

Unofficial translation of "Test-Engineering Ltd."

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**TECHNICAL REGULATIONS
OF THE CUSTOMS UNION**

TR CU 010/2011

**«On the safety of machinery and equipment»
(review of Test-Engineering for you)**

Abbreviated version for the general understanding of document

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Foreword

1. This technical regulation is designed in accordance with the Agreement on common principles and rules of technical regulation in the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation.
2. This technical regulation is designed for establishing on a single customs territory of the Customs Union, a mandatory requirements for the application and enforcement to the machines and (or) equipment in the process of development (designing), manufacturing, installation, commissioning, operation, storage, transportation, marketing and disposal, for the providing the free movement of machines and (or) equipment put into circulation in the common customs territory of the Customs Union.
3. If, in respect of machines and (or) equipment will be accepted other technical regulations of the Customs Union, technical regulations of the Eurasian Economic Community (hereinafter - EEC) establishing requirements for the machines and (or) equipment, the machines and (or) equipment shall meet the requirements of these technical regulations of the Customs Union, EEC, the effect of which they are subject.

Article 1. The field of application

1. This technical regulation extends to machines and (or) equipment, manufactured in circulation at the common customs territory of the Customs Union.
2. This technical regulation establishes minimum requirements safety of machines and (or) equipment in the process of development (designing), manufacturing, installation, commissioning, operation, storage, transportation, marketing and disposal in order to protect human life or health, property, environment, animals life and health, for prevent actions that mislead consumers.
3. This technical regulation extends to machines and (or) equipment for which were revealed and identified hazards, the requirements to their eliminate or reduce are given in accordance with Annex № 1 and № 2 of the Technical Regulations.
4. This technical regulation shall not apply to the following types of machines and (or) equipment:
 - Machines and (or) equipment related to ensuring the integrity and sustainability of the networks function and using of the radio frequency spectrum;
 - Machines and (or) equipment used for medical purposes and used in direct contact with the patient (X-ray, diagnostic, therapeutic, orthopedic, dental, surgical equipment);
 - Machines and (or) equipment specifically designed for use in the field of nuclear energy. On machinery and (or) equipment for general industrial use used in the field of nuclear energy the effect of these technical regulations apply to the extent not contrary to the requirements for nuclear and radiation safety;
 - Wheeled vehicles, other than machines and (or) equipment installed on theirs;
 - Sea and river transport vehicles (ships and craft, including those used for their machines and (or) equipment);
 - Aircraft and spacecraft;
 - Rolling stock and facilities specifically designed for use on the railways and underground;
 - Attractions;
 - Weapons and military equipment;
 - Machines and (or) equipment intended for use by persons with disabilities;

- Agricultural and forestry tractors and trailers, other than machines and (or) equipment installed on theirs;
- Drilling platforms, other than machines and (or) equipment installed on theirs.

5. The action of this technical regulation applies to machines and (or) equipment used at hazardous production facilities.

6. If risks from machines, and (or) equipment, fully or partially installed in other technical regulations of the Customs Union, EEC, the machines and (or) equipment must comply with the technical regulations of the Customs Union, EEC, on which they are applied.

7. [When identifying the machines and \(or\) equipment](#) correspondence is established specific machines and (or) equipment sample or their description, as which can be used the standards referred to in item 1 of Article 6 of these technical regulations, classifications, specifications and drawings, specifications, operational documentation.

8. Additional safety requirements for certain categories of machinery and equipment are installed in accordance with Annex № 2.

Article 2. The definitions

1. This technical regulation, the following terms and their definitions:

"accident" - the destruction of or damage to the machine and (or) equipment, the occurrence in process of the operation of machines and (or) equipment uncontrolled explosion and (or) release of hazardous and noxious substances;

"tolerable risk" - level the risk from the use of machines and (or) equipment based on the technical and economic capacity of the manufacturer, the appropriate level of safety, which should be available at all stages of the product life cycle;

"life cycle" - the period of time from the beginning of designing machines and (or) equipment to complete ending disposal, including interlinked stages (designing, manufacture, storage, installation, commissioning, operation, among others modernization, repair, maintenance and service);

"incident" - the refusal of machines and (or) equipment, the deviation of the mode of production process;

"critical failure" - the refusal machines and (or) equipment for which possible consequences are a causing harm to life or health, property, the environment, life and health of animals and plants;

"machine" - a set of interconnected parts or components, of which at least one part or one unit moves by using the appropriate actuators, control circuits, power sources, combined together for a particular application (eg, treatment, processing, handling or packaging material);

"mobile power tools" - tractors, universal power devices, power-actuated chassis;

"designated resource" - the total operating time, after reaching which the operation of the machine and (or) equipment must be stopped, regardless of their technical condition;

"operating time" - the duration or volume of works the machine and (or) equipment;

"designated working life" - calendar duration of the machine and (or) equipment, after reaching which the operation should be discontinued, regardless of their technical condition;

"designated retention period" - calendar duration of storage of the machine and (or) equipment, after achievement which their storage must be terminated, regardless of their technical condition;

"intended use of a machine" - the use of machines and (or) equipment in accordance with the purpose specified by the manufacturer in the operating documents;

"[safety case](#)" - document containing [an analysis risks](#), as well as information out of the design, operational, technical documentation about the minimum necessary measures to ensuring safety that accompanies the machine and (or) equipment at all stages of the life cycle, and supplement the information about the results of the risk assessment at the stage of operation after a major overhaul;

Note of Test-Engineering: The safety case is the same as the technical file in accordance with [Directive 2006/42/EC "On machinery"](#) (see Annex VII).

"equipment" - used independently or installed on the machine a technical device, necessary for the performance of its main and (or) additional functions as well as for connecting several machines into a single system;

"failure" - an event at which there is violation a workable condition of the machine and (or) equipment as a result constructive violations in the designing, non-observance the specify process of manufacturing or repair, default of the rules or manual (instructions) for use;

"limiting state" - the state machine and (or) equipment in which their further operation is inadmissible or inadvisable or restore their working condition is impossible or inadvisable;

"attachable machine" - mobile, trailed, semi-trailed, mounted and semi-mounted or mounted on a mobile power mean the machine designed to perform operations at the production and primary processing of agricultural products, etc.;

"developer" (designer) - a legal or individual that has the process of creating a new type of machinery and equipment, the development of technical documentation for the prototype and prototyping;

"developer (designer) of a system" - a legal or individual that has the process of creating the project documentation for the machine system and (or) equipment (production lines, interconnected production cycle);

"agricultural machine-tractor aggregate" - complex, a combination of mobile power mean with trailer, semi-trailer or mounted machine (or machines), and intended for accomplishment technical agricultural operations;

"system" - a set of machines and (or) equipment united constructively and (or) functional to perform the required functions;

"danger" - a potential source of damaging event to human life and health, property or the environment;

"danger zone" - the space in which coming from machinery or equipment hazards affect on human;

"risk" - a combination of the occurrence of harm and the consequences of harm to human life or health, property, the environment, life and health of animals and plants.

Article 3. Rules of market circulation

1. Machines and (or) equipment are issued on the market provided that they meet this technical regulation, and other technical regulations of the Customs Union, EEC, the action of which they are subject, and provided that they have passed conformity assessment procedures established by this technical regulations, and other technical regulations of the Customs Union, EEC, the action of which they are subject.

Machines and (or) equipment, for which conformity to the requirements of this technical regulation is not confirmed, should not be marked with [a unified mark of circulation on the market](#) of the Customs Union Member States and are not allowed for release into circulation in the common customs territory of the Customs Union.

Article 4. Ensuring the safety of machines and (or) equipment in the development (designing)

1. When developing (designing) of the machine and (or) equipment must be identified potential hazards at all stages of the life cycle.

2. For the identified hazards it should be to evaluate the risk assessment by calculation, experimental or an expert way according to the data from an operating similar machines and (or) equipment. Methods of risk assessment can be established in the standards referred to in item 1 of Article 6 of the Technical Regulations.

3. When developing (designing) must be determined and installed acceptable risk for the machine and (or) equipment. The level of safety appropriate to established risk, provided:

- the completeness of scientific research and developmental works;
- the conduct of a complex of necessary calculations and [tests](#), based on methods verified in the established procedure;
- choice of materials and substances applied in certain types of machines, and (or) equipment, depending on the parameters and operating conditions;
- the establishment by the developer (designer) limit state criteria;
- the establishment of the developer (designer) assigned operating life, assigned resources, timing of maintenance, repair and disposal.
- the identification all hazards associated with the predictable possible improper use of machines and (or) equipment;
- the limitation in the use of machines and (or) equipment.

4. If the assessed risk is higher allowable, a project machine and (or) equipment should be changed for risk reduction, without the intervention of personnel in all operating modes of the machine and (or) equipment (if intervention does not provide operating manual (instructions for use)).

5. If it is impossible to achieve the technical characteristics of the machine and (or) equipment that determine acceptable risk by changing the project, as well as at economic inexpediency in the operating manual (instructions for use) is specified the information that limits the conditions

for the use of the machine and (or) equipment or warning about the need to take measures to ensure safety.

6. At the development (designing) of machines and (or) equipment must be installed level of physical factors (noise, infrasound, air and contact ultrasound, local and general vibration, electromagnetic fields), as well as levels emission dangerous and hazardous substances to ensure the safety during their operation.

7. In the development (design) of the machine, and (or) equipment should be developed a safety case.

Original the safety case of machines and (or) equipment is stored at the developer (designer), and the copy - at the manufacturer of machines and (or) equipment and at the organization operating the machines and (or) equipment.

8. Development of [the operating manual \(instructions for use\)](#) is an integral part of the development (designing) of the machine, and (or) equipment. Operating manual (instructions for use) shall include:

- information on the design, operation principle, the characteristics (properties) of machinery and / or equipment;
- instructions for installation or assembly, setup or adjustment, maintenance and repair of machines and (or) equipment;
- instructions on using of machines and (or) equipment and measures to ensure safety that need to be taken when using the machine, and (or) equipment, including commissioning and intended use, maintenance and repair of all types, periodic diagnosis, testing, transportation, packaging, conservation and storage conditions;
- designated parameters (designated retention period, designated working life and (or) the designated resource), depending on the design features. Upon expiration of designated parameters (designated working life, retention period and resource) machine and (or) equipment should be taken out of service and decided to send it in for repair, disposal, about the inspection and the establishment of new designated parameters (designated working life, retention period and resource);
- list of critical failures, possible mistaken personnel actions, which lead to an incident or accident;
- personnel actions in the event of an incident, a critical failure or accident;
- criteria of limit state ;
- instructions for decommissioning and disposal.
- information about staff qualifications .

9. If the machine and (or) equipment is not designed for use by professional users, the operating manual (instructions for use) must consider the knowledge, skills and experience of these users.

Article 5. Ensuring the safety of machines and (or) equipment at the manufacture, storage, transportation, operating and disposal

1. When manufacturing of machines and (or) equipment must be provided their compliance with requirement of the design (design) documentation and of this technical regulations.

2. When manufacturing of machines and (or) equipment manufacturer must carry out all complex safety measures determined project (design) documentation, it must also be a possible the implementation monitoring of all technological operations that affect safety.

3. When manufacturing machines and (or) equipment must be carried out tests specified the project (design) documentation.

4. When manufacturing machines and (or) equipment must be provided with the safety requirements established by the project (design) documentation in accordance with the technical regulations, subject to the applicable technological processes and control systems. The manufacturer carries out risk assessments of machines and (or) equipment before release into circulation.

5. The deviations from the project (design) documentation at manufacturing of machines and (or) equipment must be agreed with the developer (designer). The risk from the use of machines and (or) equipment, made at an agreed project (design) documentation, should not be higher than acceptable risk established designer (designer).

6. Machine manufacturers and (or) equipment should provide a machine and (or) equipment an operating manual (instructions for use).

7. Machine and (or) equipment should contain clearly legible and indelible [warning labels or signs on hazards](#).

8. Machine and (or) equipment should contain good visible clearly and indelibly [identification label \(plate\)](#) containing:

- the manufacturer's name and (or) its trademark;
- the name and (or) designation of machines and (or) equipment (type, brand, model (if any));
- month and year of manufacture.

9. If information listed in item 8 of this Article is impossible to inflict to a machine and (or) equipment, they can only be specified in the operating manual (instructions for use) attached to this machine and (or) equipment. In this case, the manufacturer's name and (or) its trademark, name and designation of the machine and (or) equipment (type, brand, model (if any)) should be marked on the packaging.

10. The information referred to in item 8 of this Article should contain in the operating manual (instructions for use). In addition, the operating manual (instructions for use) must contain the name and address of the manufacturer (the person authorized by the manufacturer), importer, information to contact them.

11. Operating Manual (manual) is performed in Russian and in the state language (s) of the Member State of the Customs Union, if the law of the state (s) of the Member (s) of the Customs Union has corresponding requirements.

The operating manual (instructions for use) is performed on paper. To it can be add a set of operation documents in electronic form. The operating manual (instructions for use) can be done only in electronic form, at the option of the manufacturer, if the machine and (or) equipment is than domestic use.

12. Materials and substances that are used for packaging machines and (or) equipment should be safe.

13. Transportation and storage of machines and (or) equipment, their parts and components should be carried out with safety in mind provided for the project (design) and operational documentation.

14. During maintenance, repair and inspection machines and (or) equipment must be observed the requirements established by operating manual (instructions for use), program maintenance or repair over the life of the work.
15. Changing the design of the machine and (or) equipment that arise when their repair must be agreed with the developer (designer).
16. After a major overhaul the machine and (or) equipment must be carried out a risk assessment, the importance of which should not be higher that acceptable. If necessary, are developed technical and organizational measures to achieve the values of tolerable risk .
17. For repair the machine and (or) equipment not satisfying the requirements of the project (design) documentation should be developed measures to ensure values of risk specified in [the safety case](#) taking into account the organization's technological processes and control systems.
18. In [the operating manual \(instructions for use\)](#) shall be established recommendations for the safe utilization the machine and (or) equipment.
19. When designing the machine and (or) equipment in [the operating manual \(instructions for use\)](#) shall be determined by measures to prevent the unintended use of the machine and (or) equipment after reaching the designated resource or designated working life.

Article 6. Ensuring compliance with safety requirements

Machines and (or) equipment complies with this technical regulation, if the requirements of regulations are implemented either directly or are implemented of the requirements of intergovernmental standards, and in their absence - the national (state) standards of the Customs Union Member States

Implementation of on voluntary basis requirements mentioned in List standards indicates compliance of machines and (or) equipment with safety requirements of the technical regulations.

Note of Test-Engineering: The article is presented in a shortened version.

Article 7. The assessment of compliance

1. Machines and (or) equipment released for circulation at the common customs territory of the Customs Union shall be subject to the conformity assessment with requirements of these technical regulations.

Conformity assessment of these technical regulations is carried out in the form confirmation of compliance and in the form of state control (supervision).

Used machines and (or) equipment, or manufactured for their own use of their manufacturers, as well as components and spare parts to machines used for repairs (maintenance) machines and (or) equipment are not subject to confirmation of the technical compliance regulations.

Article 8. The confirmation of conformity

1. The confirmation of conformity of machinery and (or) equipment is carried out according to unified procedures approved by the Commission of the Customs Union.

2. The confirmation of conformity of machinery and (or) equipment with requirements of this technical regulation is carried out in the form of: certification by [an accredited certification body](#) (assessment (confirmation) of conformity) (hereinafter - the certification body), included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union;

Declaring of conformity based on their own evidence, and (or) obtained with the participation of the certification body or [an accredited testing laboratory \(center\)](#), included in [the Unified Register of certification bodies and testing laboratories \(centers\) of the Customs Union](#) (hereinafter - accredited testing laboratory (center)).

3. Certification is carried out in respect of machines and (or) equipment included in the list of objects of technical regulation, contained in Annex № 3.

4. Declaring of conformity carried out by the applicant in respect of machines and (or) equipment included in the list of objects of technical regulation, contained in Annex № 3.

5. [Accordinging decision to the applicant instead of declaring of conformity](#) in respect of machinery and (or) equipment included in the list referred to in subparagraph 1 of item 4 of this Article may be carried out a certification under schemes of certification equivalised schemes of Declaring of conformity which are provided for machines and (or) equipment with this technical regulations, including the absence or insufficiency of the applicant's own evidence confirming compliance with the requirements of the technical regulations.

6. The declaration of conformity or the certificate of conformity is the only document confirming that the machine and (or) equipment conform to requirements of these technical regulations.

7. The declaration of conformity and certificate of conformity have the same legal force and have effect in the common customs territory of the Customs Union with respect to machines and (or) equipment released for circulation in the common customs territory of the Customs Union at the time an action of the declaration of conformity or the certificate of conformity, and, for each one (the car and (or) equipment) during its life cycle.

8. Information about the declaration of conformity or the certificate of conformity must be specified in the [passport machines and \(or\) equipment](#).

9. When conducting confirmation of compliance is checked the conformity of machinery and (or) equipment requirements of these technical regulations specified directly or established in the standards referred to in Article 6 of the Technical Regulations.

10. When conducting confirmation of compliance of machines and (or) equipment the applicant forms [a package of documents](#) on the machines and (or) equipment, confirming compliance with the safety requirements of these technical regulations, which include:

- [the safety case](#);
- technic specifications (if available)
- operational documents ([passports](#), [operating manuals](#) etc.);
- a list of standards determining requirements to these machines and (or) equipment about conformity (when used by the manufacturer);
- [the contract \(supply contract\)](#) (for the party, a single product), or shipping documentation (for the party, a single product);
- certificate on quality management system of the manufacturer (if available);
- information about the researches (if available);

- testing protocols the machine and (or) equipment carried out of the manufacturer, seller or person executing functions of the foreign manufacturer, and (or) test laboratories (centers) (if available);
- certificates of compliance for materials and components and protocols of their tests (if available);
- certificates of conformity for these machines and (or) equipment provided by foreign certification bodies (if available);
- other documents, directly or indirectly, confirming compliance with the machines and (or) equipment safety requirements of these technical regulations (if available).

Article 9. The procedure declaring of conformity machinery and (or) equipment

Declaring of conformity machinery and (or) equipment, are carried out one of schemes 1d, 2d, 3d, 4d, 5d, 6d.

The scheme 1d for series-produced machines and (or) equipment consists of the following steps:

- the applicant forms a package of documents specified in paragraph 10 of Article 8;
- the applicant carries out production control
- the applicant takes all necessary measures to ensure that the manufacturing process ensures conformity of machines and (or) equipment with the requirements of this technical regulations;
- the applicant carries out tests samples in the testing laboratory or in the accredited testing laboratory (center),
- the applicant accepts and registers the declaration of conformity.

The scheme 2d for lot of machines and (or) equipment (single product) consists of the following steps:

- the applicant forms a package of documents specified in paragraph 10 of Article 8;
- the applicant carries out tests samples in the testing laboratory or an accredited testing laboratory (center),
- the applicant accepts and registers the declaration of conformity.

The scheme 3d for series-produced machines and (or) equipment consists of the following steps:

- the applicant forms a package of documents specified in paragraph 10 of Article 8;
- the applicant carries out production control
- the applicant takes all necessary measures to ensure that the manufacturing process ensures conformity of machines and (or) equipment with the requirements of this technical regulations;
- the applicant carries out tests samples in the accredited testing laboratory (center),
- the applicant accepts and registers the declaration of conformity.

The scheme 4d for lot of machines and (or) equipment (single product) consists of the following steps:

- The applicant forms a package of documents specified in paragraph 10 of Article 8;
- The applicant carries out tests samples in the accredited testing laboratory (center),
- The applicant accepts and registers the declaration of conformity.

The scheme 5d is used for the machines and (or) equipment:

- applied at hazardous industrial facilities;
- when it is impossible test in full prior to their installation on operational location;

- when the applicant for conformity assessment does not apply the standards referred to in paragraph 1 of Article 6 of these technical regulations, including for innovative products.

Includes the following steps:

- the applicant forms a package of documents specified in paragraph 10 of Article 8;
- the applicant carries out production control
- the applicant takes all necessary measures to ensure that the manufacturing process ensures conformity of machines and (or) equipment with the requirements of this technical regulations;
- the applicant sends to the certification body the application for research of the type.
- certification body carries out a research of type taking into account these documents received from applicant . If the applicant did not apply the standards referred to in paragraph 1 of Article 6 of these technical regulations, the certification body assesses the possibility of replacing the requirements of the specified standards with stated requirements. The research of type, depending on the documents presented by the applicant, carried out by one of the following ways:
 - the research of sample as representative of all produced subsequently machines and (or) equipment;
 - examination presented documents, the test sample or determining (critical) parts of machines and (or) equipment;
 - at positive results carried out researches of type the certification body makes out the certificate on type by unified form approved by the Commission's decision, and issues to the applicant. The certificate of type is an essential part of the declaration of conformity. Declared requirements to the machine and (or) equipment contained therein are recognized sufficient evidence of its compliance with the requirements of the technical regulations, are used in tests conducted by the state control (supervision) in accordance with this technical regulation;
- the applicant accepts and registers the declaration of conformity.

The scheme 6d for series-produced machines and (or) equipment, if the manufacturer has a certified system of management that includes the following:

- applicant forms package of documents referred to in paragraph 10 of Article 8, the makeup of which includes a certificate management system (copy of the certificate of conformity), issued by the certification body of management systems, included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union;
- the applicant takes all necessary measures to ensure that the manufacturing process ensures conformity of machines and (or) equipment with the requirements of this technical regulations;
- the applicant carries out tests samples in the accredited testing laboratory (center),
- the applicant accepts and registers the declaration of conformity.

Applicant at declaration by schemes 1d, 3d, 5d can be registered in accordance with the legislation of the Member State of the Customs Union on its territory, a legal entity or natural person as an individual entrepreneur: the manufacturer or person performing the functions of the foreign manufacturer in a contract with him in part ensure compliance of delivered products to the requirements of this technical regulations and in a part of liability out of non-conformity of delivered products to the requirements of the technical regulations of the Customs Union (the person performing the functions of the foreign manufacturer).

Applicant at declaration by schemes 2d, 4d can be registered in accordance with the legislation of the Member State of the Customs Union on its territory, a legal entity or natural person as an individual entrepreneur: the manufacturer or the seller or person performing the functions of the foreign manufacturer in a contract with him in part ensure compliance of delivered products to the requirements of this technical regulations and in a part of liability out of non-conformity of deliv-

ered products to the requirements of the technical regulations of the Customs Union (the person performing the functions of the foreign manufacturer).

Note of Test-Engineering: for better readability, we present these schemes as a table.

Scheme number	Scheme element			Use	The document about confirming of compliance
	Testing of products, researches of type	Estimation of production	Production control		
1d	Testing of products samples is carried out by manufacturer	-	Production control is carried out by manufacturer	For products series-produced The Applicant - the manufacturer of the Member State of the Customs Union or the person authorized by the foreign manufacturer on the territory of Customs Union	The declaration of conformity for the products series-produced
2d	Testing of production lot (single product) is carried out by the applicant	-	-	For a production lot (single product) Applicant - the manufacturer, the seller (supplier) of the Member State of the Customs Union, the foreign manufacturer or authorized person in the territory of the Customs Union	The declaration of conformity for a production lot (single product)
3d	Testing of products samples is carried out in the accredited testing laboratory (center)	-	Production control is carried out by manufacturer	For products series-produced The Applicant - the manufacturer of the Member State of the Customs Union or the person authorized by the foreign manufacturer on the territory of Customs Union	The declaration of conformity for the products series-produced
4d	Testing of production lot (single product) is carried out in the accredited testing laboratory (center)	-	-	For a production lot (single product) Applicant - the manufacturer, the seller (supplier) of the Member State of the Customs Union, the foreign manufacturer or authorized person in the territory of the Customs Union	The declaration of conformity for a production lot (single product)
5d	Research (testing) of type	-	Production control is carried out by manufacturer	For products series-produced The Applicant - the manufacturer of the Member State of the Customs Union or the person authorized by the foreign manufacturer on the territory of Customs Union	The declaration of conformity for the products produced commercially
6d	Testing of products samples is carried out in the accredited testing laboratory (center)	Certification of management system and inspection control carried out by certification body of management system certification	Production control is carried out by manufacturer		

Article 10. The composition of the evidentiary materials that are basis for decision the declaration of conformity

1. In the capacity of the evidentiary materials that are the basis for decision the declaration of conformity based on their own evidence, are used the documents referred to in paragraph 10 of

Article 8 of the technical regulations, as well as standards referred to in Article 6 of the Technical Regulations.

2. In the capacity of the conditions of use of these documents can be considered:

1) for the test protocol:

the presence in test protocols of parameters values , confirming compliance with all the requirements established in the technical regulations, apply to a specific declared product;

the dissemination of test protocols on the declared machine and (or) equipment;

2) certificates of conformity, declaration of conformity or test protocols for raw, materials, components - if they determine the safety of the final product, subject to a conformity confirmation;

3) certificate for quality management system of production - if they extend to the manufacture of the declared machinery and (or) equipment;

4) other documents, directly or indirectly, confirming compliance with the machines and (or) equipment to established requirements, certificates of conformity on the declared machine and (or) equipment issued for voluntary certification (provided that all the necessary requirements of the voluntary certification was confirmed).

3. The declaration of conformity is issued on a unified form, approved by the Commission of the Customs Union.

The declaration of conformity shall be registered in accordance with the procedure approved by the Commission of the Customs Union. The declaration of conformity becomes effective from the date of registration. Duration of the declaration of compliance is not more than 5 years.

4. The applicant must keep the declaration of conformity and evidentiary materials for ten years from the date expiration of the declaration of conformity.

A package of documents confirming compliance should be made available bodies of state control (supervision) on their requirements.

Article 11. **Certification Procedure of machines and (or) equipment**

1. Certification of machines and (or) equipment, are carried out on schemes 1c, 3c, 9c:

The scheme 1c for series-produced machines and (or) equipment consists of the following steps:

- the applicant forms a package of documents specified in paragraph 10 of Article 8 and gives the application for certification to the certification body;
- the certification body carries out sample taking at the applicant to perform the tests;
- the accredited testing laboratory (center) included in the Unified Register of certification bodies and testing laboratories (centers) of the Customs Union (hereinafter - accredited testing laboratory (center)) carries out tests samples of machines and (or) equipment;
- the certification body carries out analysis of the production state of the manufacturer and the results of tests of samples of machines and (or) equipment and issues to the applicant the certificate of conformity at positive results;
- the certification body carries out the inspection control of certified machines and (or) equipment by testing samples in an accredited testing laboratory (center) and (or) analysis of the production state .

The scheme 3c for lot of machines and (or) equipment (single product) consists of the following steps:

- the applicant forms a package of documents specified in paragraph 10 of Article 8 and gives the application for certification to the certification body;

- the certification body or accredited testing laboratory (center) carries out sample taking at the applicant to perform the tests;
- the accredited testing laboratory (center) carries out tests samples of machines and (or) equipment;
- the certification body carries out analysis the results of tests of samples of machines and (or) equipment and issues to the applicant the certificate of conformity at positive results.

The scheme 9c for lot of machines and (or) equipment of the limited amount of equipment, destined for equipping factories at the unified territory of the Customs Union, including the following:

- the applicant forms a package of documents specified in paragraph 10 of Article 8 and gives the application for certification to the certification body
- the certification body carries out analysis the package of documents presented by the applicant and issues to the applicant the certificate of conformity at positive results

Note of Test-Engineering: for better readability, we present these schemes as a table.

Scheme number	Scheme element			Use	The document about confirming of compliance
	Testing of products, researches of type	Estimation of production	Production control		
1c	Testing of products samples	Analysis of the production state	Production control is carried out by manufacturer	<p>For products series-produced</p> <p>The Applicant - the manufacturer of the Member State of the Customs Union or the person authorized by the foreign manufacturer on the territory of Customs Union</p>	The certificate of conformity for the products series-produced
3c	Testing of products samples	-	-	<p>For a production lot (single product)</p> <p>Applicant - the manufacturer, the seller (supplier) of the Member State of the Customs Union, the foreign manufacturer or authorized person in the territory of the Customs Union</p>	The certificate of conformity for a production lot
9c	Analysis of the technical documentation	-	-	<p>For a production lot of the limited amount supplied by the foreign manufacturer, or for sophisticated products, destined for equipping factories at the unified territory of the Customs Union</p> <p>The Applicant - the manufacturer of the Member State of the Customs Union or the person authorized by the foreign manufacturer on the territory of Customs Union</p>	The certificate of conformity for a production lot of the limited amount

Applicant at certification by schemes 1c, 9c can be registered in accordance with the legislation of the Member State of the Customs Union on its territory, a legal entity or natural person as an individual entrepreneur: the manufacturer or person performing the functions of the foreign

manufacturer in a contract with him in part ensure compliance of delivered products to the requirements of this technical regulations and in a part of liability out of non-conformity of delivered products to the requirements of the technical regulations of the Customs Union (the person performing the functions of the foreign manufacturer).

Applicant at certification by schemes 3c can be registered in accordance with the legislation of the Member State of the Customs Union on its territory, a legal entity or natural person as an individual entrepreneur: the manufacturer or the seller or person performing the functions of the foreign manufacturer in a contract with him in part ensure compliance of delivered products to the requirements of this technical regulations and in a part of liability out of non-conformity of delivered products to the requirements of the technical regulations of the Customs Union (the person performing the functions of the foreign manufacturer).

2. The applicant can apply with application for a certification in any certification body, which has in the scope of accreditation machine and (or) equipment, included in the list of machinery and equipment subject to conformity confirmation with requirements of technical regulations of the Customs Union "On the safety of machinery and equipment" in the form of certification, approved by the Commission of the Customs Union.

The application for certification is made by the applicant and shall contain:

- name and address of the applicant;
- name and address of the manufacturer;
- information about the machine and (or) equipment (its structure) and its identifying characteristics (name, code by classifier foreign economic activity of the Customs Union, the document for manufacture machines and (or) equipment (interstate or national standard, standard of enterprise, technical specifications and etc.), type of issue - serial production or party, details of the agreement (contract), etc.);
- use of the standard (s) referred to in paragraph 1 of Article 6 of this technical regulation;
- certification scheme.

3. The certification body considers the application and makes a decision about the possibility of certification.

If a decision is positive, the certification body enters into a contract with the applicant on carrying out works on certification.

The certification body carries out a work according to certification scheme prepares a decision and issues to the applicant the certificate of conformity at positive result.

4. In the case of a negative result of certification the certification body sends to the applicant a reasoned decision to refuse to issue a certificate of conformity.

5. Testing of type sample (standard samples) or a single product of the machine and (or) equipment carried out by accredited testing laboratory (center) on behalf of the certification body getting the test protocol.

6. Analysis of production state is carried out by a certification body at the manufacturer. Results of the analysis are drawn act.

In the manufacturer has certified Quality Management System of the production or the development and the production of machines and (or) equipment, the certification body assesses the ability of the system to ensure stable production of certified machines and (or) equipment corresponding the requirements of the technical regulations.

7. If results of the checks provided by the certification scheme are positive, the certification body prepares and issues a certificate of conformity to the applicant.

Certificate of conformity is made on a single form, approved by the Commission of the Customs Union.

Information about issued certificate of compliance certification body sends in the Unified Register of certificates of conformity and registered declarations of conformity issued at a unified form.

8. The duration of the certificate of conformity is established - not more than 5 years for the series-produced machinery and (or) equipment. The duration is not installed for the delivered party.

9. The certificate of compliance can have an annex containing a list of specific products to which it applies.

The annex is made if:

- it is required to specify a composition of the group homogeneous products produced by the applicant and certified by one and the same requirements;
- it is required to specify the manufacturers included in larger units having uniform conditions of production.

Article 12. Marking with a unified mark of product circulation on the market of the Customs Union Member States

1. Machines and (or) equipment conforming to the requirements of the safety technical regulations and gone the conformity assessment procedure accordance to Article 8 of this technical regulation shall be marked with a unified mark of product circulation on the market of the Customs Union Member States.

2. Marking with unified mark of product circulation on the market of the Customs Union member states is carried out before the release of machines and (or) equipment in circulation in the market.

3. Unified mark of product circulation on the market of the Customs Union Member States must be to apply to each unit of machinery and (or) equipment in any way, providing clear and precise images over the working life of the machine and (or) equipment.

Unified mark of product circulation on the market of the Customs Union Member States must be to apply to the product itself.

4. The application unified mark of product circulation on the market of the Customs Union member states is allowed only on the packaging and in the attached operating documents, if it cannot be to apply directly to the machine and (or) equipment.

5. Machines and (or) equipment are marked with a unified mark of product circulation on the market of the Customs Union member states, if they conform to the requirements of all the technical regulations of the Customs Union, EEC applicable to them and providing for the application of a unified mark of product circulation on the market of the Customs Union member states.

Note of Test-Engineering: Machines and (or) equipment are marked with a unified mark of product circulation on the market of the Customs Union member states approved by the Commission Decision of the Customs Union of 15.07.2011 № 711 (as amended on 20.07.2012).

Article 13. Safeguard clause

1. Customs Union Member States shall take all measures to limit, prohibition on release into circulation of machines and (or) equipment on the common customs territory of the Customs Union, and withdrawal from the market of machines and (or) equipment not conforming to the requirements of the technical regulations.

General regulations of safety machines, and (or) equipment

1. Machines and equipment must be adjusted and maintained without putting persons at risk when these operations are carried out under the conditions foreseen by the manufacturer.

2. When designing (constructing) and manufacturing machines and (or) equipment, the responsible persons must.

eliminate or reduce risk;

take measures for protection against risks;

inform consumers on protection measures, indicate whether any particular training is required and specify any need to provide technical protection measures.

3. When designing (constructing) and manufacturing machines and (or) equipment and when drafting operation manuals (instructions) on use of a machine and (or) equipment, a probability of admissible risk in use of a machine and (or) equipment must be envisaged.

4. When a danger can arise because of inadmissible use, the design (construction) of a machine and (or) equipment must prevent such abnormal use. If it is impossible, the user's attention must be drawn to such situations in operation manuals (instructions) on use.

5. When designing (constructing) a machine and (or) equipment ergonomic principles must be implemented to reduce the discomfort, fatigue and psychological stress of the personnel to a minimum possible level.

6. When designing (constructing) a machine and (or) equipment, the constraints, to which the operator's actions are subject as a result of use of personal protection equipment, must be taken into account.

7. Machine and (or) equipment must be supplemented with all the essential special accessories necessary for safe adjustment, maintenance and use for purpose.

8. Machine and (or) equipment must be designed (constructed) so that raw materials, materials and substances used at their manufacture and use shall not endanger safety or health of people, property, environment, life or health of animals and plants.

The risks related to use of liquids and fluids must be excluded.

9. Additional lighting must be provided for safe use of a machine and (or) equipment.

Internal parts and spaces of a machine and (or) equipment requiring frequent inspection, adjustment and maintenance, must be provided with appropriate lighting ensuring safety.

When using a machine and (or) equipment, shadow areas, areas causing disturbances, dazzling and stroboscopic effects must be excluded.

10. Machine and (or) equipment or each of their component parts must be packaged so that they can be stored safely and without damages and have adequate stability.

11. Where the weight, size or shape of a machine and (or) equipment or their various component parts prevent them from being moved by hand, a machine and (or) equipment or each component part must;

be fitted with attachments for raising by lifting gear

be shaped in such a way that standard lifting gear can easily be attached.

12. Where a machine and (or) equipment or one of their component parts is to be moved by hand, it must be moved easily or equipped for picking up.

Special arrangements must be made for the safe places for handling of tools, spare parts and units, necessary at use.

13. Control systems of a machine and (or) equipment must ensure safety of their use at all foreseeable operation regimes and external factors foreseeable by use conditions.

Control systems must prevent dangerous situations at errors in logic and malfunction in sequence of operations by personnel.

Depending on complexity of control and operating mode of a machine and (or) equipment control systems must include means of automatic normalization of operating modes or automatic stop if operating mode infringement can be the reason of creation of dangerous situation.

14. Control systems of a machine and (or) equipment must include safety alarm system and other devices to warn about malfunctioning of a machine and (or) equipment resulting in dangerous situations.

The warning devices of malfunctioning of a machine and (or) equipment must ensure, faultless, authentic and fast perception of the information by the personnel.

15. Controls devices of a machine and (or) equipment must be:

- easily accessible and identifiable and also appropriately marked with inscriptions, symbols or marked otherwise;

- designed and positioned so that to exclude their involuntary movement and provide their reliable and unambiguous manipulations,

- located taking into account the requested efforts for movement, sequence and frequency of use, and also function significance;

- constructed so that their form, sizes and contact surfaces of the user correspond to a capture way (fingers, hand) or pressing (hand finger, palm, foot);

- located outside the danger zones, except for certain controls where necessary, and additional safety measures must be taken.

16. Where a control is designed to perform several different actions, this action must be clearly displayed and subject to confirmation where necessary.

17. It must be possible to start a machine and (or) equipment and restart after a stoppage (whatever the cause) by actuation of a control provided for the purpose. This requirement doesn't apply to the restarting of industrial equipment, working in an automatic mode, if the restarting after a stoppage is provided by this mode.

Where a machine and (or) equipment have several starting controls to start up of the system or its separate parts, and sequence of their use can lead to dangerous situations, control must provide the devices excluding violation of the change in operating mode.

18. Each machine and (or) equipment must be fitted with a control whereby it can be brought safely to a complete stop. Machine and (or) equipment stop control must have priority over the start controls.

Once a machine and (or) equipment is stopped, the energy supply to the actuators concerned must be cut off except for the cases when cutting off may result in dangerous situation. Machine and (or) equipment control systems must be fitted (except for the portable hand-held machine) with a stop control to emergency braking and emergency stop device (disengaging), if application of these systems can reduce or prevent danger.

19. The emergency stop control must:

- have clearly identifiable, and quickly accessible controls,
- stop machine and (or) equipment as quickly as possible, without creating additional hazards;
- once active operation stopped, this command must be sustained until the user return it to the starting mode;
- return to the starting position without the restarting a machine and (or) equipment;
- be of red color to differ by shape and sizes from others controls.

20. Machine and (or) equipment control system must exclude any risk resulting of their joint functioning, and also in case of failure of any part.

When necessary a machine and (or) equipment control system must enable the personnel to block the system start and also stop it.

21. Control panel of a machine and (or) equipment must enable personnel to supervise absence of the personnel or other persons in dangerous zones or control must exclude functioning of a machine and (or) equipment in the presence of the personnel or other persons in dangerous zone. Each start must be preceded by a warning signal, the duration of which allow the persons who are present in dangerous zones to leave it or prevent start of the system.

Machine and (or) equipment control panel system must be equipped with means of display of information about failures of any part of the system, and also the emergency stops (disengaging) of the system and (or) its separate parts.

22. In case of availability of a selector of operating modes of a machine and (or) equipment each position must correspond to a common operating mode, which can be locked in each position.

23. Whenever in certain operating modes of a machine and (or) equipment a higher protection level for personnel is required, the operating mode selector in corresponding positions must:

- disable the automatic control mode,
- permit movements only by controls requiring sustained action,
- prevent any movement liable to pose a danger for personnel;
- prevent operation of parts of machine and (or) equipment not participating in the selected operating mode;
- reduce speed of movement of parts of machine and (or) equipment participating in the selected operating mode.

24. Selected control mode has priority over other operating modes, except for emergency stop.

25. Full or partial failure of power supply and its subsequent re-establishment, as well as interruption of control chain of power supply must not lead to dangerous situations, in particular:

- a machine and (or) equipment must not start unexpectedly;
- a machine and (or) equipment must not be prevented from stopping if the command has already been given,
- no moving parts of a machine and (or) equipment and parts, semi-finished products, tools installed on them must fall or be ejected;
- protection devices of a machine and (or) equipment must remain fully effective.

26. Failure (malfunction or damage) of the control circuit of a machine and (or) equipment must not lead to dangerous situations, in particular:

- a machine and (or) equipment must not start unexpectedly at power re-establishment;
- a machine and (or) equipment must not be prevented from stopping if the command has already been given,

no moving parts of a machine and (or) equipment and fixed units, semi-products and tools must fall or be ejected

protection devices of a machine and (or) equipment must remain fully effective.

27. Machine and (or) equipment must be stable under the foreseen operating conditions for use without risk of overturning, falling or unexpected movement.

In operation manuals (instructions) appropriate means for anchorage must be indicated.

28. Parts of a machine and (or) equipment and their linkages must withstand the stresses, to which they are subject when used. The durability of the materials used must be adequate for the nature of the foreseeable use, in particular as regards the phenomena of fatigue, ageing, corrosion and wear.

29. In operation manuals (instructions) of a machine and (or) equipment the type and frequency of inspection and maintenance for safety reasons must be specified. Where appropriate, the parts subject to wear and the criteria for replacement must be indicated.

30. Where a risk of rupture or disintegration of the parts or units of a machine and (or) equipment remains despite the measures taken, the protection must ensure that in case of rupture their fragments will be contained.

31. Pipes must be able to withstand the foreseen stresses and must be firmly attached and protected against external stresses.

The precautions must be taken to ensure that no risk is posed by a rupture, sudden movement, high-pressure jets.

32. Precautions must be taken to prevent risks from falling or ejected objects of a machine and (or) equipment), their fragments, waste.

33. Accessible parts of machine and (or) equipment must have no sharp edges, no sharp angles, and no rough surfaces likely to cause injury and not related to the purposes of machine (or) equipment functions.

34. Where a machine and (or) equipment are intended to carry out several different operations with the manual removal of the piece between each operation it must be possible for each element to be used separately without the other elements constituting a danger or risk for the exposed person.

35. When a machine and (or) equipment are intended for operations under different conditions of use and speeds, it must be possible to ensure safe and reliable selection and adjustment of these conditions.

36. Moving parts of a machine and (or) equipment must be located in such a way as to avoid traumas or where hazards persist to use guards or protective devices as to prevent all risk of contact with machine and (or) equipment which could lead to accidents.

37. All necessary steps must be taken to prevent accidental blockage of moving parts. In cases where, despite the precautions taken, a blockage is likely to occur, specific protection devices must be provided to enable a machine and (or) equipment to be safely unblocked. The sequence and unblocking methods must be indicated in operation manuals (instructions), and machine and (or) equipment must be marked accordingly.

38. Guards or protective devices used to protection against the risks related to moving parts of machine and (or) equipment, must be selected on the basis of the type of risk analysis.

39. Guards and protective devices must be:

stable;

safe;

- remote from a dangerous zone;
 - do not hinder control in dangerous zones;
 - ensure adjustment and (or) replacement of the tools, and maintenance of machine and (or) equipment.
40. Fixed guards must be securely held in place so that access to the protected area must possible only with tools.
41. Movable guards:
- as far as possible remain fixed to a machine and (or) equipment when open;
 - be associated with a locking device to prevent moving parts operation as long as these parts are no longer closed.
42. Movable guards and protective devices must be are designed (constructed) and incorporated into the control system of machine and (or) equipment so that
- moving parts cannot start up while they are within the operator's reach;
 - exposed person cannot reach moving parts once they have started up,
 - they can be adjusted only by means of tools;
 - absence or failure of one of their components prevents starting or stops the moving parts;
 - protection against any risk of ejection is proved by means of an appropriate barrier.
43. Adjustable guard restricting access to those areas of the moving parts of machine and (or) equipment necessary for the work must:
- be adjustable manually or automatically (according to the type of work involved);
 - be readily adjustable with tools,
 - reduce as far as possible the risk of ejection.
44. Protection devices must incorporate control systems of machines and (or) equipment so that:
- moving parts cannot start up while they are within the operator's reach,
 - exposed person cannot reach moving parts of a machine and (or) equipment once they have started up,
 - absence or failure of one of their components prevents starting or stops the moving parts.
45. Protection devices are mounting (dismantled) only with the use of tools.
46. Where a machine and (or) equipment have an electricity supply, they must be designed (constructed), manufactured and equipped so that a hazard of electric shock can be prevented.
47. In a case if in a machine and (or) equipment it is used not electric energy (hydraulic, pneumatic, thermal energy), they are designed and constructed so that to avoid any danger related to these types of energy.
48. Errors at fitting a machine and (or) equipment, which could be a source of risk must be excluded. If it is impossible, warnings must be affixed directly on a machine and (or) equipment. The information on possible errors at refitting must be given in operation manuals (instructions).
49. Danger caused by mixture of fluids and gases and (or) wrong connection of electric conductors must be excluded to assemblage. If it is impossible, the information on it is underlined on tubes, cables and (or) on connecting blocks.
50. Measures must be taken to eliminate any risk caused by contact or proximity to parts of machine and (or) equipment or materials at high or low temperatures.

The risk of hot or very cold material being ejected from a machine and (or) equipment must be assessed. Where this risk exists, the measures must be taken to reduce it.

Protection against traumas must be provided at contact or proximity to parts of a machine and (or) equipment or using substances with high or low temperature.

Metal surface of hand tools, metal handles and catches of machines and (or) equipment must be coated with heat-insulating material. The temperature of metal surfaces of the equipment must be within admissible limits at a possible (unintended) contact with the exposed skin.

51. Machine and (or) equipment are designed (constructed) to avoid all risk of fire or overheating posed by a machine (or) equipment, or by gases, liquids, dust, vapors or other substances produced or used by machine and (or) equipment.

Machine and (or) equipment are designed (constructed) to avoid any risk of explosion posed by a machine and (or) equipment, gases, liquids, dust, vapors or other substances produced or used by a machine and (or) equipment. To this end the following steps must be taken:

- avoid a dangerous concentration of explosive substances;
- conduct the continuous automatic control over concentration of explosive substances;
- prevent combustion of a potentially explosive atmosphere;
- minimize consequences of any explosion.

52. When designing (constructing) a machine and (or) equipment the levels of noise, infrasound, air and contact ultrasound must be defined.

In the design of machine and (or) equipment an admissible level of the produced noise on personnel must be defined.

53. In operation manuals (instructions) noise level and parameters of uncertainty of a machine (or) equipment must be specified.

54. When designed (constructed) a machine and (or) equipment .limit levels of vibration affecting personnel must be foreseen.

In the design of a machine and (or) equipment admissible risk must be provided for personnel resulting from vibration produced by machines and (or equipment).

55. For hand machines and hand-operated machines, and also for machines with operator inside, in operation manuals (instructions) must be specified mean-square value of the corrected vibration acceleration, affecting personnel, and parameters of uncertainty of this value.

56. Machine and (or) equipment are designed (constructed) and manufactured so that the ionizing radiation must not cause danger.

57. When using laser equipment:

- accidental radiation must be prevented;
- protection must be ensured from effective radiation produced by reflection or diffusion and secondary radiation;
- absence of danger caused by optical equipment for the observation or adjustment of laser equipment must be ensured.

58. When designed (constructed) a machine and (or) equipment the measures on personnel protection must be taken to avoid adverse influence of non-ionizing, static electric, constant magnetic fields, electromagnetic fields of industrial frequency, electromagnetic radiations of radio-frequency and optical ranges.

59. Gases, liquids, dust, vapors and other waste materials produced by a machine and (or) equipment in operation must not be a source of danger.

In case of such danger a machine and (or) equipment must be equipped with devices for containment and (or) evacuation of the said substances, situated as close as possible to the source of emission for continuous automatic control of emissions.

60. Machine and (or) equipment must be equipped with a means of preventing personnel from being closed within a machine and (or) equipment and if it is impossible – they must be equipped with a means of summoning help.

61. Parts of a machine and (or) equipment where persons are liable to stand must be designed to prevent persons from sliding, tripping or falling on or off these parts.

62. Places of maintenance of a machine and (or) equipment must be located outside dangerous zones.

It must be possible to maintain a machine and (or) equipment while they are at a standstill. If for technical reasons such conditions can't be observed, it is necessary that these operations must be possible without risk.

63. Machine and (or) equipment must be have a possibility for mounting diagnostic fault-finding equipment.

Machine and (or) equipment components, which have to be changed frequently, in particular for a change in use, or where they are liable to wear or ageing which may result in an accident), must be capable of being removed and replaced easily and in safety. Access to the components must enable these tasks to be carried out with necessary tools and measuring instruments in accordance with an operation manuals (instructions).

64. For safe access to all areas of technical maintenance a provision must be taken for means of access (stairs, ladders, catwalks etc.)

65. Machine and (or) equipment must be fitted with means to isolate them from energy sources, which are to be clearly identified by color and size. They must be capable of being locked if re-connection could endanger the exposed persons.

The isolator must be capable of being locked also where an operator is unable, from any of the points to which he has access, to check that the energy is still cut off.

After the energy is cut off, it must be possible to dissipate normally any energy remaining or stored in the circuits of machine and (or) equipment. If necessary certain circuits may remain connected to their energy sources in order to protect information, emergency lighting. In this case, the measures must be taken to ensure the operator's safety.

66. Machine and (or) equipment are designed (constructed) so that the necessity of intervention of personnel must be limited, if not foreseen by operation manuals (instructions).

If intervention of personnel cannot be avoided, it must be carried out in safety.

67. Provision is foreseen to clean internal parts of a machine and (or) equipment, containing dangerous substances without entering them, and any unblocking must be possible from outside. Safe cleaning must be ensured.

68. Information necessary to control a machine and (or) equipment must be unambiguous and easily perceived by personnel. This information must not be redundant in order not to strain personnel in operation.

69. If personnel is in danger because of failures in operation of machine and (or) equipment, machine and (or) equipment must be equipped with the warning devices giving a preventive acoustic or light signal. The signals of warning devices of a machine and (or) equipment must be unambiguous and easily perceived. The personnel must have facilities to check the operation of such warning devices at all times.

70. Where risks remain despite all adopted measures, a machine and (or) equipment must be equipped with preventive warnings (signs), which must be easily understood and made in Russian and in the official language of a Member State of the Customs Union in case of relevant requirements in legislation(s) of a Members State (s) of the Customs Union.

ADDITIONAL REGULATIONS OF SAFETY FOR SPECIAL MACHINES AND (OR) EQUIPMENT

Agricultural and other self-propelled machines and mobile machines

1. Machines, the emergence of the dangers associated with their movement, should further meet the safety requirements set out in this Appendix.
2. Visibility from the operator should be sufficient to ensure the safety of the operator and in the hazardous area personnel in the application of the machine and its working attachments for other purposes. If necessary, should be provided with the funds required to eliminate hazards caused by poor visibility.
3. The operator, while on the job, should be able to activate the controls required to operate the machine. Except in those types of work that for safety must be performed using the controls located outside the operator's station.
4. Wheel steering system must be designed and constructed so as to reduce the force on the steering wheel or control levers that occurs due to external influences on the steering wheels.
5. Differential lock management body shall be designed and installed in such a way that the motion of the machine was able to produce unlock differential.

If the machine for manufacturing processes to meet a set of functions is equipped with facilities that exceed its dimensions (eg, stabilizers, arrows, etc.), the operator must be able to start driving to make sure that the equipment is in position, do not create dangerous when moving the machine.

6. In the process of starting the engine should not be possible for any movement of the machine.

Machines must comply with the requirements of the process slowing, stopping, braking and maintain stationary in order to provide security in the operational documents under operating conditions, the level of load, speed.

7. Operator working with the management body should be able to make a complete stop or slow down the self-propelled machine. If you want to ensure safety in the event of a fault management system or violation of a utility, the machine must be equipped with a safety device to reduce speed or stop with a fully independent and easy-access controls.

If you want to ensure safety, the machine must be equipped with a parking brake that provides complete immobility machine.

8. If necessary, the remote control of the machine or system of machines, each control unit must clearly identify the machine for which it was intended.

The remote control system must be designed and constructed in such a way that it can only control the appropriate machine and (or) specific operations.

Machine equipped with remote control system must be designed and constructed in such a way that it responds only to signals specific control unit.

9. Movement of the machine, controlled pedestrian operator, it should be possible only as a result of continuous exposure of the operator to the appropriate authorities. In the process of starting the engine should not be possible for any movement of the machine.

10. Machine control, pedestrian-controlled operator, should be designed to minimize the risks associated with any movement in the direction of the machine operator.

The speed of the machine should be comparable with the speed of pedestrian operator.

If the machine is equipped with a rotating tool, any possibility of its inclusion in the process of the machine in reverse should be excluded, except when the car is driven directly to the rotating tool. In the latter case, the reverse speed machine must not present a danger to the operator.

Energy source failure steering (if any) must not interfere with the management of vehicles throughout the period of time necessary to complete standstill.

11. The machine must be designed, constructed and installed as necessary on the chassis so that arise in the process of movement uncontrolled oscillations of its center of gravity does not affect the stability of the machine and do not create undue stress on its construction.

Propelled machine must be designed and constructed in such a way that the conditions stipulated maintained its stability.

12. If the conditions provided for a self-propelled vehicle rollover risk exists, it should be equipped with ROPS. Roll-over car design of the device shall provide occupants of the vehicle operator to an appropriate volume limit deformation.

Car seat should be suitably designed or be equipped with a restraint system allows the operator is held in place without loss of necessary actions to manage the machine.

13. If, depending on the operating conditions there is a risk of self-propelled machines falling on her various subjects, it must be fitted with protection against falling objects.

In the fall of objects this unit should provide occupants of the vehicle operator to an appropriate volume limit deformation.

14. Machines that are designed for towing or themselves towed must be fitted towing device designed, constructed and placed so as to provide an easy and secure connection or disconnection, and to prevent accidental disconnection during use.

15. Trailed, semi-mounted machines should be equipped with racks of the seats corresponding to the load conditions and soil.

16. Removable mechanical devices PTO linking self-propelled machinery (tractors) with the first rigid support of towed vehicles must be designed and constructed so that any moving part during operation is protected throughout its length.

PTO-propelled machinery (tractors), to which is attached a removable mechanical power take-off device must be protected with a safety cage, firmly fixed to the self-propelled machinery (tractor) or by any other device that provides an equivalent level of protection.

To provide access to the removable device PTO this guard should be able to open. When you install the above devices must remain sufficient space to prevent movement during the self-propelled machinery (tractor) to damage the security fence driveshaft.

Shaft receiving power towed vehicles shall be in fixed on her guard.

Torque limiters and overrunning clutches can be attached to a universal joint drive shaft only by the towed vehicle. Removable mechanical power take-off device must be properly coated with a marking.

17. All towed machinery, requiring an removable mechanical power take-off device that connects them to the self-propelled machinery (tractors), must have a system of its accession, which

of necessity end machines would protect the device and its protective barriers against damage resulting from their contact with the ground or with the machine parts.

The external parts of guards shall be designed, constructed and arranged in such a way that they can not rotate at the same time with a removable mechanical device PTO. The protection shall cover the drive shaft until the forks internal hinges (in the case of simple universal joints) and at least until the middle of the external hinge in the case of wide-angle universal joints.

If the means of access to jobs in the machine located near the removable mechanical power take-off device, they must be designed and constructed in such a way as to exclude the possibility of using the PTO shaft guards as steps, except where this is by design.

18. Battery installation location must be designed and constructed in such a way as to eliminate the risk caused by hitting the operator of the electrolyte in the case of a rollover car and avoid the accumulation of electrolyte vapor in the workplace of the operator.

The machine should be designed and constructed so that the battery can be disconnected with an easily accessible and designed for that purpose device (circuit breaker).

19. Depending on the types of hazards car should be equipped with fire extinguishers located in easily accessible areas, and (or) built-in fire suppression systems.

20. The operator must be protected from the risk of exposure to hazardous substances, where the main function of the machine is sputtering.

21. Machines equipped places for operators must be equipped with appropriate devices transmitting signals from towing vehicle to the towed (if necessary).

22. Workplace operators of agricultural vehicles operating during operation outside the cab of the energy resources must be protected from land abandonment, process materials, dirt.

23. Folding elements designed to reduce transport width and / or height, must have mechanical or other means to keep them in the transport position.

24. Self-propelled machinery and power tools, designed to work in the mountains, must be equipped with detectors of maximum permissible bank.

25. Safety requirements imposed Hinged, semi, trailer, semi-trailer and mounted agricultural equipment, valued at test in the machine-tractor units of mounted, semi-mounted, trailed or mounted machines and power equipment (tractor).

26. If self-propelled machines and power tools are designed for use in hazardous environments, or the machines themselves, and energy resources are extremely hazardous environment, shall be provided to the unit to ensure proper operation of the operator and protect him from foreseeable dangers.

27. At the equipment operator position cab it must allow the operator to quickly leave the car and have at least one emergency exit.

28. With the energy of mounted machine tool, covering transport position light signaling devices energy resources, as well as self-propelled machinery must be equipped with its own external lights.

Lifting machines

1. [Lifting machinery](#) must be designed and constructed so that in the course of their operation (operating and non-operating), and on the other stages of the life cycle (manufacturing, installation, testing, removal, etc.), they kept the alleged geometry, strength, hardness, resistance, wear and corrosion resistance, and - balance (the latter only for certain types of arrows gantry cranes).

Strength, stiffness, stability and balance of account elements of the metal, as well as the corresponding figures hoisting machine safety mechanisms based on established modes of operation must be confirmed by calculation.

2. Lifting machines that move on rails must be equipped with special devices that prevent the risk of their exit from the track, as well as unauthorized movement under the influence of wind loads.

If, despite the presence of these devices, the risk of exit from the track there is, for example, because of a possible seismic damage themselves or track, you need to use additional devices to prevent a possible drop in equipment.

3. Lifting machinery must be designed and manufactured to specified conditions, working hours and work schedule arrangements. Hoist mechanisms of lifting equipment designed for intensive service processes should be equipped with recorders of operating time (data logger).

All the free-standing boom (jib) cranes type must be equipped with recorders of operating time (with load moment limiter).

The materials used for the manufacture of lifting equipment should be selected based on specified operating conditions (operating and non-operating), such as temperature, aggressive environments, explosive environment, etc. The quality of materials to be confirmed by certified manufacturer.

4. Blocks and drums for wire rope must have a diameter not less than determined by the group classification mechanism in which they are installed. Pulley groove and cutting grooves in the drum set should match the diameter wire rope.

Calculated effort to select the wire rope is determined by taking into account the design of the mechanism of reeving. Minimum factor of use (safety factor) wire rope shall not be below the detection group classification mechanism in which the cable is installed. Minimum Factor (factor) for wire rope slings of each branch must be at least 6 subject to the maximum angle between the branches multi branch slings up to 90 Design load for each of the branches multi branch slings take the condition that the load is suspended by three or fewer branches.

Steel wire ropes designed directly for lifting or handling of load (except rope lifts and ring slings) must not have any splices, except termination ends of the ropes.

Quality sealing ends and method of attachment of steel ropes selected to provide the appropriate level of security mechanism and lifting machines in general.

5. Sizes of sprockets are chosen based on the classification of the mechanism and the chain pitch.

Calculated effort of chain is select to considering reeving the design of the mechanism. Minimum factor of use (safety factor) of chain should be below the detection group classification mechanism, in which the chain is installed.

Method of attachment and splice ring chain selected to provide the appropriate level of security mechanism and lifting machines in general.

Minimum Factor (factor) for each chain sling legs should be at least 4, provided the maximum angle between the branches multi branch the condition that the load is suspended by three or fewer branches.

When used in the construction of slings from textile ropes and belts minimum efficiency (safety factor) of textile rope or tape for each separate branch slings shall not be less than 7, provided the maximum angle between the branches multi branch slings up to 90°.

Splicing (firmware) textile ropes and slings should not lead to a decrease in the specified minimum utilization of each branch of the sling.

6. Devices for controlling movements must act in such a way that load-lifting machines on which they are installed are kept safe.

Lifting machinery must be designed, constructed or equipped with special devices that would allow to limit the range of motion of relevant components of machines within limits. If necessary, at the beginning of these devices shall be activated alarm.

If standing and moving by rail lifting machinery may happen to be in close proximity to each other, causing a risk of collision, they must be equipped to prevent any such risk.

Lifting machinery must be designed and constructed so as to avoid dangerous shifts or free and uncontrolled fall posted on their loads, even if the reason for their occurrence is full or temporary blackouts or stopping the machine operator.

Under normal operating conditions, the process of lowering the system by using only the friction brakes should not be the only possible way, except for those vehicles that cannot function otherwise.

Containment devices must be designed and constructed so as to prevent any accidental fall goods.

7. Operating position of hoisting machine shall be such as to ensure the best possible overview of the trajectories of the moving parts in it to prevent possible clashes with people, equipment or other machinery, moving at the same time in close proximity and creating a certain degree of risk.

Lifting machines that move on rails must be designed and manufactured to protect people from injury, the occurrence of which is associated with cargo transport platforms or balances (if any). If necessary to meet this requirement, access to the area moving goods under normal conditions should be excluded.

If during inspection or maintenance, there is a risk of crushing between a fixed element of the transport platform and human body parts, is below or above it, there should be sufficient space in the form of shelter or the installation of mechanical devices blocking the process of movement of transport platform.

8. The movement of the transport platform hoisting machine, serving fixed platform, must be on hard tracks. Lifting system with a swivel mechanism type scissors are also considered as with rigid rails.

If people have access to the transport platform, the hoisting machine shall be designed and constructed to provide a stationary state transport platform for access, particularly when loading or unloading.

Hoisting machine shall be designed and constructed so that the difference between the levels of the transport platform and maintained her landing site caused no risk of tripping or falling.

9. If there is a risk of falling load with transport platform, lifting machine must be designed and constructed so as to prevent the emergence of the risk.

10. In places of embarkation / disembarkation (loading / unloading), the risk of contact with people or other moving platform in moving parts of hoisting machines should be excluded.

If there is risk associated with the possibility of falling people in the area of the transport platform movement at the time of its absence on the landing (loading and unloading), the site should provide protective barriers that exclude the possibility of this risk. These protective barriers should not be opened in the direction of motion area transport platform. They should have a safety device locking, triggered according to the position occupied by the transport platform and prevents the dangerous transport platform until the safety gates are closed and locked, and the discovery of the security fence to stop the transport platform at an appropriate landing (loading and unloading) site.

11. To confirm the efficiency of lifting equipment they must test periodically with static and dynamic loads on 1.25 nominal capacity (static test) and 1.1 nominal capacity (dynamic tests). The methodology of the test procedure should be to write in the operating manual of hoisting machine.

Newly made hoisting machine (free-standing crane of jib type) is further tested in the total stability (again overturning). The methodology of the test procedure should be to write in the operating manual of hoisting machine.

12. Control devices for lifting equipment, manually operated, must be with an automatic return to the starting position. However, the management of all or part of the process of moving, which is completely no risk of collision loads or vehicles, these control devices can be replaced by special devices to perform automatic stop at preset positions without using the device with an automatic return to the starting position.

Cable transport platforms, traction means must be held counterweights or equipment to monitor the tension.

13. Each part of the lifting chain, rope or lifting slings, which is an assembly unit, must be coated with a label, and in cases, where this is not possible, is a plate or permanently attached ring with the name and address of the manufacturer.

Lifting chains, steel ropes, textile ropes and slings must have a certificate with the following information:

- The name and address of the manufacturer;
- Mark of chain, wire rope, textile rope or sling, including nominal size, design and material data;
- Using method of the test;
- Minimum breaking (or breaking) force.

The form of this certificate is approved by the Commission of the Customs Union.

14. On all load-handling devices shall include designation of the material for which they are intended (if the information is necessary for safe operation) and the maximum load capacity.

For handling devices, marking which is not possible, the above information should appear on the label, securely attached to them, or to be located in a place where there is the least risk of the abrasion (eg, as a result of wear and tear) or a negative impact on the level strength lifting devices, and should be clearly visible.

15. At each lifting machine shall be specified maximum nominal capacity, and for the crane with jib or boom – is installed also the plate with load characteristic.

On lifting machinery intended solely for lifting, transport platforms equipped, with potential access to the people, must be marked clearly warning about prohibiting the lifting of people. This warning must be clearly visible from any location from which you can access on the transport platform, and continue throughout the life of the machine.

16. Mechanisms for lifting machinery must be equipped with brakes normally closed types (except brake rotation mechanism, which can be normally open).

The accelerator and brake controls for the movement of machinery running on rails must be manual. However, the deadman's control may be foot-operated.

Safety braking factor of a load lifting machine must be not lower than 1,5 taking into account group classification of mechanisms.

Hoist lifting equipment designed for lifting and transporting dangerous goods must be equipped with two brakes, with brake safety factors of each appointed on the basis of providing a given security.

17. Lifting attachments lifting machines (hook blocks, grips etc.) must comply with the requirements specified provide security and prevent inadvertent disengagement, fall or precipitation of cargo during its rise and transportation, including the fault management system.

Load hooks, except hooks special version must be installed on the thrust ball bearings.

Fixing hook for suspension should be excluded from any unauthorized disconnection suspension during operation.

Each hook hoisting machine shall be equipped with a latch that prevents arbitrary loss sling rings or eyelets hook throat while lifting and transporting cargo.

18. Electrical equipment and control system for lifting equipment must meet the requirements specified provide security and meet the requirements of classification groups established her arrangements.

The control system for lifting equipment must be at least equipped with a zero and current overload protection, avoid unauthorized launch drive mechanisms, and the ability of the personnel injury electrocution.

19. Hydraulic equipment of lifting machine must meet the requirements specified provide security, no damage hydraulic components in contact with elements of metal and avoid unintentional lowering (arrows) in an emergency.

Each hydraulic circuit must be protected from over-pressure relief valve, adjusted to work with a rated load equal to nameplate capacity, and sealed.

20. Lifting machines must be equipped with the necessary safety devices: limiters (eg, stops working movements necessary locks the door into the cab, etc.) and signs (eg, LED indication of voltage supply, display weighing machines, sound alarms started lifting and transporting cargo, etc.). The list and the number of necessary constraints and indexes hoisting machine selected on the basis of its design features, the degree of responsibility and ensuring the required level of security.

21. Control apparatus for lifting equipment must be made and installed in such a way that the management was comfortable and not difficult to monitor the load-handling and body weight.

The direction of movement of the handles and levers should be possible, correspond to the direction of motion mechanisms.

22. Internal dimensions of control cabin for lifting equipment must meet the requirements of ergonomics and for safety of the equipment.

23. Easily accessible on the move of the hoisting machine shall be covered with removable solid barriers, allowing inspection and maintenance of machinery.

Uninsulated live parts of electrical equipment for lifting equipment, located in places which do not exclude the possibility of contact with them, should be protected.

24. Galleries, platforms and ladders lifting equipment must provide the specified strength, and their size - in accordance with established safety requirements.

25. Welded joints calculated elements of metal lifting equipment must ensure their safety.

26. Rail tracks (for lifting equipment, moving on rails) must be designed and constructed so that during operation (operating and non-operating), as well as the rest of the life cycle of hoisting machine (assembly, test, etc.) he retained the stated strength, stiffness, stability, fatigue, wear, and corrosion resistance.

Equipment for processing and reprocessing food , production of cosmetics or pharmaceuticals

1. Materials in contact with foodstuffs, cosmetics or pharmaceutical products must be suitable for the intended use. Surface materials and coatings are suitable for contacting media and enable the cleaning and disinfection without breaking, cracking, chipping, peeling or abrasion.
2. Equipment surfaces in contact with food, cosmetics or pharmaceutical products must be smooth, without ridges or grooves that promote the accumulation of the product.
The equipment must be easy to clean and disinfect (if necessary with prior removal of all parts are easily removed). The interior surfaces of equipment must be curved pair, allowing them to make a thorough cleaning.
3. It is necessary that it was possible to completely remove from the equipment of liquids, gases and aerosols emissions, cosmetics or pharmaceutical products, as well as resulting from cleaning and disinfection.
4. Equipment must be so designed and constructed as to prevent the ingress of foreign matter in it or pests (eg, insects), and the accumulation of organic matter in any inaccessible to clean places.
5. The equipment must be designed and constructed in such a way as to prevent harmful contact auxiliary substances (eg lubricants) with food, cosmetics or pharmaceuticals.

The list of objects of technical regulation subject to confirmation of conformity requirements of Technical regulations of the Customs Union "On the safety of machines and equipment" in the form of certification

Note of [Test-Engineering](#): send us an application and we will notify you the information about the need for the certification or the declaring.

1. Woodworkers, household;
2. Terrain vehicle, snowmobiles and trailers;
3. Garage equipment for motor vehicles and trailers;
4. Agricultural machines;
5. Rigging of garden and forest use mechanized, including electrical;
6. Machines for livestock, poultry and feed production;
7. Mechanized instrument, including electric;
8. Manufacturing equipment for logging, and timber rafting timber yard:
 - Saws gasoline;
 - Electric Chain Saws.
9. Technological equipment for the enterprises of trade, public catering and kitchens.
10. Equipment for stripping and cleaning work and securing mining:
 - Combines treatment;
 - Mechanized complexes;
 - Motor-powered support for Love;
 - Pneumatic tools.
11. Equipment for sinking mines:
 - Heading machines for coal and rock;
 - Lining of metal for development workings;
12. Equipment stem rises and mine transport:
 - Mining scraper conveyors;
 - Conveyors mine tape;
 - Mine and mine hoists.
13. Equipment for drilling and wells, equipment for charging and stemming of blast holes:
 - Pneumatic hammers (hammer drills);
 - Hammers;
 - Machines for drilling in the mining industry;
 - Installation drill.

14. Ventilation and dust control:
 - Fans for mines;
 - Means of dust collection and dust control;
 - Compressors oxygen.
15. [Materials handling equipment, lifting cranes](#)

The list of objects of technical regulation subject to confirmation of conformity requirements of Technical regulations of the Customs Union "On the safety of machines and equipment" in the form of declaring of conformity

1. Turbines and turbine installation;
2. Draught machine;
3. Crushers;
4. Diesel generators;
5. Devices for lifting operations.
6. Conveyors;
7. Electric hoist rope and chain;
8. Manufacturing floor trackless transport;
9. Chemical equipment, oil and gas;
10. Equipment for the processing of polymeric materials;
11. Pumping equipment (pumps, pumping units and installation);
12. Cryogenic equipment, compressors, refrigeration, torch, gas treatment:
 - Set air separation and rare gases;
 - Equipment for the treatment and purification of gases and liquids, equipment heat and mass transfer of cryogenic systems and installations;
 - Compressors (air or gas driven);
 - Refrigerating.
13. Equipment for the processing of metals and flame plating products
14. Equipment Gas and dust;
15. Equipment for pulp and paper;
16. Papermaking equipment;
17. Oilfield equipment, drilling geological exploration;
18. Manufacturing equipment and apparatus for applying coatings to the products of mechanical engineering;
19. Equipment for liquid ammonia;
20. Equipment for the preparation and purification of drinking water;
21. Metalworking;

22. Metal-forming machine;
23. Woodworking equipment (except household woodworking machines);
24. Technological equipment for the foundry;
25. Welding and thermal spraying;
26. Industrial tractors;
27. Forklifts;
28. Bicycles (except for children);
29. Machines for excavation, land reclamation, development and maintenance of mining;
30. Road machine, equipment for making mixes
31. Equipment and machinery construction.
32. Equipment for construction materials
33. Manufacturing equipment for logging, and timber rafting timber yard (except gasoline-powered saws and electric chain)
34. Technological equipment for the peat industry
35. Industrial laundry equipment
36. Equipment for dry-cleaning and dyeing of clothes and household goods
37. Machinery and equipment for utilities
38. Industrial fans.
39. Industrial conditioners.
40. Heaters and air coolers
41. Manufacturing equipment for light industry
42. Technological equipment for the textile industry
43. Technological equipment for the production of chemical fibers, glass fibers and asbestos fibers
44. Processing equipment for the food, dairy and fish industry
45. Technological equipment for milling, feed and elevating equipment
46. Technological equipment for the enterprises of trade, public catering and canteens
47. Polygraph equipment
48. Manufacturing equipment for glass, porcelain, earthenware and cable industry.
49. Heating boilers using liquid and solid fuels
50. Gas and dual fuel burners (except block), oil, integrated in equipment intended for use in technological processes in the manufacturing plants.
51. Water heaters and heating devices using liquid and solid fuels
52. Mills:
 - Cutters multifaceted carbide;
 - Cutting and slitting cutters HSS;
 - Tungsten carbide cutters.
53. Incisors:

- Cutters with carbide tipped
 - Cutters multifaceted carbide
54. Circular saws with carbide inserts for wood processing
55. Fitter tools with insulated handles for work in electrical installations up to 1000 V
56. Shell-cutter:
- Milling cutters for wood with shell-relived teeth;
 - Shell-wood processing mill with knives made of steel or carbide;
 - Shaft-mounted helical cutter teams.
57. Tool of natural and synthetic diamonds:
- Diamond grinding;
 - Circles diamond saw.
58. Tool of synthetic super hard materials based on boron nitride (CBN tool):
- Grinding wheels.
59. Industrial valves.
60. Abrasive, Abrasive materials:
- Grinding wheels, including hand tools;
 - Cut-off wheels;
 - Polishing discs;
 - Grinding wheels flap;
 - Grinding endless belt;
 - Grinding fiber wheels.