

## QUESTIONS TO REGULATORS

### 1. Which national directives/laws control the placing on the market of equipment for explosive atmospheres?

#### **Australia:**

Note: This answer only relates to coal mining in the state of New South Wales (NSW).

Queensland is the other major coal mining state with hazardous areas and has state-based legislation concerning this matter. For Group II industries– defined as places with an explosive gas atmosphere other than mines susceptible to firedamp - the legislation is again state- based, and generally hazardous area requirements are defined through the national wiring rules (AS/NZS3000) which in turn refer to AS/NZS2381 (Selection, Installation for hazardous areas) This note also applies to all other answers from Australia in this questionnaire.

NSW Coal Mine Health and Safety Act 2002

NSW Coal Mine Health and Safety Regulation 2006. This regulation requires Ex-equipment to meet requirements specified in a Government Gazette -

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0005/203198/Types-of-electrical-plant-used-in-hazardous-zones---CMHS-Act-2002.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/203198/Types-of-electrical-plant-used-in-hazardous-zones---CMHS-Act-2002.pdf)

#### **European Union:**

The directive 94/9/EC and its national implementation by the member states specify the rules.

#### **United States:**

US MINING: Federal Law governs the design and use of explosion-protected equipment in United States mines. More specifically: “Federal Coal Mine Health and Safety Act of 1969”, Public Law 91-173; “Federal Mine Safety and Health Act of 1977”, Public Law 95-164 (amends Public Law 91-173); “Mine Improvement and New Emergency Response act of 2006 (Miner Act)”, Public Law 109-236 (amends Public Law 95-164

#### **Russian Federation:**

The Federal Law “ On Technical Regulation.”

The Federal Law “On Industrial Safety of Hazardous Industrial Facilities.”

#### **Brazil:**

The INMETRO Regulation “Portaria 83:2006” states the requirements for Electrical Equipment for use in Explosive Atmospheres of vapors and gases. This Regulation will be replaced in 2009 by a new INMETRO Regulation that will include dust atmospheres.

### 2. Are there compulsory conformity assessment procedures in place?

#### **Australia:**

Yes, the gazette notice requires Ex-equipment to be certified under the IEC Ex-Scheme or ANZ (Australia New Zealand) Ex-Scheme. These schemes require conformity assessment against the published standards.

#### **European Union:**

The directive 94/9 requires the conformity assessment procedure of explosion protected equipment. Depending on the categories (safety level) a notified body shall be involved. The notified body issue an EC-Type Examination Certificate. Additionally the directive 94/9 require a quality module of the product or production facility.

#### **United States:**

US MINING: Federal Law requires the US Department of Labour (USDOL) Mine Safety and Health Administration (MSHA) to administer the requirements contained in Title 30, Code of Federal Regulations (Mineral Resources) pertaining to explosion-protected equipment. Current regulations only recognize “explosion-proof” and “intrinsically safe” as acceptable means for explosion-protecting equipment, where such equipment is required to be used in mining applications.

**Russian Federation:**

The procedure of mandatory conformity assessment by certification is specified in the Federal Law “On Industrial Safety of Hazardous Industrial Facilities”

**Brazil:**

The procedure for mandatory certification (RAC – Conformity Assessment Procedure) is specified in the INMETRO Regulation “Portaria 83:2006”

**3. What is the role of national or international standards for the conformity assessment procedures (are they used in regulations and how)?**

**Australia:**

National standards for Ex-equipment are adopted IEC standards (note Ex-‘s’ – special protection is an Australian New Zealand Standard, Ex-‘n’ is not permitted in NSW underground coal mine hazardous areas).

Conformity assessment against the Ex-standards is required by regulation via the above mentioned gazette notice. Conformity assessment is part of certification.

**European Union:**

The directive requires fulfilling the general requirements specified in the directive and not the fulfilling of a standard. Usually the harmonized standards, published in the Official Journal of the European Commission, are used. The harmonized standards have adopted the IEC-Standards (Parallel Voting). In an annex of the European standard specific requirements of the directive are incorporated.

**United States:**

US MINING: There is no blanket acceptance of national or international harmonized standards for mining applications. Federal Regulations permit approval of explosion-proof equipment that has been designed and tested according to IEC Standards, as long as certain additional criteria stated in the regulations are met.

**Russian Federation:**

The national standards are used in conformity assessment procedures.

The list of these standards is included in the Range of products being subject to mandatory certification, which is approved by the Ministry of Industry and Trade. International standards are not used in the certification procedures.

**Brazil:**

It is mandatory the use of national standards harmonized with IEC standards. For those cases where it is not available a harmonized standard, must be use the equivalent IEC standard.

**4. What is the process of legal acceptance of the standards (national, regional, international)?**

**Australia:**

Legal acceptance is via the above mentioned gazette notice, this only recognises Australian Standards (AS & AS/NZS), which in turn are adoptions of the IEC standards.

**European Union:**

The adoption of the standards (harmonisation) based on the Decision of the European Commission together with the Consultant and CENELEC TC 31.

**United States:**

US MINING: The development and adoption of US Mining regulations are governed by the “Administrative Procedures Act” (Title 5 - United States Code - Chapter 5, Sections 511-599). In general, MSHA must first draft and propose a regulation and then allow for public review and comment before finalizing a regulation. US mining regulations are also constrained by current mining laws which prohibit the promulgation of any safety standard that reduces the protection afforded miners below that provided by current mining law.

**Russian Federation:**

There is no a recognition procedure for international, regional (except for the CIS) and national standards of other countries.

There is a procedure of acceptance of international, regional and national standards as Russian national standards.

At present the national standards are generally prepared on the basis of recent versions of international standards.

**Brazil:**

For Hazardous Location area, the national standard harmonized must be used. If the Brazilian standards is not available must be used the IEC standard.

**5. Who is authorized to conduct the conformity assessment? (Are results of conformity assessment done abroad accepted?)****Australia:**

Conformity assessment is done by organizations accredited under the ANZ Ex-Scheme or IEC Ex-Scheme.

Conformity assessment is accepted from overseas organizations that are accredited under the IEC Ex-Scheme. That is an IEC Ex-Certificate of Conformity form any Certification Body that is recognized under the IEC Ex-Scheme is acceptable.

**European Union:**

The notified bodies execute the conformity assessment. All member states have the right to nominate their notified bodies within their territory.

**United States:**

US MINING: Under Federal Law, MSHA is the only organization authorized to issue approval for explosion-protected equipment. Some approval regulations permit the testing and evaluation of products by the applicant or third party; however, MSHA has the ultimate authority to issue approval for the equipment.

**Russian Federation:**

Conformity assessment is carried out by certification bodies.

In accordance with the Federal Law «On Technical Regulation», “ the documents confirming products conformity, marks of conformity, testing and measurement reports issued outside the territory of the Russian Federation can be accepted in accordance with the agreements signed with the Russian Federation”.

By now no agreements which meet the requirements of the Federal Law have been signed at the international, regional or national level.

**Brazil:**

The conformity assessment is carried out by certification bodies accredited by INMETRO. According to the INMETRO Regulation “Portaria 83:2006”, the acceptance of test results performed outside Brazil can be considered only if the test laboratory is accredited by some ILAC Full Member and if the laboratory accreditation scope covers the same standards required in the Brazilian Law. Any other activity performed by Certification Body, such as inspections, are allowed only if there is a Memorandum of Understanding between the Brazilian Certification Organization and the Certification Body abroad.

**6. Who is authorized to conduct the accreditation of the conformity assessment bodies and based on which requirements? (Is accreditation of foreign conformity assessment bodies possible?)**

**Australia:**

Accreditation is scheme dependent:

- For international (IEC) it is the IEC Ex-Scheme.
- For national (the ANZ Ex-Scheme) it is JASANZ (Joint Accreditation Scheme for Australia and New Zealand).

Criteria are based on International Guides and specific scheme requirements.

Foreign conformity assessment bodies are permitted in accordance with the IEC Ex-Scheme.

**European Union:**

The member states of the European Community nominate their notified bodies within their territory. The criteria of the nomination are an accreditation in accordance to the IEC/ISO 17025 and EN 45011/12. Foreign notified bodies (outside their territory) can not be nominated by a member state.

**United States:**

US MINING: MSHA will observe the testing and evaluation of explosion-protected equipment conducted by the applicant or third party. However, there is no formal accreditation issued.

**Russian Federation:**

The accreditation procedures are ruled by the Federal Law “On Industrial Safety of Hazardous Industrial Facilities”.

The accreditation of foreign assessment bodies is not prohibited.

**Brazil:**

According to CONMETRO 004:2002 law, only INMETRO can conduct the accreditation of Certification Organizations and Test Laboratories, according to ISO Guide 65 and ISO 17025. The accreditation of foreign assessment bodies is possible.

**7. Which additional directives/laws have a product for use in explosive environments**

**to comply with? (Common for all products and/or for specific products?)**

**Australia:**

For ALL products –

NSW Occupational Health and Safety Act 2000

NSW Occupational Health and Safety Regulation 2001 – In particular, Chapter 5 – Plant Safety

**European Union:**

The manufacturer has to fulfil all relevant directives concerning his product. Depending on the product it could be the machinery of low voltage directive. A list of potential “New Approach” directives can be uploaded.

**Japan:**

To be completed

**United States:**

US MINING: Federal mining laws and regulations (see above) contain specific requirements for different types of products.

**Russian Federation:**

The Governmental Regulation of the Russian Federation «On Use of Technical Devices at Hazardous Industrial Facilities » covers all products.

The specific types of equipment shall comply with special Federal Laws (On fire safety, On communication, On gas supply).

**Brazil:**

The manufacturer has to fulfill all relevant Regulations concerning his product.

**8. Are there additional or special directives/laws for the putting products into operation (in addition to placing a product on the market)?**

**Australia:**

It is the above mentioned law that controls the putting into operation of the product; that in turn constrains the putting of the product on the market in the first place.

**European Union:**

The use (installation, maintenance, repair and overhaul, ...) of explosion protected products are specified in the directive 99/92. This directive specifies minimum requirements and can be completed by national regulations of the member states. These additional requirements are not allowed to affect the product itself.

**United States:**

US MINING: Federal mining laws and regulations (see above) contain specific installation and use requirements for different types of products.

Russian Federation:

The conditions of use of technical devices at hazardous industrial facilities and acceptance of hazardous industrial facilities are specified in the Federal Law “ On Industrial Safety of Hazardous Industrial Facilities”.

**Brazil:**

The use of products in Hazardous Locations areas are regulated by the Labor Ministry Regulation NR-10.

## **9. Which are the procedures for the market surveillance and who is responsible?**

### **Australia:**

Market surveillance is ad-hoc and there are a number of market surveillance opportunities:

- Market surveillance at manufacture – ANZ ex Scheme and IEC Ex-Scheme
- Market surveillance by the purchaser – Legislation requires employers to determine the suitability of equipment (generally vested in the Manager of Electrical Engineering, which is a statutory coal mine position)
- Market surveillance by the repairer/overhauler – Legislation requires these organisations to be licensed
- Market surveillance by the Mining Regulator – Investigation of specified reportable incidents, licensing of Ex-repair facilities, mine site assessments and random reviews (including testing per the standard).

### **European Union:**

The market surveillance is organized by the member states. All market surveillance authorities communicate every 6 month within their ADCO meeting. With the safeguard clause of the directive 94/9 the market surveillance can act. Complained product will be published in the internet (RAPEX) to communicate it to the population.

### **United States:**

US MINING: MSHA's quality assurance specialists perform audits of approved products and address field complaints of defective or non-conforming products. Discrepant products must be brought into compliance or removed from mines.

### **Russian Federation:**

The market surveillance is performed in accordance with the Federal Law "On Technical Regulation" and the Federal Law "On Industrial Safety of Hazardous Industrial Facilities" by the Federal Authorities assigned in accordance with the Federal Laws and the Governmental Regulation of the Russian Federation.

### **Brazil:**

INMETRO is responsible for performing the Market Surveillance.

## **10. What are the regulations for inspection, maintenance and repair of the equipment?**

### **Australia:**

- Coal Mine Health and Safety Regulation 2006
- Occupational health and Safety Regulation 2001
- Coal mine Health and Safety Regulation 2006, specifically requires repair at licensed facilities

### **European Union:**

The use of explosion protected equipment is specified in the directive 99/92. The implementation of the directive into national laws can specify the rules of inspection, maintenance, repair and overhaul. International standards (IEC) exist, but they are not legally binding to the member states, they are not harmonised. A heterogeneous system has been established.

### **United States:**

US MINING: Federal mining laws and regulations (see above) address inspection, maintenance and repair of the equipment.

**Russian Federation:**

Inspection, maintenance and repair of the equipment are regulated by the Federal Law “On Industrial Safety of Hazardous Industrial Facilities”.

**Brazil:**

The Labor Ministry Regulation NR-10 defines the need for user to perform regular inspections. There are no legal requirements for conducting these inspections and overhaul and repair. But there is a recommendation to use national standards harmonized with IEC 60079-17 and IEC 60079-19.