health and safety requirements of this Rulebook are fulfiled;
- The design inspection and design verification techniques, processes and systematic actions that will be used when designing machinery covered by this Rulebook;
- The corresponding manufacturing, quality control and quality assurance techniques, processes and systematic actions that will be used;
- Inspections and tests that will be carried out before, during and after manufacture, and the frequency with which they will be carried out;
- Quality records, such as inspection reports and test data, calibration data, and reports on the

qualifications of the personnel concerned;

- The means of monitoring the achievement of the required design and quality of the machinery, as well as the effective operation of the quality system.

2.3 The Designated shall assess the quality system to determine whether it satisfies the requirements of point 2.2 of this Annex.

The elements of the quality system which conform to the relevant standard regarding quality system shall be presumed to conform to the corresponding requirements referred to in point 2.2 of this Annex.

The team of auditors must have at least one member who is experienced in the assessment of the technology of the machinery. The assessment procedure shall include an inspection to be carried out at the manufacturer's premises. During the assessment, the team of auditors shall carry out a review of the technical file referred to in Point 2.1, the second paragraph, the third indent to ensure their compliance with the relevant health and safety requirements.

The manufacturer or his authorised representative must be notified of the decision referred to in Paragraph 3 of this point. The notification must contain the conclusions of the examination and the reasoned assessment decision including legal remedies and complaint shall be decided on by a body of the Designated body, in accordance with its Act on Internal Organisation.

2.4. The manufacturer shall undertake to fulfil the ongoing obligations permanently, arising from the quality system as approved and to ensure that it remains appropriate and effective.

The manufacturer or his authorised representative shall inform the Designated Body which approved the quality system of any planned change to it.

The Designated body shall evaluate the proposed changes and decide whether the modified quality assurance system will continue to satisfy the requirements referred to in point 2.2 of this Annex, or whether a re-assessment is necessary.

The Designated body shall notify the manufacturer of its decision. The notification shall contain the conclusions of the examination and the reasoned assessment decision.

3. Verification of approved quality system by the Designated body.

3.1. The purpose of verification is to make sure that the manufacturer duly fulfils the obligations

arising out of the approved quality system.

3.2. The manufacturer shall, for inspection purposes, allow the Designated body access to the places of design, manufacture, inspection, testing and storage, and shall provide it with all necessary information, such as:

- The documentation concerning the quality system;

- The quality records provided for in that part of the quality system concerned with design (results of analyses, calculations, tests, etc.) ;
- The quality records provided for in that part of the quality system concerned with manufacture (inspection reports and test data, calibration data, reports on the qualifications of the personnel concerned, etc).

3.3.The Designated body shall conduct periodic audits to make sure that the manufacturer is maintaining and applying the quality system; it shall provide the manufacturer with an audit report. The frequency of the periodic audits shall be such that a full reassessment is carried out every three years.

3.4. Moreover, the Designated body may pay the manufacturer unannounced visits except periodic audits referred to in Paragraph 3.3 of this Annex . The need for these additional visits and their frequency will be determined on the basis of a visit monitoring system managed by the Designated body. In particular, the following factors will be taken into account in the visits monitoring system:

- The results of previous surveillance visits,

- The need to monitor remedial measures,

- Wherepossible, the special conditions concerning the approval of the system,

- The significant modifications in the organisation of the manufacturing process, measures or techniques.

On the occasion of such visits, the Designated body may, if necessary, carry out tests or have them carried out in order to verify the proper functioning of the quality system. The Designated body shall provide the manufacturer with a visit report and, if a test was carried out, with a test report.

4. The manufacturer or his representative shall, for the inspection purposes, keep for at least ten years from the last date of manufacture:

- The documentation referred to in point 2.1 of this Annex,

- The decisions and reports of the Designated body referred to in Paragraph 4 of point 2.4, and points 3.3 and 3.4 of this Annex.

Annex 11

CRITERIA TO BE TAKEN INTO ACCOUNT FOR THE DESIGNATION OF CONFORMITY ASSESSMENT BODIES

1. The conformity assessment body, its director, the members of managing board of directors or members of managing board of that body, as well as employees and other involved people (hereinafter referred to as: personnel) responsible for carrying out the procedures for assessing conformity in accordance with this Rulebook shall not be the designer, manufacturer, supplier or installer of machines which they inspect, nor the authorised representative of any of these parties. They shall not become involved, either directly or as authorised representatives, in the design, construction, marketing or maintenance of the machines. This does not exclude the possibility of exchanges of technical information between the manufacturer and the body.

2. The body referred to in point 1 of this Annex and its personnel shall carry out the assessment of conformity with the highest degree of professional integrity and technical competence and shall be free from all pressures and inducements, particularly financial, which might influence their judgement or the results of the inspection, especially from people or groups of people with an interest in the result of assessments.

3. For each category of machinery for which it is notified, as well as for each conformity assessment procedure, the body must, prior to and after the designation, have personnel with technical knowledge and sufficient and appropriate experience to perform a conformity assessment.

The staff responsible for carrying out conformity assessment shall have:

1) The appropriate experience, and authorisation to perform conformity assessment activities,

2) The adequate knowledge of the requirements for the tests they carry out, as well as appropriate experience in relation to such tests;

3) Qualification and independency in preparationof the reports on conducted assessment and

perform checks stipulated under this Rulebook

4. Conformity assessment body shall have the adequate facilities depending on the requirements laid down in Serbian standards in the List of standards under Article 7 of this Rulebook on type of machinery which is a subject of conformity assessment, or relevant requirements and aspects to be assessed.

5. The impartiality of the staff performing the conformity assessment of machinery must be guaranteed. The salary or remuneration of staff may not depend on the number of tests performed, nor on the results of such tests.

6. The conformity assessment body must possess the adequate general act governing basic procedures with regard to conducting conformity assessment activities including decision-making procedure on complaints on the performance of the body and made decisions.

7. The conformity assessment body shall have damage liability insurance.

8. The conformity assessment body shall be bound to observe professional secrecy with regard to all information obtained in carrying out conformity assessment activities in accordance with its general act on professional secrecy, this Rulebook and other regulations.

9. The conformity assessment body must participate in the relevant activities of the standardisation organizations, that is it must ensure that its staff carrying out the conformity assessment activities are familiar with the activities of those organizations.