

Workshop for regulatory authorities of Latin American and BRICS countries on the whole life-cycle approach of IECEx certification schemes for explosive atmospheres

A Common Regulatory Framework for Services, Personnel Competencies and Equipment in Environments with Explosive Atmospheres

Questionnaire on Regulatory Practice in the Ex Sector

Question 1. In your Country International Technical Standards published by the IEC are adopted in the field of electricity?

Brazil	<p>Yes, ABNT (Brazilian Technical Standards Association) has a normalization policy of publication of Brazilian standards harmonized with the relevant international standards of IEC.</p> <p>Brazil is a "P" (Participant) member of several Technical Committees of the IEC (such as TC-2, TC-18, TC-23 and TC-31).</p> <p>In that Technical Committees Brazil participates presenting comments and suggestions for the improvement of relevant international IEC standards, based on best practices, lessons learned and experiences gained by Brazilian companies.</p> <p>After publication of the IEC international standards, ABNT creates and published their ABNT NBR IEC Standards, in Portuguese.</p>
South Africa	<p>Yes, South Africa has adopted many IEC standards as South African National Standards (SANS Standards). The majority have been adopted without change, although there are South African developed standards which may apply more stringent requirements and which may cover some aspects not covered in the IEC standards. South Africa participates in IEC standards working groups</p>
European Union	<p>IEC standards are generally “parallel voted” in Cenelec to be issued as an EN standard at the same time. A German language translation is added to the original French and English version from IEC. A large number are adopted without deviation. In all cases where a European regional deviation is required, it is clear from the European text where it deviates from the IEC original. Almost without exception, the EN is published by the national standards body in each member state without any further change.</p>
Australia	<p>Australia primary electrical standard is the Wiring Rules AS/NZS 3000 which is not an adopted IEC standard but uses the principals of IEC 60364. In other areas Australia has adopted many IEC standards as joint National Standards for Australian and New Zealand (AS/NZS Standards). In some cases standard have been adopted without change, although there are Australian developed standards which may apply additional requirements and which may cover some aspects not covered in the IEC standards. Australia participates in many IEC standards committees and working groups.</p> <p>There are a many standards applicable that are unique to group I that are developed in Australia.</p>

Question 2: In your Country International Technical Standards published by IEC TC-31 on equipment and installations in explosive atmospheres are adopted?

Brazil	<p>Yes Brazil is a “P” (Participating) member in the IEC TC-31 (Equipment for Explosive Atmospheres) and participates in the process of comments, update and approval of Standards Series IEC 60079.</p>
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	<p>Brazil National Committee contributes with comments and suggestions for the improvement of the relevant international standards IEC based on best practices, lessons learned and experiences gained by Brazilian companies.</p> <p>After the publication of international standards IEC 60079 Series, ABNT creates and published their Brazilian Standards harmonized the ABNT NBR IEC 60079 Series, in Portuguese</p>
South Africa	<p>RSA is an observer member of TC31, and participates by attending the TC31 plenary meetings. RSA considers documents circulated by TC31 and responds with comments and suggestions as and when deemed necessary. Such comments are solicited by circulating the IEC documents to the relevant industry stakeholders represented by the South African Flameproof Association</p>
European Union	<p>All IEC Ex Equipment Standards have been accepted by Cenelec as a European Standard (EN)</p>
Australia	<p>Yes Australia is a participating member of TC31, and adopts the equipment standards without change. The user standards such as installation, maintenance etc are adopted from IEC with change to reflect Australian and New Zealand conditions.</p> <p>Australian has been an active participant at all levels of TC31 in the development of these standards for more that 25 years.</p>

Question 3: In your Country are there laws or regulations published by the Government on installations in explosive atmospheres?

Brazil	<p>To date there are no published regulations on certification of electrical installations in explosive atmospheres.</p> <p>However, to assure safety in “Ex” electrical installations, many companies use the requirements given in ABNT NBR IEC 60079-14 (Electrical installations design, selection and erection in explosive atmospheres) and ABNT NBR IEC 60079-17 (Electrical installations inspection and maintenance in explosive atmospheres) e ABNT NBR IEC 60079-19 (Equipment repair, overhaul and reclamation “Ex”)</p>
South Africa	<p>Yes. South African regulators in the form of the Department of Labour (DoL) regulate the surface industry and the Department of Mineral Resources (DMR) regulate the underground mining sector and offshore oil exploration and recovery sectors. Both regulators reference South African (SANS) standards, making them mandatory. These South African Standards further reference the SANS 60079 series of standards (making them mandatory) which are the adopted and unchanged IEC standards. Other South African Standards are also referenced</p>
European Union	<p>The ATEX Product Directive 94/9/EC is adopted identically as law in all EU member countries. The ATEX User Directive 1999/92/EC is adopted with minor variations in all member countries. 1999/92/EC has required that only 94/9/EC compliant equipment should be installed in hazardous atmospheres since July 2003.</p>
Australia	<p>Installations within hazardous areas is legislated through the Electricity Act in each state and Territory within Australia</p> <p>NSW and Queensland mining industry have specific coal mining regulations for each state that governs the used of Ex equipment in underground coal mines. That are specific to the hazards associated with underground coal mining.</p>

Question 4: In your Country the laws or regulations published by the Government on installations in explosive atmospheres include areas of Group I (Underground Coal Mines), Group II (Flammable Gases) and Group III (Combustible Dusts)?

Brazil	<p>The current edition of the regulation published by INMETRO (National Institute of</p>
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	<p>Metrology, Quality and Technology) in Regulation 179/2010 applies only to “Ex” electrical equipment for use in areas with presence of flammable gases or combustible dust.</p> <p>Are indicated in this Regulation, among other Standards of Series ABNT NBR IEC 60079, Standards NBR IEC 62013 - Parts 1 and 2:</p> <p>ABNT NBR IEC 62013-1 - Caplights for use in mines susceptible to firedamp - Part 1: General requirements - Construction and testing in relation to the risk of explosion;</p> <p>ABNT NBR IEC 62013-2 - Caplights for use in mines susceptible to firedamp - Part 2: Performance and other safety-related matters</p>
South Africa	The DMR and DoL regulations (see above) include dust and gasses in both surface and underground locations
European Union	ATEX covers Groups I, II and III but does not distinguish between the IEC designations of Group II and Group III. Group III is included within the ATEX designation of Group II (All situations other than coal mines). For this reason, the current recommendation is to keep the ATEX marking and the standard marking separate, to minimize confusion.
Australia	Same applies as for question 3

Question 5: In your Country the laws or regulations published by the Government on Explosive Atmospheres cover the product certification "Ex", including the process of manufacturing and the placing on the market of this type of equipment?

Brazil	<p>Yes, there is in Brazil, since 1991, Regulations published by Inmetro on third party compulsory certification for electrical equipment for explosive atmospheres. These "Ex" certificates of conformity must be issued by an “Ex” Certification Bodies, accredited by Inmetro.</p>
South Africa	<p>In terms of regulation, all Ex product used in South Africa must have a locally issued “IA” Certificate. This certificate may only be issued by a SANAS (South African National Accreditation System) accredited laboratory. Two systems of quality control exist. One system is similar to the IECEx system whereby manufacturers/repairers are issued a permit or licence to manufacture product by a CB which is granted after an initial Ex audit is passed successfully, and the product has undergone a type test. Regular audits ensure that the manufacturer maintains the quality system and quality of the product.</p> <p>A second system allows the manufacturer to submit product in batches to an accredited test laboratory. A sample is drawn from the batch (quantities are determined according to the batch size) as per a South African standard and each sample is type tested. If all the samples pass the tests, then the batch is deemed to have passed, and an IA certificate is issued for the entire batch with the serial numbers listed on the certificate. There is no involvement from the CB</p>
European Union	ATEX 94/9/EC envisages a number of different conformity assessment modules, applicable to different Categories of Equipment (Equipment Protection Levels) and electrical/non-electrical. Not all of these can be described as certification. However, for ATEX Category 1 (EPL Ga and EPL Da) and for ATEX Category 2 electrical equipment (EPL Gb and EPL Db) a form of certification is mandatory.
Australia	<p>Yes the Electricity Act requires that Ex equipment is third party certified for electrical equipment for explosive atmospheres. These certificates of conformity must satisfy the requirement given in AS/NZS 60079.14 for ‘assurance of conformity of equipment’ which requires IECEx or ANZEx or other certificates with full 3rd party accredited testing and certification.</p> <p>For NSW& QLD coal mining the following applies 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-</p>

	<p>used-in-hazardous-zones---CMHS-Act-2002.pdf</p> <p>In Queensland the obligations of manufacturers and suppliers of equipment and services are covered by Sections 44 - 47 of the <u>Coal Mining Safety and Health Act 1999</u></p>
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Question 6: In your Country the laws or regulations published by the Government on Explosive Atmospheres cover the entire life cycle of plants containing hazardous areas, including all phases of design, installation, inspection, maintenance and repairs?

Brazil	<p>Since 1991 it has been published by Inmetro Regulations covering only the certification of electrical products for explosive atmospheres.</p> <p>There are no Regulations yet on non-electrical equipment "Ex" or on service facilities providing services in hazardous locations or on personal competencies in explosive atmospheres.</p> <p>However, at present, Inmetro is drafting a new regulation on certification workshop service repair, overhaul and reclamation of equipment "Ex", based on the requirements given in ABNT NBR IEC 60079-19 and Operational Documents ABNT IECEX OD 014 and ABNT IECEX OD 015, harmonized with the requirements of the respective international system established by the IECEX. This new regulation is expected to be published in 2013.</p> <p>Moreover, Inmetro also already set to publish during 2013, a new Regulation on Personal Competence in explosive atmospheres, based on the requirements indicated in Operational Document ABNT IECEX OD 504, aligned with the requirements of the respective international system established by the IECEX</p>
South Africa	<p>The regulations cover the area classification, selection of equipment, installation, inspection and maintenance, repair and overhaul for the life cycle of the equipment</p>
European Union	<p>ATEX 1999/92/EC leads to national legislation which covers these aspects, albeit the exact detail may vary from country to country.</p>
Australia	<p>Yes legislation and Regulations require all industries to cover the entire life cycle of Ex plant and equipment.</p> <p>Design selection and installations are required to satisfy the requirements of AS/NZS60079.14, inspection and maintenance to satisfy AS/NZS60079.17 and overhaul and repair to satisfy AS/NZS3800 (adopted from IEC 60079.19)</p> <p>The NSW mining legislation has a specific clause that requires all explosion protected equipment is managed throughout its full life cycle.</p>

Question 7: In your Country are there regulations published by the Government on certification of Personal Competencies Schemes for activities specifically related to installations in hazardous areas?

Brazil	<p>At the present moment, Inmetro is drafting a new regulation on certification workshop service repair, overhaul and reclamation of equipment "Ex", based on the requirements given in ABNT NBR IEC 600679-19 and Operational Documents ABNT IECEX OD 014 and 015, harmonized with the requirements of the respective international system established by the IECEX. This new regulation is expected to be published in 2013</p>
South Africa	<p>The regulations require that personnel working on Ex equipment are competent to do so. There are a number of ways to declare competency, both by means of "unit standards" where they exist, or by means of certificates awarded by providers of Ex training courses.</p>
European Union	<p>No. However ATEX 1999/92/EC does require that the main actors are competent, without defining how this shall be proved. If, following an incident, an employer could not prove the</p>

	competence of the relevant employees, this could be grounds for prosecution. Generally, a major employer will have an in-house scheme or will rely on either CompEx or IECEx
Australia	All industries currently are required to demonstrate that persons working in hazardous area are competent. In most cases business have their people who work on explosion protected equipment trained and assessed against units of competence given in AS/NZS 4761. <i>Competencies for working with electrical equipment for hazardous areas (EEHA)</i> . IECEx CoPC would satisfy competency but as not yet been included in legislation or standards.

Question 8: In your country are there laws or regulations published by the Government on certification Schemes of compliance for companies providing services for hazardous areas, including area classification, design, installation, inspection, maintenance and repairs of "Ex" equipment?

Brazil	Inmetro already set to publish during 2013, a new Regulation on Personal Competence in explosive atmospheres, based on the requirements indicated in Operational Document ABNT IECEx OD 504, aligned with the requirements of the respective international system established by the IECEx
South Africa	The regulations cover the area classification, selection of equipment, installation, inspection and maintenance, repair and overhaul for the life cycle of the equipment. The law requires that product is manufactured under either the "permit" or "licence" type scheme or is covered by the batch test approach described earlier. The CB's and TL's have to be accredited by SANAS
European Union	No. UK and Netherlands have historically had voluntary schemes for certification of service providers in the repair industry. This is reflected in the significantly higher uptake in those countries of the IECEx Service Facility Certification Scheme.
Australia	No, other than for repair of Ex equipment there is no law within Australia that requires a certification scheme for these activities. The laws and regulation do however require that any person conducting this work can demonstrate their competence. For repair and overhaul it is required that repair workshops are certified by certification bodies in either IECEx service facility scheme or the ANZEx service facility scheme. For NSW mining group I, overhaul and repair facilities must have in addition a license to overhaul and repair group I equipment issued by the regulator

Question 9: In your Country are there knowledge, interests or shares currently in development on the recommendations of the United Nations (UNECE) for the implementation of certification Schemes for service facilities, personnel competencies and equipment for explosive atmospheres, based on the international Schemes issued by IECEx, aiming raising levels of safety in explosive atmospheres, considering the approach of the life cycle of plants containing hazardous areas ?

http://www.iecex.com/docs/UNECE_CRO_en.pdf

Brazil	Brazil is a "Participating" (P) member of IECEx since 2009. In Brazil there is a Subcommittee SC IECEx BR, set since 2008, which meets monthly to discuss matters related to "Ex" certification Schemes on services, equipment and personnel competencies "Ex". This Subcommittee is composed of representatives of certification bodies for "Ex" products, certification bodies for personnel, "Ex" equipment manufacturers "Ex", end users of "Ex" services and facilities, testing laboratories. ABNT is developing operational documents harmonized with IECEx for certification of
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	<p>workshops for service repairs of equipment "Ex" and personal competencies for explosive atmospheres.</p> <p>These new ABNT Operational Documents are based on the “life-cycle” approach, which requires proper area classification, installation, inspection, maintenance and repair of “Ex” equipment.</p> <p>This approach assures effective and efficient explosion protection, as well the elimination of potential ignition risk, at all times when a facility or “Ex” product are in use. Inmetro is drafting new regulations for the certification workshop service equipment repairs "Ex" and for certification of personal competencies "Ex", based on the relevant IECEx Operational Documents</p>
South Africa	The South African legal framework is already in line with the intention of the UNECE guideline document. The IECEx framework is used as the ideal model for local implementation of product conformity to the standards. The final step would be to accept IECEx certification without any need for a local certificate. This however is unlikely at present
European Union	There is no common focus on this issue across Europe, but many countries are active in all three areas. All actors in the field within the EU have access to at least one IECEx Certification Body supplying certification in these fields.
Australia	Yes, however Australia was at the forefront of adopting IECEx certification schemes prior to the work being done by UNECE. Australia are continuing to work to implement the remaining IECEx certification schemes as they are introduced

Question 10: Which national directives / laws control the placing on the market of equipment for explosive atmospheres?

Brazil	The Inmetro Regulation “Portaria 179/2010” states the requirements for third part certification of electrical equipment for use in explosive atmospheres of flammable gases and combustible dust http://www.inmetro.gov.br/legislacao/rtac/pdf/RTAC001559.pdf
South Africa	SANS 10108 (a local standard) is referenced by legislation. This document is “The classification of hazardous locations and the selection of equipment for use in such locations”. The standard references the SANS 60079 series among others. This standard (SANS 10108) is sold together with another document called ARP 0108. This document is owned by the regulator and contains specific regulatory requirements for both locally manufactured equipment and imports, covering maintenance, inspection and certification requirements
European Union	The ATEX Product Directive applies throughout the whole European Economic Area (EU plus EFTA) and is published as national law in each country
Australia	The acceptance of equipment in an installation is as per question 5

Question 11: Are there compulsory conformity assessment procedures in place?

Brazil	The procedures for mandatory certification (RAC – Conformity Assessment Procedure) are specified in the Inmetro Regulation “Portaria 179/2010”
South Africa	Yes, as previously described.
European Union	Yes. But not all involve certification
Australia	Certification bodies are required to satisfy the requirement of JASANZ accreditation

Question 12: What is the role of national or international standards for the conformity assessment procedures (are they used in regulations and how)?

Brazil	It is mandatory the use of national Brazilian standards harmonized with IEC standards. For those (few) cases where a Brazilian ABNT NBR IEC 60079 harmonized standard are not available, the international IEC or ISO/IEC standard shall be used
South Africa	As previously described, our national standards for Ex are the adopted IEC standards, and they are called up in legislation. The objective is to eventually discard all locally developed Ex standards in favour of adopted IEC standards. This will take some years due to the number of standards called up by legislation.
European Union	ATEX 94/9/EC requires compliance with the Essential Health and Safety Requirements of the Directive (EHSRs). These are fairly broad in their approach and the use of standards in support is normal. However, it remains possible for a manufacture to deviate from standards if he is able to show that he is achieving an equivalent level of safety. Harmonised Standards are those which have been accepted by the EU as demonstrating conformity with the EHSRs and are the preferred route, but provision is also made for justifying the use of non-harmonised standards. Lists of current harmonised standards are published regularly in the Official Journal of the EU and may be obtained from the EU Commission web site for ATEX. Where an IEC Standard exists, the harmonised European Standard is generally identical to the IEC version. There are additional harmonised standards (for example relating to electrostatic spraying technology) where no IEC standards exist.
Australia	For equipment Australia has adopted IEC standards without change and these are used for the bases of equipment certification. Where IEC standards are modified for Australian environment, these must be catered for within the appropriated certification schemes, eg personnel competence need to assess to the additional Australian requirement. There are other Australian Standards that are used for certification of Ex product used by the NSW mining industry eg underground cables used within hazardous zones and cable plugs and receptacle that are not covered by IECEx standards.

Question 13: What is the process of legal acceptance of the standards (national, regional, international)?

Brazil	For Hazardous Locations of inflammable gases and combustible dust, the Brazilian national standard harmonized Series ABNT NBR IEC 60079 must be used. For those (few) cases where a Brazilian standards ABNT NBR IEC 60079 are not yet available, the international IEC or ISO/IEC standard shall be used. Other Standards or Directives from other particular Countries (e.g. NEC, NEMA, BS, DIN, etc.) or Regional Standards or Directives (e.g. ATEX) cannot be directly used. Other standards or policies of other countries in particular (e.g., ANSI, NEC, NEMA, BS, DIN, etc.) or regional standards or policies (e.g. ATEX) can not be directly used. If a manufacturer of an "Ex" product already has a certificate already issued in another country, in accordance with other Standards, and also wish for a certification in Brazil, there is a need for verification by a certification body accredited by INMETRO, on the equivalence of assessment requirements and tests used in another country, against the requirements set forth in IEC or IEC NBR Standards
South Africa	Can be complicated. The regulator decides which standards to legislate. The DoL in their legislation then refer to the latest published standard. The DMR prefer to refer to a standard date and version in their legislation. Later editions only become mandatory when the regulation is changed or amended.
European Union	Standards obtain "Harmonised" status by being originally mandated by the EU and then accepted on behalf of the EU by the EU consultant for the ATEX Directive. As indicated

	previously, a harmonized standard has a particular status but its sole use is not mandated by law.
Australia	<p>Standards are issued by Standards Australia and are referenced either directly or indirectly by 'wiring rules AS/NZS3000' which is legislated through the Electricity Act.</p> <p>NSW state based mining regulations calls standards up directly or there are provisions within mining legislation for the regulator to gazette requirements that would call upon standards</p> <p>While Queensland mining legislation does reference some standards from the Regulations, this is usually not to call up the complete standard, rather it might refer to some parameters or definitions contained there-in. More usually standards are referenced from within Recognised Standards (a 3rd tier of legislation under Regulations).</p>

Question 14: Who is authorized to conduct the conformity assessment? (Are results of conformity assessment done abroad accepted?)

Brazil	<p>The conformity assessments are carried out by "Ex" Certification Bodies accredited by Inmetro.</p> <p>Regarding to acceptance of conformity assessment done abroad, according to the Inmetro Regulation "Portaria 179/2010", the test results indicated in an ExTR (issued within the international IECEX Scheme) can be analyzed by an "Ex" Certification Body, accredited by Inmetro, for consideration during the process of issuing a new Brazil "Ex" Certificate of Conformity.</p> <p>Furthermore, the acceptance of test results performed by a Testing Laboratory located outside Brazil can be considered only if the Test Laboratory is accredited by some ILAC (International Laboratory Accreditation Cooperation) Full Member and if the laboratory accreditation scope covers the same standards required in the Inmetro Regulation (i.e., Standards Series ABNT NBR IEC 60079).</p> <p>Any other activities performed by Certification Body, such as inspections, are allowed only if there is a Memorandum of Understanding between the "Brazilian" Certification Body (accredited by Inmetro) and the Certification Body abroad</p>
South Africa	<p>For South African "permit" or "licence" schemes, SANAS conducts audits on the CB's. They provide the lead assessor, and appoint a technical expert (usually from industry).</p> <p>In terms of manufacturer conformity assessments, the CB provides its own auditors.</p> <p>Where a manufacturer is audited in terms of overseas schemes (IECEX, ATEX etc) then the chosen authorized overseas CB will provide its own auditors.</p>
European Union	<p>Where ATEX mandates any form of certification, this must be conducted by a "Notified Body" which has been "notified" by a national government to the EU Commission for the purpose of acting in respect of a particular directive. Notified Bodies have significantly greater freedom to accept results from other sources than a certification body within the IECEX scheme, and such an ability could possibly vary from country to country according to the particular view of the authority in that country responsible for notification. In all cases, Notified Bodies that are also IECEX Certification bodies would normally accept IECEX Reports from other IECEX Certification Bodies as an input to issuing ATEX Documentation.</p>
Australia	<ol style="list-style-type: none"> 1. Accreditation is scheme dependent: (a) For international (IEC) it is the IEC Ex-Scheme, and (b) For national (the ANZ Ex-Scheme) it is JASANZ (Joint Accreditation Scheme for Australia and New Zealand). 2. Criteria are based on International Guides and specific scheme requirements. 3. Foreign conformity assessment bodies are permitted in accordance with the IEC Ex-Scheme.

Question 15: 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?)

Brazil	<p>According to CONMETRO 004/2002 Resolution, only Inmetro can conduct the accreditation of “Ex” Certification Bodies, “Ex” Test Laboratories and “Ex” Person Certification Bodies, according to harmonized Standards ABNT NBR ISO/IEC 17065, ABNT NBR ISO/IEC 17025 and ABNT NBR ISO/IEC 17024, respectively.</p> <p>http://www.inmetro.gov.br/legislacao/resc/pdf/RESC000003.pdf</p> <p>The accreditation of foreign assessment bodies is possible. To date, the offices in Brazil of the following ten “Ex” Certification Bodies are accredited by Inmetro: BVC, CEPEL, CERTUSP, DEKRA, DNV, NCC, ICB, IEx, TÜV Rheinland and UL</p>
South Africa	SANAS is authorized to conduct the accreditation of the CB’s
European Union	<p>Currently, Notified Bodies are appointed on the basis of a comparatively short set of rules that do not necessarily involve accreditation. Different countries within the EU have, historically, taken different views on the mechanisms to use. Under the “New Legislative Framework” (NLF) revised versions of a number of directives (Machinery, Low Voltage, EMC, etc. as well as ATEX) will be published either in late 2013 or in 2014 and will tighten the rules for notification. The NLF will insist on either full accreditation for the scope of the notification, or the basis for notification for an individual body must be circulated to all other member states to permit an objection. It is assumed that accreditation will therefore effectively become mandatory, but it will be the national accreditation body that issues the accreditation, so there is still possible divergence across the EU, unlike the single set of criteria operated by IECEX..</p>
Australia	<p>Conformity assessment is done by organisations accredited under the ANZ Ex-Scheme or IEC Ex-Scheme. NSW mining allows for conformity assessment accepted from overseas organisations that are accredited under the IEC Ex-Scheme. That is an IEC Ex-Certificate of Conformity from any Certification Body that is recognized under the IEC Ex-Scheme is acceptable.</p> <p>The accreditation of conformity assessment bodies (Ex CB) is done by JASANZ who are a member of IAF</p>

Question 16: Which additional directives / laws have a product for use in explosive environments to comply with? (Common for all products and/or specific for products?)

Brazil	Manufacturers of “Ex” equipment have to fulfill all relevant Brazilian Regulations concerning his product, including, for example, the consumer rights protection law
South Africa	In terms of South African regulations there are a number of local standards that are mandatory. These are listed in SANS 10108 and the ARP 0108. Regulations also apply.
European Union	None. ATEX 94/9/EC is presumed to cover all relevant aspects. However, the same product may be subject to other directives (Pressure Equipment Directive, Machinery Directive, EMC Directive, for example). The Low Voltage Directive and the ATEX Directive are mutually exclusive and cannot be applied simultaneously, though equipment that is suitable for use in both a hazardous and a non-hazardous area may claim compliance for the relevant one according to its final place of installation.
Australia	<p>NSW Coal mining require group I certified equipment and the requirement of the Government Gazette -</p> <p>http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/203198/Types-of-electrical-plant-used-in-hazardous-zones---CMHS-Act-2002.pdf</p>

Question 17: Are there additional or special directives/laws for putting products into operation (in addition to placing a product on the market)

Brazil	In Brazil, the requirements on the safety in installations and service involving electricity are
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	<p>regulated by the Labor Ministry Regulation NR-10 - Safety at Installations and Electrical Services</p> <p>http://portal.mte.gov.br/data/files/8A7C812D308E216601310641F67629F4/nr_10.pdf</p> <p>This Regulatory Standard also covers requirements for certification of equipment for explosive atmospheres, as well the qualification of personnel engaged in hazardous location activities.</p>
South Africa	<p>South African law states that no one may use or put into use explosion protected equipment without being in possession of the applicable certification documents. During audits, if certificates are not available, equipment may be shut down until the certificate can be produced.</p>
European Union	<p>National regulations are based on, but not necessarily identical to, ATEX 1999/92/EC</p>
Australia	<p>Yes the installation of those products must comply with AS/NZS 60079.14</p> <p>NSW Coal Mine Health and Safety Regulation 2006. This regulation requires Ex-equipment to meet requirements specified in a Government Gazette -</p> <p>http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0005/203198/Types-of-electrical-plant-used-in-hazardous-zones---CMHS-Act-2002.pdf</p>

Question 18: Which are the procedures for the market surveillance for “Ex” equipment and who is responsible ?

Brazil	<p>Inmetro is responsible for performing the market surveillance for “Ex” equipment. The Conformity assessment system adopted in Brazil is System 5, according to Standard ABNT NBR ISO/IEC Guide 67</p>
South Africa	<p>Each CB is responsible for the scheduling and conducting of market surveillance audits of their licensed manufacturers. Such a CB is audited and accredited by SANAS</p>
European Union	<p>Each national government makes its own detailed arrangements for market surveillance, but the responsible authorities in each country meet in the “ATEX ADCO” in order to pool information and take decisions on any Europe-wide action that may be identified. This is an entirely separate activity from Notified Bodies performing production surveillance on manufacturers, but occasionally members of the ATEX ADCO may approach an individual Notified Body for information as part of their Market Surveillance activity.</p>
Australia	<p>Market surveillance is ad-hoc and there are a number of market surveillance opportunities:</p> <ul style="list-style-type: none"> -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/over-hauler – 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). <p>Queensland is similar to NSW mining in that market surveillance opportunities include at manufacture, by the purchaser (as per legislative obligations) and by the regulator (through minesite inspections, audits and incident investigations).</p>

Question 19: What are the regulations for inspection, maintenance and repair of the “Ex” equipment?

Brazil	<p>The Labor Ministry Regulation NR-10 defines the need for user to perform periodic</p>
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	<p>inspections on electrical installations in explosive atmospheres.</p> <p>There are no legal requirements for conducting these inspections, maintenance and repair.</p> <p>However, many companies adopts the procedures required in Brazilian harmonized standards ABNT NBR IEC 60079-17 (Electrical installations inspection and maintenance for explosive atmospheres) and ABNT NBR IEC 60079-19 (Equipment repair, overhaul and reclamation for explosive atmospheres)</p>
South Africa	<p>SANS 10086 and its parts (The installation, inspection and maintenance of equipment used in explosive atmospheres) cover the inspection, maintenance and repair of Ex equipment in South Africa for both surface and underground equipment. These documents have recently been updated to remove the locally produced content and replace it with references to the applicable parts of the 60079 series. The original document title has been retained due to the references in the regulations.</p>
European Union	<p>Covered by ATEX 1999/92/EC and related national implementations</p>
Australia	<p>Yes legislation and Regulations require all industries to cover the entire life cycle of Ex plant and equipment.</p> <p>Design selection and installations are required to satisfy the requirements of AS/NZS60079.14, inspection and maintenance to satisfy AS/NZS60079.17 and overhaul and repair to satisfy AS/NZS3800 (adopted from IEC 60079.19)</p> <p>NSW Coal Mine Health & Safety Regulation 2006 Clause 19 (1) parts c,d,e,g and g</p> <p>In Queensland see the <i>Coal Mining Safety and Health Regulation 2001</i> sections 20, 23</p>