



ATEX and IECEx – The Latest Developments from Europe and in International Certification

Ron Sinclair, General Manager, SGS Baseefa Ltd

Rockhead Business Park, Staden Lane, Buxton SK17 9RZ, United Kingdom

Tel: +44 (0) 1298 766600 • Fax: +44 (0) 1298 766601 • E-mail: Ron.Sinclair@sgs.com

Web: www.sgs.com • www.baseefa.com

Both within Europe and internationally, the requirements for equipment and installations in hazardous areas continue to develop. One of the major causes of criticism of the European ATEX Product Directive is being addressed by changes in the way that Notified Bodies are appointed. Document requirements are also being aligned with some of the other “New Approach” directives. Internationally, a number of major plant owners are starting to ask about the availability of IECEx Certified Personnel to undertake work on their plant. The scheme for Certification of Personnel Competence is starting to grow, and with it the demand for appropriately qualified people.

Developments in ATEX

Sometime during 2013, we expect the European Commission to publish a number of updated directives under what is called the “New Legislative Framework” (NLF). The ATEX Product Directive 94/9/EC is one of the directives to be affected.

The thrust of the NLF is to ensure that similar requirements across more than one directive are expressed in the same way and, particularly, to rationalise the way in which Notified Bodies are appointed. The term “Notified Body” refers to the action of a member state “notifying” a certification body to the European Commission as being competent to act in the field of a particular directive. The problem, to date, has been that the process that individual countries have undertaken to decide if a body is fit to be notified are, to put it politely, obscure. Under the NLF, the normal requirement will be that the body must obtain accreditation from their national accreditation organisation (for example The United Kingdom Accreditation Service – UKAS – in the UK). This should ensure a more even standard of competence between the bodies, even though doubt is sometimes cast over the equality of the accrediting bodies. Unfortunately (in my opinion) the Commission have still left a little weasel room for bodies that cannot achieve accreditation, but any such body, appointed without accreditation, can be subject to challenge from any other member state.

Other than the change in appointment procedures for Notified Bodies, there is very little practical change in the proposed text of the new directive; certainly none that will require technical changes to products. However, manufacturers based outside the European Economic Area (EEA) will need to take account of different rules applying to Manufacturers’ Representatives and Importers based within the EEA. Essentially, the Commission have spread an existing requirement from some directives across all of the NLF directives and it will now be compulsory for the ATEX technical file information to be available from a legal entity (or legal person) established within the EEA. This documentation must be held for a minimum period of ten years after the last product of the relevant type has been imported.

My personal thought is that this could lead to conflicts if, for example, the importer is the end purchaser of an item of equipment and the manufacturer is not happy about providing the complete technical file. It could be that the manufacturer has to appoint an entity solely for the purpose of holding the documentation. I am certainly aware that this happens for the current version of the Machinery Directive. It should not be a problem for certified equipment, as the certifying Notified Body already holds most of the technical file (with the ten year minimum limit already imposed), or for non-electrical Category 2 equipment where a file already has to be deposited with a Notified Body, but it is definitely a new requirement affecting manufacturers of Category 3 equipment.

Probably the issue that will cause most concern is that the number of the directive will change. 94/9/EC will become history. This means that all related paperwork will have to be revised to show the new number. The European Commission are talking about a two year transition period, but I support the European Ex Notified Bodies Group in calling for this to be extended to at least five years, in order to give sufficient time for documentation to be updated. This is not just an issue for users of the directive, it is also an issue for legislators, in all the member countries of the EEA, who will have to prepare legislation and get it



A Flameproof Enclosure is only as strong as its fasteners. Do all those installing, inspecting and maintaining realise the need to use only the fasteners specified by the manufacturer?

implemented within that two year period. I am aware that some countries actually missed the July 2003 deadline for the original legislation, despite the 1994 publication of the original ATEX text.

The one area where we seem to have won a concession is that existing EC-Type Examination Certificates, referring to conformity with 94/9/EC, can remain valid under the new directive and do not need to be re-issued solely to change the directive number.

IECEx Competence Certification

As the IECEx Product Certification Scheme goes from strength to strength (with well over 10,000 product certificates and reports currently available for public search on the internet – see www.iecex.com), so the related “User” orientated services are beginning to move forward.

The scheme for certification of Service Facilities (in the main, motor repair workshops) continues to have great support from a number of oil majors who are concerned that they need an independent assurance that the workshops they are trusting to get their production up and running again actually know how to do the job safely, so as not to increase the risk of explosions.

The newest scheme is for the certification of individual Personnel Competence. This is applicable to all those engaged in the design, installation, inspection and maintenance of a plant where hazardous areas may exist. Like the Product Certification Scheme, it is starting slowly, but we are just beginning to see an upsurge as the scheme becomes better known.

The purpose of the IECEx Certificate of Personnel Competence is to give a portable qualification that allows any prospective employer to have confidence in the basic competence of the individual, independent of the particular site on which the individual will be working. As with all IECEx Certification, a copy of every certificate is available for checking from the IECEx web site and, in this case, provides a photograph of the certified person, thus minimising the chance of impersonation. Essential information from the certificate is also provided in credit card sized format, to provide immediate identification regarding the individual.

So what distinguishes the IECEx Scheme from others that may be available?

The first point to make is that the scheme, itself, does not involve any training activity. Training can be obtained from any source, and the effectiveness of that training is independently verified within the scheme. But training is only a partial contribution to the competence of an individual. It is equally important that the individual has the minimum level of intellectual ability in relation to the tasks being undertaken and can apply the information from a training course to new situations that are met in the workplace. There are separately specified requirements in some of the units according to whether the individual is working as an Operative or as a Responsible Person.

Other qualifications, such as relating to prior and continuing working as a general electrician, are also relevant for some of the units. Each unit has a number of pre-requisites specified, so that applicants to the scheme know exactly what they should have achieved before presenting themselves for examination.

A record of work experience in the relevant field must be submitted, along with the names of referees who can testify to the accuracy of the record. Checking of all the submitted records (training and academic, as well as direct work related), on a random basis, is a fundamental part of the scheme.

When it comes to the examination, this is tailored directly to the specified field of activity of the individual within each of the units of competence. An instrument engineer will not have to answer questions on the installation and protection of high voltage motors, or vice versa. Question selection can be limited based on protection type, equipment type or supply voltage, and the limitation is specified in the certificate.

The basis of the examinations is the information given in the fundamental "User" standards in the IEC 60079 series. Parts 10-1 and 10-2 relate to area classification. Part 14 is for selection and installation of equipment. Part 17 covers inspection and maintenance. Part 19 – Overhaul and Repair – is more specialised and applies to Unit Ex 005 only.

If specifically requested, additional questions can be included relating to industry codes such as IP 15, and the certificate endorsed accordingly, but under no circumstances can a local industry code be used as a substitute for knowledge of the universally applicable IEC standards.

The IECEx Units of Competence

- Unit Ex 001 Apply basic principles of protection in explosive atmospheres
- Unit Ex 002 Perform classification of hazardous areas
- Unit Ex 003 Install explosion-protected equipment and wiring systems
- Unit Ex 004 Maintain equipment in explosive atmospheres
- Unit Ex 005 Overhaul and repair of explosion-protected equipment
- Unit Ex 006 Test electrical installations in or associated with explosive atmospheres
- Unit Ex 007 Perform visual and close inspection of electrical installations in or associated with explosive atmospheres
- Unit Ex 008 Perform detailed inspection of electrical installations in or associated with explosive atmospheres
- Unit Ex 009 Design electrical installations in or associated with explosive atmospheres
- Unit Ex 010 Perform audit inspection of electrical installations in or associated with explosive atmospheres

As with any scheme of this nature, continual monitoring is part of the process. There is a formal surveillance review (requiring updating of work-related records) at eighteen months, plus a reassessment at the three year period. If the claimed competence has not been used during that three year period, a full requalification is required before it can be reinstated in the certificate.

My own company, Baseefa, has followed the path of using a secure web site to hold all the information and this allows the candidates to build their evidence files on-line and to maintain up to date records relevant to the use of the individual competence elements. There need be no head scratching trying to put together an evidence file at the relevant surveillance and reassessment periods as it is already assembled.

There is a lot of information on the IECEx web site, including a guidance document (IECEx 05A) that can be downloaded from the publications section of www.iecex.com. Full details of the Competence Units and their pre-requisites are in Operational Document OD 504, available in the same place.

About the Author

Ron Sinclair has been active in the certification of equipment for use in explosive atmospheres for over 35 years. Previously a designer of large electrical machines, he has developed expertise in all types of Ex protection while working for the UK Health and Safety Executive's Baseefa and EECS. When HSE decided to terminate the certification activity in 2001, Ron led the staff into the creation of a re-formed Baseefa as a private company. Subsequently, Baseefa has joined SGS, the world's major supplier of test, certification and inspection services. Baseefa boasts over 300 years collective experience of hazardous area equipment certification, and is now working increasingly to support the users of such equipment.

Ron is active in standards development for hazardous area equipment: he is Chairman of BSI Committee EXL/31; Chairman of Cenelec Committee TC31; and a major contributor to the development of IEC standards. He attends the European Commission's ATEX Standing Committee, and is well placed to interpret the latest thinking from the legislators. For four years, he has been chair of ExTAG, the Test and Assessment Group of the international IECEx Certification Scheme. ExTAG is the forum for all the IECEx Certification Bodies and Testing Laboratories to meet and to thrash out procedures to assist equal application throughout the world of the IEC standards for Ex protection.

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