APPROVED BY

By the decision of the Customs Union Commission
on 18 October 2011 the year N 825

# Technical Regulations of the Customs Union

# TR CU 012/2011

**"On the safety of equipment for work in explosive atmospheres"**

## Foreword

1. This technical regulation of the Customs Union was developed 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 dated November 18 , 2010 No.

2. This technical regulation of the Customs Union sets in a single customs territory of the Customs Union unified mandatory for application and performance requirements for equipment for operation in explosive environments, in order to ensure the free movement of such equipment put into circulation at the common customs territory Tamo conjugated Union.

3. If in respect of equipment for operation in explosive environments will be taken other technical regulations of the Customs Union and (or) technical regulations of the Eurasian Economic Community (hereinafter - EurAsEC), establishing requirements for the specified equipment, other than the explosion protection, then it must comply with the requirements of these technical regulations of the Customs Union and (or) technical regulations of the Eurasian Economic Community, the action of which on their spread.

## Cm Atiyah- 1. Field of application

1. This technical regulation of the Customs Union establishes requirements for equipment for operation in explosive environments, the implementation of which ensures the safety of its use in explosive environments.

2. This technical regulation of the Customs Union was adopted in order to protect human life and health, property, prevent actions that mislead consumers.

3. This technical regulation of the Customs Union applies to electrical (electrical equipment ), including Ex-components, and non-electrical equipment for use in explosive environments.

The identification feature of equipment for operation in explosive atmospheres and Ex-components is the presence of means of ensuring explosion protection specified in the manufacturer's technical documentation , and explosion protection marking applied to the equipment and Ex-component.

4. Action of the present technical regulations of the Customs Union does not apply to:

- medical products ;

- equipment , during the operation of which the explosion hazard arises only due to the presence of explosive substances and unstable chemical compounds;

- equipment for domestic and non - industrial use in conditions where an explosive atmosphere is formed due to an unforeseen leak of flammable gas;

- the means of individual protection;

- naval vessels, inland and mixed (river-sea) navigation, mobile offshore platforms and drilling rigs to work in marine and inland waters, and other floating means, and also e used on these machines and equipment;

- transport facilities in common use, intended for the carriage of passengers and goods by air, land, rail or water transport;

- nuclear weapons, research facilities of organizations of the nuclear-defense complex, except for the equipment included in them , located in explosive zones.

## Article 2. Definitions

In this technical regulation of the Customs Union, the following terms and their definitions are used:

"emergency mode" - a mode in which the characteristics of the equipment to operate in potentially explosive environments go beyond the limits of the restrictions specified by the manufacturer in the technical documentation;

"analysis of the state of production of the manufacturer" - assessment of the presence of at Manuf applicants have the necessary conditions for ensuring conformity of manufactured equipment requirements of the present technical regulations of the Customs Union;

"input in operation" - documented formalized event, fixing the willingness of equipment to use for the appointment;

"type of explosion protection" - special measures provided in equipment for operation in explosive atmospheres in order to prevent ignition of the surrounding explosive atmosphere;

"explosion" - absence of unacceptable risk of ignition of surrounding explosive environment, associated with the possibility of causing harm and (or) coating damage;

"explosion protection" - measures to ensure the explosion safety of equipment for work in explosive environments;

"explosive zone" - part of a closed or open space, in which there is , or may form explosive Wednesday in scope, requiring special measures of protection at the design, manufacture, installation and operation of equipment;

"explosive atmosphere" - a mixture with air under atmospheric conditions of combustible substances in the form of gas, vapor, mist, dust, fibers or volatile particles, in which, after ignition , a self-sustaining flame propagation occurs ;

" equipment identification " - establishing the identity of equipment characteristics to its essential features;

"manufacturer" - a legal entity or an individual as an individual entrepreneur, carrying out on their own behalf the production and (or) sale of equipment for operation in explosive environments and are responsible for its compliance with the requirements of this technical regulation of the Customs Union;

"importer" - a resident of a member state of the Customs Union, which has concluded with

a non-resident of the member states of the Customs Union, a foreign trade agreement on the transfer of equipment for operation in explosive environments, implements the sale of this equipment and is responsible for its compliance with the safety requirements of this technical regulation of the Customs Union;

"Ex-component" - installed on (a) the equipment explosion-proof technical equipment required for safe operation of the equipment in hazardous environments, but not intended for self parking ceiling elements applications;

"maximum surface temperature" - the highest temperature occurring in the operation on one of the parts or surfaces of equipment if installed modes of its operation, provided in technical documentation ii manufacturer, or damage to, but in the range of deviations established for Ex specific type;

"Marking of protection" - applied to the equipment and explosion-proof components for use in hazardous environments, and indicated in the technical documentation of the manufacturer special sign explosion and identifying the conditional designation of indicators defining explosion-proof equipment and Ex components to work in vzryvoo -hazardous environments;

"normal operation" - equipment operations in which its electrical and mechanical characteristics do not go beyond the limits of the restrictions specified by the manufacturer in the technical documentation;

"equipment for work in explosive atmospheres " - a technical device (a machine, apparatus, stationary or mobile installation, an element of their control systems, protection, a device that provides protection, a control and measuring device), which is designed to work in explosive environments and may contain own potential sources of ignition of the surrounding explosive environment, but its design provides for measures to eliminate the unacceptable risk of ignition of this environment;

"refusal" - an event consisting in violation Started petitiveness condition of the equipment;

"certificate of conformity of the quality management system" - a document by which the certification body for quality management systems certifies the conformity of the quality of the manufacturer's works and services to the requirements of ISO 9000 standards ;

"special sign of explosion safety" - a sign applied to equipment and Ex-components, and certifying that the equipment and Ex-components are made in an explosion-proof design ;

"Temperature autoignition explosive gaseous environment" - the smallest th temperature of the heated surface, which is in predetermined conditions ignites the combustible substance in the form of a gas or vapor mixture;

" self-ignition temperature of a dust layer " - the lowest temperature of a heated surface at which self-ignition of a dust layer of a given thickness occurs on this surface;

" manufacturer's technical documentation " - a system of graphic and text documents used in the design, manufacture and operation of equipment for operation in explosive environments (parts, assembly units, complexes and kits), as well as in the design, construction and operation of protection systems ;

"level of protection" - the level of protection from explosion, assigned to the equipment in dependence on the danger of becoming a source of inflamed tions and conditions of application in potentially explosive environments.

## Article 3. Rules of circulation on the market

1. Equipment for operation in explosive environments is released into circulation in the common customs territory of the Customs Union , provided that it has passed the necessary conformity assessment (confirmation) procedures established by this technical regulation of the Customs Union, as well as other technical regulations of the Customs Union and technical regulations of the Eurasian economic community (yes Leah - EurAsEC), the effect of which is distributed on this equipment.

2. Equipment for operation in explosive atmospheres, the compliance of which with the requirements of this technical regulation of the Customs Union has not been confirmed, should not be marked with a single mark of product circulation on the market of the Member States of the Customs Union and shall not be allowed to be put into circulation on the market.

## Article 4. Explosion safety requirements

1. Equipment for work in explosive atmospheres (hereinafter - equipment) must meet the requirements necessary for safe functioning and operation in relation to the risk of explosion:

to prevent the formation of an explosive atmosphere, which can be created due to the release of flammable substances by the equipment ;

to prevent the ignition of an explosive atmosphere, taking into account the nature of each source of initiation of an explosion;

in accordance with the field of application of the equipment, levels and types of protection according to Appendix 1.

2. The explosion-proof equipment must be provided in the normal mode of operation and within tolerances set technical documentation of the manufacturer, with taking into account the conditions of use.

3. Equipment for use in explosive atmospheres must be p azrabotano and manufactured in such a way that when applying it on purpose and fulfillment of the requirements for installation, operation (use), the carriage (transportation), maintenance and repair services provides the following requirements Safety:

1) the equipment should provide explosion when operating in for the estimated (calculated) lifetime;

2) equipment must operates Vat in actual or forecasted conditions of the environment;

3) Equipment must maintain explosion in the changing conditions of the environment and in the presence of external influences (humidity, vibration, contamination, lightning and switching Perrin conjugation, etc.) Within the constraints of operating conditions specified by the manufacturer.

The parts of the equipment must be designed for the corresponding mechanical and thermal effects and must withstand the effects of existing or suspected corrosive substances;

4) if the equipment contains parts that can be sources of ignition, it must be opened in the off state or contain only

Intrinsically safe circuits, or be protected from touching warning personnel and n adpisi;

5) in the presence of membranes storage of electrical charge (capacitors) and heated elements, which can be sources of ignition, the cover must be opened with a time delay sufficient for discharging embedded capacitors to znach eniya safe residual energy or for reducing the temperature of the heated elements below the maximum temperature of the surface or the temperature class indicated on the equipment.

If at Ex equipment by blowing protective gas after disconnection of power provided continued blowing protective gas before discharging embedded capacitors or reduce the temperature of the heated elements to these above values, the manufacturer must apply on the open part of the equipment a warning sign;

6) the surface temperature of equipment with the explosion protection level "especially explosion - proof " ("very high") and "explosion-proof" ("high") and (or) its parts must be lower than the autoignition temperature of the surrounding explosive gas environment and the autoignition temperature of the dust layer during operation ( within the limits of deviations established in the manufacturer's technical documentation ) in the indicated emergency modes and when environmental conditions change.

The temperature above the temperature Somavia splameneniya surrounding explosive environment while operating (within deviations established in the technical documentation of the manufacturer) is allowed only in the case if the manufacturer takes additional measures to protect said equipment.

Consideration should be given to temperature rise caused by external heat sources and chemical reactions;

7) The temperature of the surface equipment to the level of protection "increased reliability against explosion" ( "higher") not should be above the maximum temperature of the surface in the normal operation mode.

The design of this equipment not must have parts, capable to produce sparks ignites the surrounding explosive environment;

8) equipment of group I must be dustproof and prevent the danger of ignition of coal dust;

9) in equipment of group III, including cable glands and connections, dust (taking into account the size of its particles) must not form explosive mixtures with air or dangerous accumulations inside the equipment;

10) equipment that can emit flammable gases or dust must have closed structures. Available in hardware holes or leaky connections should be designed in such a way that the resulting hectares Threat or dust does not lead to the emergence of a potentially explosive environment with the outer side of the equipment. Openings through which materials are introduced or removed should be designed and equipped to restrict the escape of combustible materials during filling or draining;

11) Equipment designed for use on objects and (or) their sections with the presence of dust should be designed so that dust deposited on its surface , is not ignited. Dust deposits should be limited by cleaning the surfaces, the frequency of which is indicated in the manual (instructions) for operation (application). The surface temperature of the equipment parts must be below the self- ignition temperature of the dust layer. In this case, means should be provided for limiting the surface temperature of equipment parts in order to prevent

dangerous heat generation in dependence on the thickness of the layer deposited dust;

12) provision should be made for safe manual shutdown of equipment included in automatic processes, in case of violation of the established modes of its operation, provided for in the manufacturer's technical documentation, if this does not adversely affect safety;

13) when the emergency off so me equipment accumulated energy must be dissipated to a safe value for the time indicated on the warning labels, placed in the opened cover;

14) hardware should be equipped with appropriate introductory devices, wherein, if the equipment is supposed to be used in conjunction with other equipment and their connection must be safe;

15) if the equipment has detection or warning devices for the control of an explosive atmosphere, the places and conditions for their placement must be provided for in the manufacturer's technical documentation;

16) the equipment must not contain materials capable of emitting flammable substances that create an explosive atmosphere;

17) in the range of working conditions established in the technical documentation of the manufacturer is necessary to exclude the possibility of chemical reaction between the materials used and substances which constitute a potentially explosive environment, which can adversely affect on explosion protection;

18) the equipment should not contain materials that, when their characteristics change under the influence of ambient temperature and operating conditions, as well as in combination with other materials, reduce the level of explosion protection of the equipment ;

19) Ex components mounted in equipment or used for replacement of parts of equipment and systems of protection should safely operate in accordance with the requirements of ensuring explosion during their installation in accordance with the guidelines (instructions) for operation (application) of the manufacturer;

20) equipment that can be exposed to external influences should be provided with additional protective equipment. The equipment must withstand external influences without violating its explosion protection;

21) if the equipment is in the housing or the closed container, which are part of the form of protection, such a housing or container to be opened only with the help of a special tool or with the use of appropriate measures protection;

22) to prevent dangerous overload equipment must be provided for the use of the measuring, regulating and control devices (maximum switches limiters temperature differential relay pressure, flow, relay with delayed time indicat ors excess speed and (or) similar types of devices).

4. The design of the equipment must provide protection against the following potential sources of ignition:

1) sparks (electrical and frictional), flame, high temperatures of heated surfaces, electromagnetic, ultrasonic, optical and ionizing radiation;

2) static electricity (electrostatic charges that can cause dangerous discharges);

3) The stray currents and leakage currents, which may cause The appearance leniyu dangerous corrosion sparks or overheating of the surfaces and to create, in this manner, the possibility of ignition;

4) overheating at a result of friction or impacts, which may occur between the materials and the parts contacting one with the other during rotation or the penetration of foreign objects;

5) pressure compensation, which is carried out by control devices and can cause shock waves or compression, leading to ignition;

6) strikes of lightning;

7) exothermic reactions, including self-ignition of the dust layer .

This should be taken into account all the factors of the risk of explosion and identified the sources of initiation of ignition of explosive environments. Taking into account the assessment of hazard factors , methods of ensuring explosion protection (types of explosion protection) of equipment for its use in explosive environments should be selected .

5. Devices providing equipment protection in emergency modes must meet the following requirements:

1) the security device must functioning acce independently from any necessary for operation of the measuring or control device. Failure of the protective device should be detected with the help of technical means provided for technical documentation;

2) Emergency shutdown should directly result in the action corresponding to the device control without intermediate command program software;

3) emergency means controls security devices should be equipped with mechanisms or other devices lock again for starting. A new start command can be executed and normal operation can only be resumed after a special reset of the restart interlocks;

4) applied device control and indicators must be designed with a view to ensuring the maximum possible level of operational safety in relation to risk of explosion;

5) devices with a measuring function must be designed and manufactured taking into account the operational requirements and the conditions of their use in an explosive atmosphere and meet the requirements for ensuring the uniformity of measurements;

6) it should be possible to check the accuracy of readings and the functioning of devices with a measuring function;

7) alarm threshold is a potential source of ignition devices with a measuring function, d olzhen be below the limiting conditions of occurrence of explosion and (or) the ignition registered hazardous environments, to account specified in the technical documentation of safety factor, operating conditions , and inaccuracies of the measuring system;

8) the software of the equipment it controls must take into account the risks associated with errors in the program.

6. When the equipment is delivered to the consumer , the manufacturer's technical documentation must be attached to it , which must include:

1) name and ( or) designation of equipment (type, brand, model), its parameters and characteristics affecting safety, name and (or) trademark of the manufacturer;

2) information on its purpose;

3) instructions for installation, assembly, commissioning or adjustment;

4) guidance on the use of equipment and safety measures, which are necessary to comply with the operation (including the entry into operation,

the use of direct assignment, technical service, all types of repair and technical assistance with FIR surveys, a means of protection, aimed at the reduction of the intensity and localization of harmful production factors, transportation and terms of storage);

5) assigned service life indicators and (or) assigned resource;

6) a list of critical failures, possible errors of personnel (user), leading to emergency modes of equipment, and actions to prevent these errors;

7) parameters of limiting states;

8) information on the measures that should be taken when detected fault is of the equipment;

9) information on the need for additional equipment with additional elements (cable glands , etc.);

10) requirements for ensuring the preservation of the technical characteristics of the equipment that determine its explosion safety;

11) requirements for packaging, preservation, transportation and storage conditions, assigned storage periods, instructions on the scheduled periods for re-examination of the state, replacement of individual elements, parts, assemblies with an expired shelf life;

12) requirements to ut ilizatsii equipment;

13) rules and conditions of storage, transportation and disposal (if necessary - establishing requirements for them);

14) requirements for personnel;

15) the location of the manufacturer's information for the communication with him;

16) the name and location of the authorized manufacturer of the person of the importer, the information for communication with them;

17) date of manufacture.

Technical documentation is produced on paper . A set of technical documentation on electronic media may be attached to it .

7. In the equipment must be applied marking, which comprises:

1) the name of the manufacturer or its registered trademark ;

2) designation of the type of equipment;

3) serial number;

4) number of the certificate of conformity;

5) explosion protection marking. The image of the special explosion safety mark is set in Appendix 2.

8. Marking and technical documentation of the manufacturer are carried out in the Russian language and in the state (s) language (s) of the Member State Customs Union, etc. When the presence of the relevant requirements in the law (s) of the Member State of the Customs Union.

9. The marking should be applied on the surface of the equipment or tablet available for inspection without disassembly or application of the instrument, and maintained in for the duration of the service equipment.

10. According to the decision of the manufacturer or in accordance with the contract (contract) delivery of marking equipment may include additional information that is important for its safe use, in that including:

1) SG inalnoe voltage or range of nominal voltage;

2) long-term permissible operating voltage;

3) conventional designation of the type of current (if the rated frequency is not indicated );

4) conditional designation class protection from destruction of human electrical current;

5) the degree of protection provided by the enclosure;

6) rated power consumption or useful power or rated current;

7) mass;

8) overall dimensions;

9) date of manufacture.

## Article 5. Ensuring compliance with safety requirements

1. Compliance equipments Nia present technical regulations of the Customs Union is provided by the implementation of its requirements of safety directly, or implementation on a voluntary basis of requirements of interstate standards, and in case of their absence - the national (state) standards of the Member States of the Customs Union, in the result of the application of which on a voluntary basis compliance with

requirements of the technical regulations of the Customs Union and standards containing rules and methods uc investigations (tests) and measurements, in fact including rule selection of samples required for the application and performance requirements of the technical regulations of the Customs Union and the implementation of (confirmed) that the unit for work in explosive environments (hereinafter referred to as standards).

2. The lists of standards referred to in paragraph 1 of this Article shall be approved by the Commission of the Customs Union (hereinafter - the Commission).

**Article 6. Confirmation of conformity**

1. Before being released into circulation in the common customs territory of the Customs Union, the equipment must be subjected to the procedure for confirming compliance with the requirements of this technical regulation of the Customs Union.

Confirmation of conformity of equipment is mandatory in nature and carried out in the form of certification.

2. Procedures for verification of conformity of equipment installed in the present technical regulations of the Customs Union requirements are carried out by accredited op ganami certification (assessment (confirmation)) and accredited test laboratories (centers) included in the Unified Register of bodies on certification and test laboratories (centers) of the Customs Union ...

3. Confirmation of conformity of equipment carried by the schemes in accordance with the Regulation on the application of standard assessment schemes (confirmation) of conformity to technical regulations of the Customs Union, approved by the Commission of the Customs Union:

1) in relation to serially produced equipment:

certification of equipment based on tests of a standard sample in an accredited testing laboratory (center) and analysis of the state of production with subsequent inspection control (scheme 1c);

2) in relation to a limited batch of equipment :

certification of a batch of equipment based on testing samples of equipment from this batch (scheme 3c) in an accredited testing laboratory (center);

Certification units of equipment on the basis of the test unit equipment in

accredited testing laboratory (scheme 4c).

4. Applicant with certification by the scheme 1c may be registered in accordance with its legislation within the Customs Union member states a legal entity or natural person in qual stve individual entrepreneur, or the manufacturer, or performing the functions of a foreign manufacturer under a contract with him in part of ensuring the compliance of the supplied products with the requirements of this technical regulation and in terms of liability for non-compliance of the supplied products with the requirements of this technical regulation of the Customs Union (a person performing the functions of a foreign manufacturer).

5. Applicant with certification scheme 3c, 4c may be registered in accordance with the legislation in its territory of the Customs Union member states a legal entity or natural person in an individual entrepreneur is either the manufacturer or the seller or performing the functions of a foreign of gotovitelya under contract with him, in terms of ensuring the compliance of the supplied products with the requirements of this technical

regulation and in terms of liability for non-compliance of the supplied products with the requirements of this technical regulation of the Customs Union (a person performing the functions of a foreign manufacturer).

6. When carrying out equipment certification :

1) The manufacturer (authorized by the manufacturer of the face), an importer provides the certification body (conformity assessment (confirmation) of conformity) a set of documents on equipment, confirming the compliance of equipment requirements explosion of the technical regulations of the Customs Union, which includes:

technical conditions (if any); operational documents;

a list of standards, the requirements of which this equipment meets, from the List of standards specified in paragraph 1 of Article 5 of this technical regulation of the Customs Union (when applied by the manufacturer );

an explanatory note containing a description of the adopted technical solutions and a risk assessment confirming the fulfillment of the explosion safety requirements of this technical regulation of the Customs Union, if the standards are absent or have not been applied;

certificate of conformity of the manufacturer's quality management system (if any);

contract (the contract on delivery) or shipping documentation (for a batch of equipment);

2) The body of certification (assessment (confirmation) of conformity)

carries out identification of the presented equipment by establishing the identity of its characteristics with the features established in Article 1 of this technical regulation of the Customs Union, as well as the provisions established by paragraphs 8 and 9 of Article 4 of this technical regulation of the Customs Union;

organizes holding test sample (samples) equipment in an accredited test laboratory (center) on the matching requirements of the standards from the List of standards specified in paragraph 1 st Atiyah- 5 of this technical regulation CU and performs protocol analysis (protocols) tests. The test report contains a list of technical documentation (drawings of explosion protection means ), confirming the compliance of the equipment and Ex-component with the requirements of this technical regulation of the Customs Union.

If necessary, caused by the specifics of manufacturing and installation, indicated

manufacturer's technical documentation on manufacturing or assembly, tolerance aetsya conduct testing equipment on site of manufacture and (or) installation.

If the standards of the manufacturer do not apply or are not available, then the authority of certification (assessment (confirmation) of conformity) conducts a confirmation that the unit directly to the requirements of explosion protection of the technical regulations of the Customs Union. To this end , the certification body :

- to use the technical documentation and descriptions adopted technical solutions and evaluation When Skov, confirming compliance with the requirements of explosion safety of this technical regulation of the Customs Union, contained in the explanatory note, the manufacturer determines the specific requirements of security for the certified equipment;

- determines the standards that establish the methods of measurements and tests from the List of standards specified in paragraph 1 of Article 5 of this technical regulation of the Customs Union, or, in their absence, determines the methods of control, measurement and testing of equipment to confirm its compliance with the established specific requirements;

organizes testing of equipment in an accredited testing laboratory (center);

analyzes the state of the manufacturer's production. If the manufacturer I am a certified system of management of quality of production or the development and production of the equipment evaluates the possibility of the system to ensure a steady release of certified equipment, the relevant requirements of the present technical regulation;

When confirming the conformity of a batch of equipment (single equipment), an analysis of the state of production is not carried out;

carries out the inspection control (if provided certification scheme) for certified equipment in during the entire duration of action of the certificate of conformity by the test samples in an accredited test laboratory (center) and (or) analysis of production conditions (Scheme 1c);

issues a certificate of conformity in a unified form approved by the decision of the Commission:

- for serially produced equipment with a validity period of no more than 5 years;
- the term is not set for a batch of equipment (single equipment) .

The certificate of conformity of the Ex-components to the requirements of this technical regulation of the Customs Union is issued upon completion of the procedures specified in this subparagraph in the same form.

The certificate of conformity must contain in the annex, inter alia, the following information:

description of the design and means of ensuring explosion protection ;

special conditions of use (if the sign "X" is indicated in the explosion protection marking );

3) manufacturer ( person authorized by the manufacturer ), importer:

upon receipt of a certificate of conformity, it applies a single mark of product circulation on the market of the Member States of the Customs Union and the registration number of the certification body (assessment (confirmation) of conformity);

generates a set of documents for equipment, which includes:

- documents for equipment specified in subparagraph 1 of this paragraph;
- test report (s) ;
- certificate of conformity;

taking all the necessary measures, to the process of production has been stable

and ensured the compliance of the manufactured equipment with the requirements of this technical regulation of the Customs Union (scheme 1c).

7. In the case of application by the manufacturer in the design and (or) technical documentation confirming compliance with the equipment and (or) Ex-component requirements of the present technical regulations of the Customs Union, the changes affect on the performance explosion-proof equipment, it is in the body of certification (assessment (confirmation ) compliance), has issued a certificate of compliance, the description of the changes, technical documentation (drawings means ensuring of protection) with as amended and revised , and a sample for carrying out additional tests, if the authority of certification (assessment (confirmation) of conformity) deemed insufficient carrying only the examination of the technical documentation with the amended changes to the adoption of decisions on the compliance of equipment and (or) Ex-components of the present technical regulations of the Customs Union with the introduced changes.

In this case , the certification (assessment (confirmation) of conformity) body carries out an examination of the technical documentation (drawings of the means of ensuring explosion protection) with the changes introduced , and if it considers it insufficient, and additional tests of the sample. In case of positive results , the certification body (assessment (confirmation) of conformity) draws up a decision on confirming the validity of the certificate of conformity , taking into account the changes made, or draws up a

new certificate of conformity with the technical regulations of the Customs Union, if the changes require consideration of the equipment and (or) Ex-component as a new product ...

8. On the territory of the Member States of the Customs Union, a set of documents, including documents confirming compliance, must be kept:

for equipment - from the manufacturer (a person authorized by the manufacturer) for at least 10 years from the date of withdrawal (termination) of this equipment from production ;

on party equipment (single product) - from the importer, manufacturer or authorized manufacturer person in for no less than 10 years from the date of implementation of the last products of the party.

Documents and materials confirming the results of certification are stored in the certification body that issued the certificate of conformity for at least 5 years after the expiration of the certificate of conformity.

The set of documents must be provided to the state supervisory authorities upon their request.

**Article 7. Marking with a single mark of product circulation on the market of the Member States of the Customs Union**

1. Equipment that meets the requirements of this technical regulation of the Customs Union and has passed the conformity assessment procedure in accordance with Article 6 of this technical regulation of the Customs Union must be marked with a single mark of product circulation on the market of the Member States of the Customs Union.

The equipment is marked with a single mark of product circulation on the market of the Member States of the Customs Union if it meets the requirements of all technical regulations of the Customs Union and technical regulations of the EurAsEC that apply to it and provide for the application of a single mark of product circulation on the market of the Member States of the Customs Union.

2. Marking with a single mark of product circulation on the market of the Member States of the Customs Union is carried out before the release of equipment into circulation on the market .

3. Single sign -treatment products on the market of the Member States of the Customs Union is applied to each unit of equipment (products) in any way, providing a clearer and clearer picture in during the entire period of service equipment.

A single mark of product circulation on the market of the Customs Union member states is applied to the product itself , and is also given in the manufacturer's technical documentation attached to it .

4. It is allowed to apply a single mark of product circulation on the market of the member states of the Customs Union only on the packaging and an indication of the manufacturer's technical documentation attached to it , if this mark cannot be applied directly to the equipment due to design features.

**Article 8. Safeguard clause**

1. The Member States of the Customs Union are obliged to take all measures to restrict, prohibit the release into circulation of equipment for operation in explosive environments in the common customs territory of the Customs Union, as well as withdraw from the market such equipment that does not meet the safety requirements of this technical regulation of the Customs Union.

**Appendix 1 to the** technical regulation
**Customs Union "On the safety of equipment for work in explosive environments"**
**(TR CU 012/2011)**

## Classification until exponent, determine the explosion safety equipment

### I. Classification of hazardous areas

1. Classification of hazardous areas is used in order to select equipment, according to its level of explosion protection, ensuring the safe operation of such equipment in the relevant hazardous area.

2. Depending on the frequency and duration of the presence of an explosive gas or dust atmosphere, explosive zones are divided into the following classes:

1) for explosive gas environments - classes 0, 1 and 2;

2) for an explosive Pylev 's media - classes 20, 21 and 22.

### II. Equipment classification into groups

Depending on the field of application, the equipment is divided into the following groups:

1) Equipment Group I - equipment adapted for use in underground workings shafts and their ground-based structures, hazardous for miner gas and (or)

combustible dust. Depending on the design, equipment of group I can have one of three levels of protection;

2) equipment of group II - equipment intended for use in places (except for underground workings of mines and their surface structures), hazardous in explosive gas environments. Depending on the design, equipment of group II can have one of three levels of protection. Equipment of group II can be subdivided into subgroups IIA, IIB, IIC , depending on the category of explosive mixture for which it is intended;

3) equipment of group III - equipment intended for use in places (except for underground workings of mines and their surface structures), hazardous in explosive dust environments. In dependence of the structure may have one of three levels of protection. Group III The equipment may be divided into sub-groups IIIA, IIIB, IIIC in dependent imosti of characteristics hazardous environment for which it is intended.

## III. Equipment classification by explosion protection levels

1. Equipment , depending on the danger of becoming a source of ignition and the conditions of its use in explosive atmospheres, is classified according to the levels of explosion protection:

1) "especially explosion-proof" ("very high");

2) "explosion-proof" ("high");

3) "increased reliability against explosion" ("increased").

2. Level of protection "osobovzryvobezopasny" ( "very high") extends on the equipment, which is intended for operation in accordance with an established manufacturer's operational parameters provides a required level of protection even at a low probability faults, is functioning at the presence of explosive environment and in which when failure of one means of protection desired level of protection provided by the second independent means of protection or the required level of protection is provided at two failures means protection occurring independent mo apart.

Equipment of this level of protection is intended for use in underground workings shafts and their ground buildings, in which there exists a danger of the presence of mine gas and (or) a combustible dust (equipment group I) or on the objects and (or) their sections (groups of machinery II and III) , an explosive environment created by mixtures with air flammable substances in a gas, vapor, mist or dust, fibers, volatiles present continuously over a prolonged period in or frequently.

3. The "explosion-proof" ("high") explosion protection level applies to equipment designed to operate in accordance with the manufacturer's specified operating parameters and to provide the required explosion protection level and function in normal operation with one recognized probable fault.

Equipment group I a given level of protection must be able to safely turn off when the regulated concentration mine gas in the environment.

Equipment of this level of protection is intended for use in underground mines and ground buildings, in which there is a possibility of presence of mine gas and (or) a combustible dust (equipment group I) l for at

objects and (or) their portions (equipment groups II and III), in which the likely occurrence of an explosive medium in the form of gas, vapor, mist, dust, fibers or volatile particles.

4. Level of protection "increased safety against explosion" ( "higher") applies to equipment designed to operate in accordance with established manufacturer operational parameters and providing functioning t nly in a specified manufacturer normal operation.

Equipment of group I of this level of protection has the ability to safely shut down when the regulated concentration of firedamp in the environment is reached .

Equipment of uro vnya Ex intended for use in underground workings shafts and their ground constructions (equipment group I) or on the objects , and (or) their portions (equipment groups II and III), in which during normal conditions of operation the presence of mine gas and (or ) combustible dust or explosive environment created by mixtures of air with the combustible substance in the form of gas, vapor, mist or dust, fibers, volatile substances unlikely and if explosive Wednesday exists, only in within a short time.

## IV. Types of equipment explosion protection

1. The dependence of the provided special measures for the prevention of a surrounding explosive atmosphere ignition equipment may have one type or a combination of several types of protection:

1) in relation to electrical equipment intended for operation in explosive gas atmospheres:

"d" - flameproof enclosure;

"e" - increased protection;

"i" ("ia", "ib", "ic") - intrinsic safety (intrinsically safe electrical circuit);

"m" ("ma", "mb", "mc") - sealing with a compound;

"nA" - non - sparking equipment;

"nC" - a contact device in a flameproof casing, or hermetically sealed device, or non incendive component or sealed device;

"nR" - sheath with limited m skip- gases;

"nL" - equipment containing electrical circuits with limited energy;

"nZ" - shell under excess pressure;

"o" - oil filling of the shell;

"p" ("px", "py", "pz") - filling or purging the shell under excess pressure;

"q" - quartz filling of the shell;

"s" - special type of explosion protection;

2) in relation to electrical equipment, intended for operation in explosive dusty environments:

"t" ("ta", "tb", "tc") - shell protection ;

"i" ("ia", "ib") - intrinsic safety (intrinsically safe electrical circuit);

"m" ("ma", "mb", "mc") - sealing with a compound;

"p" - filling or purging the shell under excess pressure;

"s" - special type of explosion protection;

3) in respect of non-electrical equipment intended for operation in hazardous environments:

"c" - structural safety;

"b" - control of the ignition source ;

"k" - liquid immersion protection ;

"d" - protection by a flameproof enclosure ;

"fr" - protection by a shell with limited gas passage ;

"p" - high pressure protection ;

4) other recognized types of explosion protection.

2. Types of equipment explosion protection are determined by the following special measures provided for equipment of different explosion protection levels in order to prevent ignition of the surrounding explosive atmosphere:

1) explosion - proof enclosure "d" - type of equipment explosion protection , in which its parts capable of igniting an explosive gas atmosphere are enclosed in an enclosure capable of withstanding the explosion pressure of an explosive mixture inside it and preventing the explosion from spreading into the surrounding explosive atmosphere;

2) protection by enclosure "t" - type of explosion protection, in which the equipment is protected by an enclosure that provides protection against dust penetration and by means of limiting the surface temperature ;

3) increased protection of species "e" - type of protection, with which used , additional measures against the possibility of exceeding allowable temperature, and the occurrence of sparks in the normal or in said (emergency) mode of operation;

4) intrinsic safety (intrinsically safe electrical circuit) "i" - type of explosion protection based on the limitation of electrical energy (power) in an electrical discharge and the temperature of the elements of electrical equipment to a value below the level causing ignition from sparking or thermal effects;

5) The sealing compound "m" - type of protection, with which the part of equipment capable of igniting an explosive atmosphere due to sparks or heat, are a compound to exclude the ignition I explosive environment while operating or installation;

6) protection type "n" - type of explosion protection, in which additional protection measures are taken to exclude ignition of the surrounding explosive gas environment in normal and specified (emergency) modes of operation of electrical equipment;

7) oil filling of the shell "o" - type of explosion protection, in which the equipment or parts of the equipment are immersed in a protective liquid, excluding the possibility of ignition of an explosive gas atmosphere that may be present above the liquid or outside the shell;

8) filling or purging the enclosure under excess pressure "p" - a type of explosion protection that excludes the entry of the external environment into the enclosure or room due to the presence of a protective gas in them under a pressure exceeding the pressure of the external environment;

9) quartz filling of the shell "q" - a type of explosion protection, in which parts capable of igniting an explosive atmosphere are fixed in a certain position and completely surrounded by a filler that prevents ignition of the external surrounding explosive atmosphere;

10) a special type of protection "s" - the type of protection, based on the measures of protection other than the protection measures provided by subparagraphs 1 - 9 of this paragraph, but acknowledged sufficient to ensure the explosion in time evaluation or and spytany;

11) constructional safety "c" - type of protection, with which the received additional measure of protection, excluding the possibility of ignition of surrounding explosive environment from heated surfaces, sparks and adiabatic

compression created by moving parts of equipment;

12) controls the ignition source "b" - type of protection, comprising installing a non-electrical equipment device, which eliminates the formation of the source of ignition and through which Interna nnie embedded sensors monitor parameters of the elements of equipment and cause tripping circuit protective devices or sensors;

13) protection by liquid immersion "k" - type of protection, in which potential ignition sources are safe or separated from an explosive atmosphere by full or partial immersion in a protective liquid, when hazardous surfaces are permanently covered with a protective liquid so that an explosive atmosphere that may be present above uro vnya liquid or outside the shell equipment could not be ignited;

14) protection by enclosure with limited passage of gases "fr" - type of protection, in which the entry of the surrounding explosive atmosphere into the enclosure is limited by means of the enclosure to an acceptable low level, at which the concentration of the explosive atmosphere in the enclosure is below the lower concentration limit of flame propagation .

## V. Classification of equipment by temperature classes

In dependence on the maximum allowable surface temperature of the equipment group II is subdivided into the following temperature classes:

1) T1 - 450 degrees Celsius;
2) T2 - 300 degrees Celsius;
3) T3 - 200 degrees Celsius;
4) T4 - 135 degrees Celsius;
5) T5 - 100 degrees Celsius;
6) T6 - 85 degrees Celsius.

**Appendix 2 to the** technical regulation
**Customs Union "On the safety of equipment for work in explosive environments"**
**(TR CU 012/2011)**

## Image of a special explosion-proof sign

fig. 1

fig. 2

**Description of the image of the special sign of explosion protection**

The image of a special explosion safety sign is a combination of two stylized letters of the Latin alphabet "E" and "x", the height of the letter "x" is 5/9 of the height of the letter "E", inscribed in a rectangle on a light (Fig. 1) or on a contrasting background ( fig. 2), with a height to width ratio of 11/8.

Ex stands both explosion (Explosion-proof).

The dimensions of the special explosion protection mark are determined by the manufacturer of the equipment for use in explosive atmospheres. The base dimension for the height of the rectangle must be at least 10 mm. The dimensions of the special explosion safety mark must ensure the legibility of its elements and their legibility with the naked eye against the general colored background of the equipment or Ex-component.

**APPROVED BY**
By the decision **of the Customs Union Commission**
**of October 18, 2011 N**
**825 (as amended by the** Decision of
the **Board of the Eurasian Economic**
**Commission of October 25,**
**2016 N 119)**

**Scroll**
**standards, as a result of which, on a voluntary basis, compliance with the requirements of the technical regulations of the Customs Union "On the safety of equipment for work in explosive atmospheres" (TR CU 012/2011)**

| N p / p | Elements of technical regulations Customs Union | Standard designation | Name of the standard | Note |
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| one | 2 | 3 | 4 | five |
| one | paragraphs 1, 2 and 5 of article 4 | GOST R IEC 60050-426-2011 | International Electrotechnical Dictionary. Part 426. The equipment for explosive environments | |
| **General requirements for equipment for explosive environments** | | | | |

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|---|---|---|---|---|
| 2 | paragraphs 1 and 2, subparagraphs | GOST 30852.0-2002 (IEC 60079-0: 1998) | Explosion-proof electrical equipment. Part 0. General requirements | applies to 01.01.2018 |
| 3 | 1 - 8, 10 and 12-22 points 3, paragraphs 4, 5 - 9 and 10 of Article 4, Sections II - V of Annex 1 | GOST 31610.0-2012 (IEC 60079-0: 2004) | Electrical equipment for explosive gas atmospheres . Part 0. General requirements | |
| 4 | | GOST IEC 61241-0-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 0. General requirements | |
| five | | GOST R IEC 60079-0-2011 | Explosive atmospheres. Part 0. Equipment. General Requirements | applies to 01.12. 2016 |
| 6 | | GOST 31610.0-2014 (IEC 60079-0: 2011) | Explosive atmospheres. Part 0. Equipment. General Requirements | applied with 01.12.2016 |

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| **Kind of protection "flameproof casing " d "** | | | | |
| 7 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 30852.1-2002 (IEC 60079-1: 1998) | Explosion-proof electrical equipment. Part 1. Explosion protection "flameproof enclosure" | applies to 01.01.2018 |
| eight | | GOST IEC 60079-1-2011 | Explosive atmospheres. Part 1. Equipment with type of protection "flameproof enclosures" d " | |
| nine | | GOST IEC 60079-1-2013 | Explosive atmospheres. Part 1. Equipment with type of protection "flameproof enclosures " d " | |
| **Type of protection "shell under excess pressure " p "** | | | | |
| 10 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 30852.3-2002 | Explosion-proof electrical equipment . Part 2. Filling or purging the shell under excess pressure p | applies to 01.01.2018 |
| eleven | | GOST IEC 60079-2-2011 | Explosive atmospheres. Part 2. Equipment with type of protection, filling or purging of the enclosure under excess pressure "p" | |

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| 12 | | GOST IEC 60079-2-2013 | Explosive atmospheres. Part 2. Equipment with the type of protection "enclosure under redundant pressure "p" | |
| **Type of protection "quartz shell filling " q "** | | | | |
| 13 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , S ection IV | GOST 30852.6-2002 (IEC 60079-5: 1997) | Explosion-proof electrical equipment. Part 5. Quartz filling of the shell q | |
| fourtee n | | GOST 31610.5-2012 / IEC 600 79-5: 2007 | Electrical equipment for explosive gas atmospheres . Part 5. Quartz filling of the shell "q" | |
| fifteen | | GOST R IEC 60079-5-2012 | Explosive atmospheres. Part 5. Equipment with type of protection "quartz filling of the shell" q " | |
| **Type of protection "oil- filled enclosure " o "** | | | | |

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| sixteen | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 30852.7-2002 (IEC 60079-6: 1995) | Explosion-proof electrical equipment. Part 6. Oil filling of the shell "o" | applies t o 01.01.20 18 |
| 17 | | GOST R IEC 60079-6-2012 | Explosive atmospheres. Part 6. Equipment with the type of protection "oil filling of the enclosure " o " | |
| 18 | | GOST 31610.6 -2015 / IEC 600 79-6: 2015 | Explosive atmospheres. Part 6. Equipment with type of protection "filling the enclosure liquid "o" | |
| **Increased protection type "e"** | | | | |

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| nineteen | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 30852.8-2002 | Explosion-proof electrical equipment. Part 7. Protection of species "e" | |
| twenty | | GOST 31610.7 -2012 / IEC 600 79-7: 2006 | Electrical equipment for explosive gas atmospheres . Part 7. Increased protection type "e" | |
| 21 | | GOST R IEC 60079-7-2012 | Explosive atmospheres. Part 7. Equipment. Increased p rotection type "e" | |
| **Classification of zones. Explosive gas atmospheres** | | | | |
| 22 | paragraphs 1, 2 and 5 of article 4, section I of annex 1 | GOST 30852.9-2002 (IEC 60079-10: 1995) | Explosion-proof electrical equipment . Part 10. Classification of hazardous areas | applies to 01.01.2018 |
| 23 | | GOST 31610.10 -2012 / IEC 6007 9-10: 2002 | Electrical equipment for explosive gas atmospheres . Part 10. Classification hazardous areas | applies to 01.01.2018 |
| 24 | | GOST IEC 60079-10-1-2011 | Explosive atmospheres. Part 10-1. Classification of zones. Explosive gas atmospheres | |
| 25 | | GOST IEC 60079-10-1-2013 | Explosive atmospheres. Part 10-1. Classification of zones. Explosive gas atmospheres | |
| **Classification of zones. Explosive dust atmospheres** | | | | |
| 26 | paragraphs 1, 2 and 5 of article 4, section I of annex 1 | GOST IEC 61241-10-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 10. Classification of areas where there is or can combustible dust present | |
| 27 | | GOST IEC 60079-10-2-2011 | Explosive atmospheres. Part 10-2. Classification of zones. Explosive dust atmospheres | |

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| **Type of protection "intrinsically safe electrical circuit " i "** | | | | |
| 28 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , S ection IV | GOST 30852.4-2002 (IEC 60079-3: 1990) | Explosion-proof electrical equipment . Part 3. Sparking mechanisms for testing electrical circuits for intrinsic safety | applies to 01.01.2018 |
| 29 | | GOST 30852.10-2002 (IEC 60079-11: 1999) | Explosion-proof electrical equipment . Part 11. Intrinsically safe electrical circuit "i" | applies to 01.01.2018 |
| thirty | | GOST 31610.11-2012 / IEC 60079-11: 2006 | Electrical equipment for explosive gas atmospheres . Part 11. Intrinsically safe electrical circuit "i" | |
| 31 | | GOST R IEC 60079-27-2012 | Explosive atmospheres. Part 27. The concept of an intrinsically safe system field bus (FISCO) | |
| 32 | | GOST IEC 61241-11-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 11. Intrinsically safe equipment "iD" | |
| 33 | | GOST R IEC 60079-11-2010 | Explosive atmospheres. Part 11. Intrinsically safe electrical circuit "i" | applies to 01.12.2016 |
| 34 | | GOST 31610.11-2014 (IEC 60079-11: 2011) | Explosive atmospheres. Part 11. Equipment with type of protection "intrinsically safe electrical circuit" i " | applied with 01.12.2016 |
| **Protection of equipment by rooms under excess pressure "p"** | | | | |
| 35 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , S ection IV | GOST 30852.12-2002 (IEC 60079-13: 1982) | Explosion-proof electrical equipment . Part 13. The design and maintenance of premises, protected by excessive pressure | |
| 36 | | GOST 30852.15-2002 (IEC 60079-16: 1990) | Explosion-proof electrical equipment . Part 16. Forced ventilation to protect the premises, in which mounted analyzers | |
| 37 | | GOST R IEC 60079-13-2010 | Explosive atmospheres. Part 13. Protection | applies to |

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| | | | premises equipment under excess pressure "p" | 01.12.2016 |
| 38 | | GOST 31610.13-2014 (IEC 60079-13: 2010) | Explosive atmospheres. Part 13. Protection of premises equipment under excess pressure "p" | applied with 01.12.2016 |
| **Design, selection and installation of electrical installations** | | | | |
| 39 | paragraphs 1, 2 and 5 of article 4 | GOST 30852.13-2002 (IEC 60079-14: 1996) | Explosion-proof electrical equipment . Part 14. Electrical installations in hazardous areas (except for underground workings) | applies to 01.01.2018 |
| 40 | | GOST IEC 61241-1-2-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 1. Electrical equipment protected by enclosures and surface temperature limitation . Section 2. Selection, installation and operation | |
| 41 | | GOST IEC 60079-14-2011 | Explosive atmospheres. Part 14. Design, selection and installation of electrical installations | |
| 42 | | GOST IEC 60079-14-2013 | Explosive atmospheres. Part 14. Design, selection and installation of electrical installations | |
| **Type of protection "n"** | | | | |
| 43 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 30852.14-2002 | Explosion-proof electrical equipment . Part 15. Protection type n | applies to 01.01.2018 |
| 44 | | GOST 31610.15-2012 / IEC 60079-15: 2005 | Electrical equipment for explosive gas atmospheres . Part 15. Construction, testing and marking of electrical equipment with type of protection "n" | |
| 45 | | GOST R IEC 60079-15-2010 | Explosive atmospheres. Part 15. Equipment with type of protection "n" | applies to 01.12.2016 |

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| 46 | | GOST 31610.15-2014 / IEC 60079-15: 2010 | Explosive atmospheres. Part 15. Equipment with type of protection "n" | applied with 01.12.2016 |

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| **Checking and maintenance services of electrical** | | | | |
| 47 | paragraphs 1, 2 and 5 of article 4 | GOST 30852.16-2002 (IEC 60079-17: 1996) | Explosion-proof electrical equipment . Part 17. Inspection and maintenance of electrical installations in hazardous areas (except for underground workings) | applies to 01.01.2018 |
| 48 | | GOST 31610.17-2012 / IEC 60079-17: 2002 | Electrical equipment for explosive gas atmospheres . Part 17. Inspection and technical maintenance of electrical installations in hazardous areas (except for underground workings) | applies to 01.01.2018 |
| 49 | | GOST IEC 60079-17-2011 | Explosive atmospheres. Part 17: Inspection and maintenance services of electrical | |
| fifty | | GOST IEC 60079-17-2013 | Explosive atmospheres. Part 17: Inspection and maintenance services of electrical | |
| **Type of protection "sealing with compound " m "** | | | | |
| 51 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 30852.17-2002 (IEC 60079-18: 1992) | Explosion-proof electrical equipment . Part 18. Explosion protection of the type "sealing with a compound "m" | applies to 01.01.2018 |
| 52 | | GOST R 52350.18-2006 (IEC 60079-18: 2004) | Electrical equipment for explosive gas atmospheres . Part 18. Construction, testing and marking of electrical equipment with explosion protection type "sealing with compound" m " | |

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| 53 | | GOST IEC 61241-18-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 18. Protection by compound "mD" | |
| 54 | | GOST R IEC 60079-18-2012 | Explosive atmospheres. Part 18. Equipment with type of protection "sealing with compound " m " | |
| **Repair, inspection and restoration of electrical equipment** | | | | |
| 55 | paragraphs 1, 2 and 5 of article 4 | GOST 30852.18-2002 (IEC | Explosion-proof electrical equipment . Part | |

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| | | 60079-19: 1993) | 19. Repair and inspection of electrical equipment used in explosive gas atmospheres (except for underground workings or applications related to the processing and production of explosives ) | |
| 56 | | GOST R IEC 60079-19-2011 | Explosive atmospheres. Part 19. Repair, inspection and restoration of electrical equipment | applies to 01.12.2016 |
| 57 | | GOST 31610.19-2014 / IEC 60079-19: 2010 | Explosive atmospheres. Part 19. Repair, inspection and restoration of electrical equipment | applied with 01.12.2016 |
| **Characteristics of substances for the classification of gas and vapor. Test methods and data** | | | | |
| 58 | paragraphs 1, 2 and 5 of article 4 | GOST 30852.2-2002 (IEC60079-1A: 1975) | Explosion-proof electrical equipment. Part 1. Explosion protection of the "flameproof enclosure" type. Appendix 1. Appendix D. Method determining a safe experimental maximum clearance | used is Busy to 01.01.2018 |
| 59 | | GOST 30852.5-2002 (IEC 60079-4: 1975) | Explosion-proof electrical equipment. Part 4. Method for determination of autoignition temperature | applies to 01.01.2018 |
| 60 | | GOST 30852.11-2002 (IEC 60079-12: 1978) | Explosion-proof electrical equipment . Part 12. Classification of mixtures of gases and vapors with air on safe experimental maximum clearances and minimum flammable currents | applies to 01.01.2018 |

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| 61 | | GOST 30852.19-2002 (IEC 60079-20: 1996) | Explosion-proof electrical equipment . Part 20. Data on combustible gases and vapors related to the operation of electrical equipment | applies to 01.01.2018 |
| 62 | | GOST 31610.1.1-2012 / IEC 60079-1-1: 2002 | Electrical equipment for explosive gas atmospheres . Part 1-1. Flameproof enclosures "d" Test method for determining safe experimental maximum clearance | |
| 63 | | GOST R IEC 60079-20-1-2011 | Explosive atmospheres. Part 20-1. Characteristics | |

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| | | | substances for the classification of gas and vapor. Test methods and data |
| **Characteristics of materials. Combustible dust test methods** | | | |
| 64 | paragraphs 1, 2 and 5 of article 4 | GOST IEC 61241-2-1-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 2. Test methods . Section 1. Methods for determining the self-ignition temperature of combustible dust |
| 65 | | GOST IEC / TS 61241-2-2-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 2. Test methods. Section 2. Method for determining the specific electrical resistance of combustible dust in layers |
| 66 | | GOST R IEC 61241-2-3-99 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 2. Test methods . Section 3. Method of determination minimum ignition energy of dust-air mixtures |
| 67 | | GOST R 54745-2011 | Explosive atmospheres. Part 20-2. Characteristics of materials. Combustible dust test methods |
| **Intrinsically safe systems** | | | |
| 68 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST R 52350.25-2006 (IEC 60079-25: 2003) | Electrical equipment for explosive gas atmospheres . Part 25. Intrinsically safe systems |

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| 69 | | GOST R IEC 60079-25-2012 | Explosive atmospheres. Part 25. Intrinsically safe systems |
| **Equipment with equipment protection level Ga** | | | |
| 70 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 31610.26-2012 / IEC 60079 -26: 2006 | Explosive atmospheres. Part 26. Equipment with equipment protection level Ga |
| **Protection of equipment and transmission systems using optical radiation** | | | |
| 71 | paragraphs 1, 2 and 5 of article 4, | GOST 31610.28-2012 / IEC | Explosive atmospheres. Part 28. Protection |

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| | Section IV of Appendix 1 | 60079-28: 2006 | equipment and transmission systems using optical radiation | |
| **Gas analyzers** | | | | |
| 72 | points 1, 2 and 5, subparagraphs 1 - 8 and 12-22 | GOST R 52350.29.1-2010 (IEC 60079-29-1: 2007) | Explosive atmospheres. Part 29-1. Gas analyzers. General technical requirements and test methods for combustible gas analyzers | |
| 73 | article 4, paragraph 3 , section IV appendix 1 | GOST R 52350.29.2-2010 (IEC 60079-29-2: 2007) | Explosive atmospheres. Part 29-2. Gas analyzers. Requirements for the selection, installation, use and maintenance of gas analyzers for combustible gases and oxygen | |
| 74 | | GOST IEC 60079-29-1-2013 | Explosive atmospheres. Part 29-1. Gas analyzers. Performance requirements for combustible gas analyzers | |
| 75 | | GOST IEC 60079-29-2-2013 | Explosive atmospheres. Part 29-2. Gas analyzers. Requirements for the selection, installation, use and maintenance of gas analyzers for combustible gases and oxygen | |

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| 76 | | GOST IEC 60079-29-3-2013 | Explosive atmospheres. Part 29-3. Gas analyzers. Functional Safety Manual for Stationary Gas Analytical systems | |
| 77 | | GOST R 52350.29.4-2011 (IEC 60079-29-4: 2009) | Explosive atmospheres. Part 29-4. Gas analyzers. General technical requirements and test methods for combustible gas analyzers with an open optical channel | |
| **Resistive distributed electric heater** | | | | |
| 78 | points 1, 2 and 5, subparagraphs 1 - 8 and 12 - 22 article 4, paragraph 3 , section IV appendix 1 | GOST R IEC 62086-1-2005 | Electrical equipment for explosive gas atmospheres . Network electrical resistive heaters . Part 1. General technical requirements and test methods | |
| 79 | | GOST R IEC 62086-2-2005 | Electrical equipment for explosive gas atmospheres . Network electrical resistive heaters . Part 2. Requirements for design, installation and maintenance | |
| 80 | | GOST IEC 60079-30-1-2011 | Explosive atmospheres. Resistive distributed electric heater. Part 30-1. General technical requirements and test methods | |
| 81 | | GOST IEC 60079-30-2-2011 | Explosive atmospheres. Electric heater resistive distributed. Part 30-2. Guidance on the design, installation and maintenance services | |
| **Protection against dust ignition with "t" casings** | | | | |
| 82 | points 1, 2 and 5, subparagraphs 1 - 8 and 12-22 paragraph 3 of article 4 | GOST R IEC 60079-31-2010 | Explosive atmospheres. Part 31. Equipment with type of protection against dust ignition "t" | |
| 83 | | GOST IEC 60079-31-2013 | Explosive atmospheres. Part 31. Equipment with protection against dust ignition by enclosures "t" | |

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| **Electrostatics** | | | | |
| 84 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 31613-2012 | Electrostatic Intrinsic Safety. General technical requirements and test methods | |
| 85 | | GOST 31610 .32-1-2015 / IEC / TS 60079-32-1: 2013 | Explosive atmospheres. Part 32-1. Electrostatics. Dangerous manifestations. Management | |
| **Special type of protection "s"** | | | | |
| 86 | Article 4, paragraphs 1, 2 and 5 , Annex 1 , Section IV | GOST 22782.3-77 | Explosion-proof electrical equipment with a special type of explosion protection. Technical requirements and test methods | |
| 87 | | GOST R IEC 60079 -33-2011 | Explosive atmospheres. Part 33. Equipment with special type of protection "s" | applies to 01.12.2016 |
| 88 | | GOST 31610.33-2014 (IEC 60079-33: 2012) | Explosive atmospheres. Part 33. Equipment with special type of protection "s" | applied with 01.12.2016 |
| **The head lamp for use in mines, hazardous for miner gas** | | | | |
| 89 | points 1, 2 and 5, subparagraphs 1 - 8 and 12 - 22 article 4, paragraph 3 , section IV appendix 1 | GOST R IEC 60079-35-1-2011 | Head lamps for use in firedamp mines. Part 1. General requirements and test methods related to risk of explosion | applies to 01.12.2016 |
| 90 | | GOST 31610.35-1-2014 (IEC 60079-35-1: 2011) | Explosive atmospheres. Part 35-1. Head lamps for use in firedamp mines. General requirements and test methods related to the risk of explosion | applied with 01.12.2016 |

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| 91 | | GOST 31611.2-2012 (IEC 62013: 2005) | Head lamp for use in mines, dangerous on gas. Part 2. Operational and other characteristics related to safety | |
| 92 | | GOST IEC 60079-35-2-2013 | Explosive atmospheres. Part 35-2. Headlights for use in firedamp mines. Operational and other characteristics related to the security | |
| **Explosive atmospheres. Application of quality systems for the production of equipment** | | | | |
| 93 | paragraphs 1 and 2, subparagraphs 1 - 8, 10 and 12 - 22 points 3, paragraphs 4, 5 - 9 and 10 of Article 4, Sections II - V of Annex 1 | GOST R ISO / IEC 80079-34-2013 | Explosive atmospheres. Part 34. Application of quality systems for the production of equipment | |
| **Non - electrical equipment for explosive atmospheres . General requirements and test methods** | | | | |
| 94 | points 1, 2, 4 and 5, subparagraphs 1 - 8 and 12 - 22 article 4, paragraph 3, sections II, III and V | GOST 31438.1-2011 (EN 1127-1: 2007) | Explosive atmospheres. Explosion protection and explosion prevention . Part 1. Underlying concept and methodology | |
| 95 | | GOST 31438.2-2011 (EN | Explosive atmospheres. Explosion protection and | |

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| | Appendix 1 | 1127-2: 2002) | explosion prevention. Part 2. Basic concept and methodology (for underground workings) | |
| 96 | | GOST 31441.1-2011 (EN 13463-1: 2001) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 1. General requirements | |
| 97 | | GOST 32407-2013 (ISO / DIS 80079-36) | Explosive atmospheres. Part 36. Non - electrical equipment for explosive atmospheres. General requirements and test methods | |

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| **Non - electrical equipment with types of protection "constructional safety " c ", ignition source control " b ", immersion in liquid" k ", protected by a restricted gas passage" fr "and protected by a flameproof enclosure " d "** | | | | |
| 98 | points 1, 2 and 5, subparagraphs 1 - 8 and 12 - 22 paragraph 3 of article 4, sections II - V of annex 1 | GOST 31441.2-2011 (EN 13463-2: 2004) | Non - electrical equipment intended for use in potentially explosive environments. Part 2. Protection sheath with limited pass gas "fr" | |
| 99 | | GOST 31441.3-2011 (EN 13463-3: 2005) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 3. Protection by flameproof enclosure "d" | |
| 100 | | GOST 31441.5-2011 (EN 13463-5: 2003) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 5. Protection of structural security "with" | |
| 101 | | GOST 31441.6-2011 (EN 13463-6: 2005) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 6. Protection by control of ignition source "b" | |
| 102 | | GOST 31441.8-2011 (EN 13463-8: 2003) | Non-electrical equipment intended for use in potentially explosive atmospheres. Part 8. Protection by liquid immersion | |
| | | | "k" | |
| 103 | | GOST ISO / DIS 80079-37-2013 | Explosive atmospheres. Part 37. Non - electrical equipment for explosive atmospheres . Non-electrical equipment with types of protection "constructional safety " c ", control of ignition source " b ", immersion in liquid "k" | |
| **Equipment and components intended for use in explosive environments of underground workings of mines and mines** | | | | |

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| 104 | points 1, 2 and 5, subparagraphs 1 - 8 and 12 - 22 paragraph 3 of article 4, | GOST 31439-2011 (EN 1710: 2005) | Equipment and components intended for use in potentially explosive environments of underground workings of mines and mines | |
| 105 | sections II, III and V Appendix 1 | GOST ISO / IEC 80079-38-2013 | Explosive atmospheres. Part 38. Equipment and components intended for use in explosive environments of underground workings of mines and mines | |
| **Engines of internal combustion piston** | | | | |
| 106 | points 1, 2 and 5, subparagraphs 1 - 8 and 12 - 22 paragraph 3 of article 4, sections II - V of annex 1 | GOST 31440.1-2011 (EN 1834-1: 2000) | Engines of internal combustion piston. Safety requirements for engines, intended for use in potentially explosive atmospheres. Part 1. Engines of the group II for use in environments containing flammable gas and steam | |
| 107 | | GOST 31440.2-2011 (EN 1834-2: 2000) | Engines of internal combustion piston. Safety requirements for engines, intended for use in potentially explosive atmospheres. Part 2. Engines group I for use in underground mines, dangerous for ignition mine gas and / or combustible dust | |
| 108 | | GOST 31440.3-2011 (EN 1834-3: 2000) | Engines of internal combustion piston. Safety requirements for engines, intended for use in potentially explosive atmospheres. Part 3. Group III motors for use in environments containing combustible dust | |
| **Equipment group 1, level of protection Ma** | | | | |

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| 109 | points 1, 2 and 5, subparagraphs 1 - 8 and 12 - 22 paragraph 3 of article 4, sections II - V of annex 1 | GOST 31442-2011 (EN 50303: 2000) | Equipment Group 1, EPL Ma, for use in an environment of dangerous ignition mine gas and / or coal dust | |
| **Gas turbine power plants** | | | | |
| 110 | points 1, 2 and 4 - 10, subparagraphs 1 - 8, 10 and 12 - 22 points 3, points 4, 6 and 10 of Article 4, Sections II - V appendix 1 | clauses 5.9.5, 5.9.7, 5.9.8, 5.12.4, 5.13.4, 5.13.6, 5.13.7, 5.16.5, 5.17.6, 5.17.10, 5.19, 5.19.1 - 5.19.5, 5.20.8, 5.21.1 - 5.21.3, 5.21.5, 5.25, 5.26, 6.1 and 7 GOST R 55393-2012 (ISO 21789: 2009) | Gas turbine power plants . Safety requirements | |

Information about changes :

*By the decision of the Board of the Eurasian Economic Commission of October 25, 2016 N 119, the list is set out in a new edition See the text of the list in the previous edition*

**APPROVED BY**
By the decision **of the Customs Union Commission of October 18, 2011 N 825 (as amended by the** Decision of the **Board of the Eurasian Economic Commission of October 25, 2016 N 119)**

**Scroll**
**standards containing rules and methods of research (testing) and measurements, including sampling rules necessary for the application and fulfillment of the requirements of the technical regulations of the Customs Union "On the safety of equipment for work in explosive environments" (TR CU 012/2011) and assessment compliance of objects of technical regulation**

| N p / p | Elements of technical regulations Customs Union | Standard designation | Name of the standard | Note |
|---|---|---|---|---|
| one | 2 | 3 | 4 | five |
| **General requirements for equipment for explosive environments** | | | | |
| one | article 5, paragraph 1 | GOST 30852.0-2002 (IEC 60079-0: 1998) | Explosion-proof electrical equipment. Part 0. General requirements | applies to 01.01.2018 |
| 2 | | GOST 31610.0-2012 (IEC 60079-0: 2004) | Electrical equipment for explosive gas atmospheres . Part 0. General requirements | |
| 3 | | GOST IEC 61241-0-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 0. General requirements | |
| 4 | | GOST R IEC 60079-0-2011 | Explosive atmospheres. Part 0. Equipment. General Requirements | applies to 01.12. 2016 |
| five | | GOST 31610.0-2014 (IEC 60079-0: 2011) | Explosive atmospheres. Part 0. Equipment. General Requirements | applied with 01.12.2016 |
| **Kind of protection "flameproof casing " d "** | | | | |
| 6 | article 5, paragraph 1 | GOST 30852.1-2002 (IEC 60079-1: 1998) | Explosion-proof electrical equipment. Part 1. Explosion protection "flameproof enclosure" | applies to 01.01.2018 |
| 7 | | GOST IEC 60079-1-2011 | Explosive atmospheres. Part 1. Equipment with the type of protection "explosion-proof shell "d" | |
| eight | | GOST IEC 60079-1-2013 | Explosive atmospheres. Part 1. Equipment with the type of protection "explosion-proof | |

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| | | | shell "d" | |
| **Type of protection "shell under excess pressure " p "** | | | | |
| nine | article 5, paragraph 1 | GOST 30852.3-2002 | Explosion-proof electrical equipment . Part 2. Filling or purging the shell under excess pressure p | applies to 01.01.2018 |

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| 10 | | GOST IEC 60079-2-2011 | Explosive atmospheres. Part 2. Equipment with type of protection, filling or purging of the enclosure under excess pressure "p" | |
| eleven | | GOST IEC 60079-2-2013 | Explosive atmospheres. Part 2. Equipment a view of protection "shell under excess pressure " p " | |
| **Type of protection "quartz shell filling " q "** | | | | |
| 12 | article 5, paragraph 1 | GOST 30852.6-2002 (IEC 60079-5: 1997) | Explosion-proof electrical equipment. Part 5. Quartz filling of the shell q | |
| 13 | | GOST 31610.5-2012 / IEC 60079-5: 2007 | Electrical equipment for explosive gas atmospheres . Part 5. Quartz filling of the shell "q" | |
| fourteen | | GOST R IEC 60079-5-2012 | Explosive atmospheres. Part 5. Equipment with type of protection "quartz filling of the shell" q " | |
| **Type of protection "oil- filled enclosure " o "** | | | | |
| fifteen | article 5, paragraph 1 | GOST 30852.7-2002 (IEC 60079-6: 1995) | Explosion-proof electrical equipment. Part 6. Oil filling of the shell "o" | applies to 01.01.2018 |
| sixteen | | GOST R IEC 60079-6-2012 | Explosive atmospheres. Part 6. Equipment with the type of protection "oil filling of the enclosure" o " | |
| 17 | | GOST 31610.6-2015 / IEC 60079-6: 2015 | Explosive atmospheres. Part 6. Equipment with type of explosion protection "filling the shell with liquid " o " | |
| **Increased protection type "e"** | | | | |

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| 18 | article 5, paragraph 1 | GOST 30852.8-2002 | Explosion-proof electrical equipment. Part 7. Protection of species "e" | |
| nineteen | | GOST 31610.7-2012 / IEC 60079-7: 2006 | Electrical equipment for explosive gas atmospheres . Part 7. Increased protection type "e" | |

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| twenty | | GOST R IEC 60079-7-2012 | Explosive atmospheres. Part 7. Equipment. Increased protection type "e" | |
| **Type of protection "intrinsically safe electrical circuit " i "** | | | | |
| 21 | article 5, paragraph 1 | GOST 30852.4-2002 (IEC 60079-3: 1990) | Explosion-proof electrical equipment. Part 3. Sparking mechanisms for testing electrical circuits for intrinsic safety | applies to 01.01.2018 |
| 22 | | GOST 30852.10-2002 (IEC 60079-11: 1999) | Explosion-proof electrical equipment . Part 11. Intrinsically safe electrical circuit "i" | applies to 01.01.2018 |
| 23 | | GOST 31610.11-2012 / IEC 60079-11: 2006 | Electrical equipment for explosive gas atmospheres . Part 11. Intrinsically safe electrical circuit "i" | |
| 24 | | GOST IEC 61241-11-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 11. Intrinsically safe equipment "iD" | |
| 25 | | GOST R IEC 60079-11-2010 | Explosive atmospheres. Part 11. Intrinsically safe electrical circuit "i" | applies to 01.12.2016 |
| 26 | | GOST 31610.11-2014 (IEC 60079-11: 2011) | Explosive atmospheres. Part 11. Equipment with type of protection "intrinsically safe electrical circuit" i " | applied with 01.12.2016 |
| **Protection of equipment by rooms under excess pressure "p"** | | | | |
| 27 | article 5, paragraph 1 | GOST 30852.12-2002 (IEC 60079-13: 1982) | Explosion-proof electrical equipment . Part 13. The design and maintenance of premises, protected by excessive pressure | |
| 28 | | GOST 30852.15-2002 (IEC 60079-16: 1990) | Explosion-proof electrical equipment . Part 16. Forced ventilation to protect the premises, in which mounted analyzers | |
| 29 | | GOST R IEC 60079-13-2010 | Explosive atmospheres. Part 13. Protection of premises equipment under excess pressure "p" | applies to 01.12.2016 |
| thirty | | GOST 31610.13-2014 (IEC 60079-13: 2010) | Explosive atmospheres. Part 13. Protection of premises equipment under excess pressure "p" | applied with 01.12.2016 |

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| **Design, selection and installation of electrical installations** | | | | |
| 31 | article 5, paragraph 1 | GOST 30852.13-2002 (IEC 60079-14: 1996) | Explosion-proof electrical equipment . Part 14. Electrical installations in hazardous areas (except for underground workings) | applies to 01.01.2018 |
| 32 | | GOST IEC 61241-1-2-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 1. Electrical equipment protected by enclosures and limiting the surface temperature . Section 2. Selection, Installation and Operation | |
| 33 | | GOST IEC 60079-14-2011 | Explosive atmospheres. Part 14. Design, selection and installation of electrical installations | |
| 34 | | GOST IEC 60079-14-2013 | Explosive atmospheres. Part 14. Design, selection and installation of electrical installations | |
| **Type of protection "n"** | | | | |
| 35 | article 5, paragraph 1 | GOST 30852.14-2002 | Explosion-proof electrical equipment . Part 15. Protection type "n" | applies to 01.01.2018 |
| 36 | | GOST 31610.15-2012 / IEC 60079-15: 2005 | Electrical equipment for explosive gas atmospheres . Part 15. Construction, testing and marking of electrical equipment with type of protection "n" | |
| 37 | | GOST R IEC 60079-15-2010 | Explosive atmospheres. Part 15. Equipment with type of protection "n" | applies to 01.12.2016 |
| 38 | | GOST 31610.15-2014 / IEC 60079-15: 2010 | Explosive atmospheres. Part 15. Equipment with type of protection "n" | applied with 01.12.2016 |

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| **Checking and maintenance services of electrical** | | | | |
| 39 | article 5, paragraph 1 | GOST 30852.16-2002 (IEC 60079-17: 1996) | Explosion-proof electrical equipment . Part 17. Inspection and maintenance of electrical installations in hazardous areas (except for underground workings) | applies to 01.01.2018 |

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| 40 | | GOST 31610.17-2012 / IEC 60079-17: 2002 | Electrical equipment for explosive gas atmospheres . Part 17. Inspection and technical maintenance of electrical installations in hazardous areas (except for underground workings) | applies to 01.01.2018 |
| 41 | | GOST IEC 60079-17-2011 | Explosive atmospheres. Part 17: Inspection and maintenance services of electrical | |
| 42 | | GOST IEC 60079-17-2013 | Explosive atmospheres. Part 17: Inspection and maintenance services of electrical | |
| **Type of protection "sealing with compound " m "** | | | | |
| 43 | article 5, paragraph 1 | GOST 30852.17-2002 (IEC 60079-18: 1992) | Explosion-proof electrical equipment . Part 18. Explosion protection of the type "sealing with a compound "m" | applies to 01.01.2018 |
| 44 | | GOST R 52350.18-2006 (IEC 60079-18: 2004) | Electrical equipment for explosive gas atmospheres . Part 18. Construction, testing and marking of electrical equipment with explosion protection type "sealing with compound " m " | |
| 45 | | GOST IEC 61241-18-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 18. Protection by compound "mD" | |
| 46 | | GOST R IEC 60079-18-2012 | Explosive atmospheres. Part 18. Equipment with type of protection "sealing with compound " m " | |
| **Repair, inspection and restoration of electrical equipment** | | | | |
| 47 | article 5, paragraph 1 | GOST 30852.18-2002 (IEC | Explosion-proof electrical equipment . Part | |

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| | | 60079-19: 1993) | 19. Repair and inspection of electrical equipment used in explosive gas atmospheres (except for underground workings or applications related to the processing and production of explosives ) | |
| 48 | | GOST R IEC 60079-19-2011 | Explosive atmospheres. Part 19. Repair, inspection and restoration of electrical equipment | applies to 01.12.2016 |

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| 49 | | GOST 31610.19-2014 / IEC 60079-19: 2010 | Explosive atmospheres. Part 19. Repair, inspection and restoration of electrical equipment | applied with 01.12.2016 |
| **Characteristics of substances for the classification of gas and vapor. Test methods and data** | | | | |
| fifty | article 5, paragraph 1 | GOST 30852.2-2002 (IEC 60079-1 A: 1975) | Explosion-proof electrical equipment. Part 1. Explosion protection of the "flameproof enclosure" type. Appendix 1. Appendix D. Method determining a safe experimental maximum clearance | applies to 01.01.2018 |
| 51 | | GOST 30852.5-2002 (IEC 60079-4: 1975) | Explosion-proof electrical equipment. Part 4. Method for determination of autoignition temperature | applies to 01.01.2018 |
| 52 | | GOST 30852.11-2002 (IEC 60079-12: 1978) | Explosion-proof electrical equipment . Part 12. Classification of mixtures of gases and vapors with air on safe experimental maximum clearances and minimum flammable currents | applies to 01.01.2018 |
| 53 | | GOST 30852.19-2002 (IEC 60079-20: 1996) | Explosion-proof electrical equipment . Part 20. Data on combustible gases and vapors related to the operation of electrical equipment | applies to 01.01.2018 |
| 54 | | GOST 31610.1.1-2012 / IEC 60079-1-1: 2002 | Electrical equipment for explosive gas atmospheres . Part 1-1. Flameproof enclosures "d". Test method for determining safe experimental maximum clearance | |
| 55 | | GOST R IEC 60079-20-1-2011 | Explosive atmospheres. Part 20-1. Characteristics of substances for the classification of gas and vapor. Methods | |

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| | | | tests and data | |
| **Characteristics of materials. Combustible dust test methods** | | | | |
| 56 | article 5, paragraph 1 | GOST IEC 61241-2-1-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 2. Test methods . Section 1. Methods of determination self-ignition temperature of combustible dust | |

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| 57 | | GOST IEC / TS 61241-2-2-2011 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 2. Test methods. Section 2. Method for determining the specific electrical resistance of combustible dust in layers | |
| 58 | | GOST R IEC 61241-2-3-99 | Electrical equipment for use in areas dangerous for ignition of combustible dust. Part 2. Test methods. Section 3. Method for determining the minimum ignition energy of dusty air mixtures | |
| 59 | | GOST R 54745-2011 | Explosive atmospheres. Part 20-2. Characteristics of materials. Combustible dust test methods | |
| **Equipment with equipment protection level Ga** | | | | |
| 60 | article 5, paragraph 1 | GOST 31610.26-2012 / IEC 60079-26: 2006 | Explosive atmospheres. Part 26. Equipment with equipment protection level Ga | |
| **Protection of equipment and transmission systems using optical radiation** | | | | |
| 61 | article 5, paragraph 1 | GOST 31610.28-2012 / IEC 60079-28: 2006 | Explosive atmospheres. Part 28. Protection of equipment and transmission systems using optical radiation | |
| **Gas analyzers** | | | | |
| 62 | article 5, paragraph 1 | GOST R 52350.29.1-2010 (IEC 60079-29-1: 2007) | Explosive atmospheres. Part 29-1. Gas analyzers. General technical requirements and test methods for combustible gas analyzers | |
| 63 | | GOST R 52350.29.2-2010 (IEC 60079-29-2: 2007) | Explosive atmospheres. Part 29-2. Gas analyzers. Requirements for the selection, installation, use and maintenance of gas analyzers for combustible gases and oxygen | |
| 64 | | GOST IEC 60079-29-1-2013 | Explosive atmospheres. Part 29-1. Gas analyzers. Performance requirements for combustible gas analyzers | |

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| 65 | | GOST IEC 60079-29-2-2013 | Explosive atmospheres. Part 29-2. Gas analyzers. Requirements for the selection, installation, use and maintenance of gas analyzers for combustible gases and oxygen | |
| 66 | | GOST IEC 60079-29-3-2013 | Explosive atmospheres. Part 29-3. Gas analyzers. Functional Safety Manual for Stationary Gas Analytical systems | |
| 67 | | GOST R 52350.29.4-2011 (IEC 60079-29-4: 2009) | Explosive atmospheres. Part 29-4. Gas analyzers. General technical requirements and test methods for combustible gas analyzers with an open optical channel | |
| **Resistive distributed electric heater** | | | | |
| 68 | article 5, paragraph 1 | GOST R IEC 62086-1-2005 | Electrical equipment for explosive gas atmospheres . Network electrical resistive heaters . Part 1. General technical requirements and test methods | |
| 69 | | GOST R IEC 62086-2-2005 | Electrical equipment for explosive gas atmospheres . Network electrical resistive heaters . Part 2. Requirements for design, installation and maintenance | |
| 70 | | GOST IEC 60079-30-1-2011 | Explosive atmospheres. Resistive distributed electric heater. Part 30-1. General technical requirements and methods | |

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| 71 | | GOST IEC 60079-30-2-2011 | Explosive atmospheres. Electric heater resistive distributed. Part 30-2. Guidance on the design, installation and maintenance services | |
| **Protection against dust ignition with "t" casings** | | | | |
| 72 | article 5, paragraph 1 | GOST R IEC 60079-31-2010 | Explosive atmospheres. Part 31. Equipment with type of protection against dust ignition "t" | |

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| 73 | | GOST IEC 60079-31-2013 | Explosive atmospheres. Part 31. Equipment with protection against dust ignition by enclosures "t" | |
| **Electrostatics** | | | | |
| 74 | article 5, paragraph 1 | GOST 31613-2012 | Electrostatic Intrinsic Safety. General technical requirements and test methods | |
| 75 | | GOCT 31610.32-1-2015 / IEC / TS 60079-32-1: 2013 | Explosive atmospheres. Part 32-1. Electrostatics. Dangerous manifestations. Management | |
| **Special type of protection "s"** | | | | |
| 76 | article 5, paragraph 1 | GOST 22782.3-77 | Explosion-proof electrical equipment with a special type of explosion protection. Technical requirements and test methods | |
| 77 | | GOST R IEC 60079-33-2011 | Explosive atmospheres. Part 33. Equipment with special type of protection "s" | applies to 01.12.2016 |
| 78 | | GOST 31610.33-2014 (IEC 60079-33: 2012) | Explosive atmospheres. Part 33. Equipment with special type of protection "s" | applied with 01.12.2016 |
| **The head lamp for use in mines, hazardous for miner gas** | | | | |
| 79 | article 5, paragraph 1 | GOST R IEC 60079-35-1-2011 | Head lamp for use in mines, dangerous on miner gas. Part 1. General requirements and methods of test relating to the risk of explosion | applies to 01.12.2016 |
| 80 | | GOST 31610.35-1-2014 (IEC 60079-35-1: 2011) | Explosive atmospheres. Part 35-1. Head lamps for use in firedamp mines. General requirements and test methods related to the risk of explosion | applied with 01.12.2016 |
| 81 | | GOST 31611.2-2012 (IEC 62013: 2005) | Head lamp for use in mines, dangerous on gas. Part 2. Operational and other characteristics related to safety | |

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| 82 | | GOST IEC 60079-35-2-2013 | Explosive atmospheres. Part 35-2. Headlights for use in firedamp mines. Operational and other characteristics related to the security | |
| **Explosive atmospheres. Application of quality systems for the production of equipment** | | | | |
| 83 | article 5, paragraph 1 | GOST R ISO / IEC 80079-34-2013 | Explosive atmospheres. Part 34. Application of quality systems for the production of equipment | |
| **Non - electrical equipment for explosive atmospheres . General requirements and test methods** | | | | |
| 84 | article 5, paragraph 1 | GOST 31438.1-2011 (EN 1127-1: 2007) | Explosive atmospheres. Explosion protection and explosion prevention . Part 1. Underlying concept and methodology | |
| 85 | | GOST 31438.2-2011 (EN 1127-2: 2002) | Explosive atmospheres. Explosion protection and explosion prevention . Part 2. Underlying concept and methodology (for underground workings) | |
| 86 | | GOST 31441.1-2011 (EN 13463-1: 2001) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 1. General requirements | |
| 87 | | GOST 32407-2013 (ISO / DIS 80079-36) | Explosive atmospheres. Part 36. Non - electrical equipment for explosive atmospheres. General requirements and test methods | |
| **Non - electrical equipment with types of protection "constructional safety " c ", control of ignition source " b ",** | | | | |

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| **immersion in liquid "k", a protection sheath with limited pass gas "fr" and protection flameproof envelope "d"** | | | | |
| 88 | article 5, paragraph 1 | GOST 31441.2-2011 (EN 13463-2: 2004) | Non -electrical equipment intended for use in potentially explosive environments. Part 2. Protection sheath with limited pass gas "fr" | |

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| 89 | | GOST 31441.3-2011 (EN 13463-3: 2005) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 3. Protection by flameproof enclosure "d" | |
| 90 | | GOST 31441.5-2011 (EN 13463-5: 2003) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 5. Protection of structural security "with" | |
| 91 | | GOST 31441.6-2011 (EN 13463-6: 2005) | Non -electrical equipment intended for use in potentially explosive atmospheres. Part 6. Protection by control of ignition source "b" | |
| 92 | | GOST 31441.8-2011 (EN 13463-8: 2003) | Non-electrical equipment intended for use in potentially explosive atmospheres. Part 8. Protection by liquid immersion "To" | |
| 93 | | GOST ISO / DIS 80079-37-2013 | Explosive atmospheres. Part 37. Non - electrical equipment for explosive atmospheres .<br>Non-electrical equipment with types of protection "constructional safety " c ", control of ignition source " b ",<br>immersion in liquid "k" | |
| **Equipment and components intended for use in explosive environments of underground workings of mines and mines** | | | | |
| 94 | article 5, paragraph 1 | GOST 31439-2011 (EN 1710: 2005) | Equipment and components intended for use in potentially explosive atmospheres | |

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| | | | underground workings of mines and mines | |
| 95 | | GOST ISO / IEC 80079-38-2013 | Explosive atmospheres. Part 38. Equipment and components intended for use in explosive environments of underground workings of mines and mines | |
| **Engines of internal combustion piston** | | | | |

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| 96 | article 5, paragraph 1 | GOST 31440.1-2011 (EN 1834-1: 2000) | Engines of internal combustion piston. Safety requirements for engines, intended for use in potentially explosive atmospheres. Part 1. Group II motors for use in environments containing combustible gas and vapor | |
| 97 | | GOST 31440.2-2011 (EN 1834-2: 2000) | Engines of internal combustion piston. Safety requirements for engines, intended for use in potentially explosive atmospheres. Part 2. Motors of group I for use in underground workings hazardous by firedamp and / or combustible dust | |
| 98 | | GOST 31440.3-2011 (EN 1834-3: 2000) | Engines of internal combustion piston. Safety requirements for engines, intended for use in potentially explosive atmospheres. Part 3. Group III motors for use in environments containing combustible dust | |
| **Equipment group 1, level of protection Ma** | | | | |
| 99 | article 5, paragraph 1 | GOST 31442-2011 (EN 50303: 2000) | Equipment of group 1, level of protection Ma, for use in an environment hazardous to ignite firedamp gas and / or coal dust | |

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| **Gas turbine power plants** | | | | |
| 100 | article 5, paragraph 1 | paragraphs 5.9.5, 5.9.7, 5.13.6, 5.17.10,5.19.4, 5.19.5 and 7 GOST R 55393-2012 (ISO 21789: 2009) | Gas turbine power plants . Safety requirements | |
| **dentification, analysis of the state of production** | | | | |

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| 101 | article 5, paragraph 1 | GOST 31814-2012 | Conformity assessment. General rules for sampling for testing products for confirmation of conformity | |
| 102 | | GOST 31815-2012 | Conformity assessment. The procedure for conducting inspection control in certification procedures | |
| 103 | | GOST R 51293-99 | Product identification . General Provisions | |
| 104 | | GOST R 54293-2010 | Analysis of the state of production when confirming compliance | |