

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
Email ron.sinclair@sgs.com • Web www.baseefa.com • Tel +44 (0) 1298 766600

Both within Europe and internationally, the requirements for equipment and installations in hazardous areas continue to develop. We are looking forward to the new ATEX Directive and what it will mean for manufacturers and purchasers of Ex Equipment as well as celebrating the success and developments in the International IECEx Certification System. Crystal Ball gazing shows the two currently separate schemes coming together.

The New ATEX Directive – Why and What?

Earlier in 2014 we received the text of the new ATEX Directive. 2014/34/EU will replace 94/9/EC from 20th April 2016. Why have we got a new directive and what does it mean for manufacturers and purchasers of ATEX Equipment?



It is important to realise that this is part of a general rationalisation of legislation within the European Union. In 2008, the European Commission published what is known as the "New Legislative Framework" (NLF). The intent is to rationalise a number of separate directives so that identical requirements are expressed in identical ways, and to clarify some of the issues that have caused queries over the years.

Formal EU Definition of a Notified Body

Notified bodies are conformity assessment bodies which have been officially designated by their national authority to carry out the procedures for conformity assessment within the meaning of applicable Union harmonisation legislation when a third party is required.

However, probably the most significant aspect is that the Commission have admitted that the arrangement for accepting Notified Bodies has been far from ideal. Each European member state has been responsible for setting its own guidelines for the notification process but, for the NLF based directives, a common framework, based on formal accreditation, will now be in place.

Statement by European Commission on the Notification Process

Experience has shown that the criteria set out in sectoral legislation which conformity assessment bodies have to fulfil to be notified to the Commission are not sufficient to ensure a uniformly high level of performance of notified bodies throughout the Community. It is, however, essential that all notified bodies perform their functions to the same level and under conditions of fair competition. That requires the setting of obligatory requirements for conformity assessment bodies wishing to be notified in order to provide conformity assessment services.

Although the market place has been suspicious for some time, it is an unexpected admission from the Commission that the previous arrangement was not fit for purpose.

So Notified Bodies are affected by the changes, but are there any issues to cause concern for manufacturers and purchasers? The answer is "Some, but not a lot".

The way 2014/34/EU is written requires that "Declarations of Conformity" (DoCs) for equipment dispatched on 19 April 2016 will require to be in accordance with 94/9/EC but after midnight the DoC will require to be in accordance with 2014/34/EU. Clearly the sharp divide either side of midnight causes quite a number of complications; not only in terms of DoCs but also for printed instructions and advertising materials. The Commission has recognised that there will be a problem and is in course of deciding how this will be handled. As it is a common issue with all the NLF directives, a common solution must be found, and this will take a little while. We are hoping we will have news of the solution in early 2015.

Creating the new documentation will be the only real task for many manufacturers. The directive is very specific in confirming that pre-existing EC-Type Examination Certificates and Quality Assessment Notifications (QANs) issued in accordance with 94/9/EC will remain valid for 2014/34/EU, so there is no need to rush to update the certification information.

For others, particularly manufacturers based outside Europe, extra duties have been clarified for the supply chain. The new directive places a requirement on both importers and distributors to hold documentation and to have it available until 10 years after the last equipment has been supplied. This is an extension of the identical requirement that also applies now, as well as in the future, to the manufacturer.

Not only will the EC-Type Examination Certificates remain valid, there are no technical changes in the Essential Health and Safety Requirements (EHSRs) given in Annex II of the new directive. Existing standards that are harmonised for 94/9/EC will automatically be accepted as harmonised for the new

directive, so the process of keeping products up to the "State of the Art" (required by both directives) will transfer smoothly, without any particular time constraints imposed by the change in directive.

The European group of Notified Bodies for ATEX have already agreed that existing ExNB Clarification Sheets will remain valid. The current list is available from the EU Commission Guidance on ATEX web site, accessible through the link at www.baseefa.com. "State of the Art" issues, and how to deal with them, are expressly covered in ExNB/10/397/CS. All manufacturers should become familiar with this, as it helps them to maintain their Declarations of Conformity up to date, and therefore accurate when first declaring to 2014/34/EU.

So, what needs to be done:

Manufacturers; Before 20 April 2016 prepare new Declarations of Conformity and ensure that your distributors and importers (if any) understand their obligations in relation to documentation

Purchasers: All you need to do is check that the DoC received after 20 April 2016 is to 2014/34/EU. All other documentation remains acceptable.

What's new in IECEx?

Just as things change in the European legislative field with ATEX, the IECEx international certification system keeps developing. With over 20,000 certificates issued and available for search and direct download at www.iecex.com the system is the place to go for authoritative information on certification. The web site also provides a source of all sorts of relevant information, including Operational Documents and ExTAG Decision Sheets (which serve the same function as the ExNB Clarification Sheets). Up to ten new documents are added every year, many of them of relevance to manufacturers and some of relevance to equipment installers and users.



Although the equipment certification scheme is the best known, all the other schemes are developing a pace.

Service Facility Certification has historically been applied to those workshops offering a repair and refurbishment service, particularly for rotating electrical machines. There are now a number of workshops with this international certification confirming their capability to work effectively to the IEC 60079-19 standard, with particular clusters in the UK, the Netherlands (both because of earlier national schemes) and South East Asia. The new development, due to become effective in 2015, is the extension of the scheme to include other types of "service" such as installation, inspection, maintenance and area classification.

The use of individuals possessing an IECEx Certificate of Personnel Competence (CoPC) will be one plank of the service facility scheme extension.

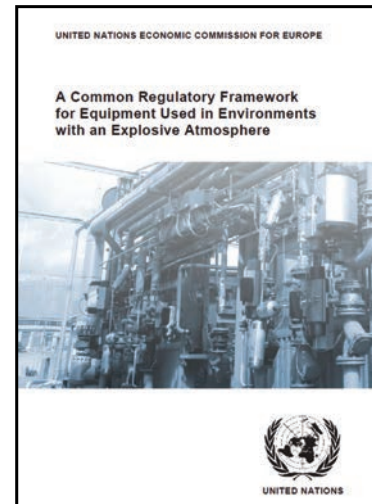
The CoPC scheme is also developing. It has been recognised that the basic competence unit IECEx 001 (the foundation for the other nine units) is probably on the complex side for someone who is new to working in hazardous areas. Therefore, from January 2015 a new unit IECEx 000 "Certificate of Basic Knowledge" will be available, based only on a knowledge test. This will indicate that the individual concerned has a basic knowledge, but is not able to demonstrate a specific competence in the Ex field. At the same time, unit Ex 001 will be beefed up, to ensure that the relevant concepts are understood before moving on to the other units Ex 002 to Ex 010.

IECEx Units of Knowledge/Competence

- Unit Ex 000 Basic knowledge
- 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

To get certification for any of the units beyond Ex 000 and Ex 001 demands a fair effort on the part of the candidate, spending between two and five days at the assessment centre, dependant on how many, and which, units are involved. Five of the units involve extended periods working with model assemblies. Unit Ex 005, "Repair and Overhaul", requires demonstration of the full process for the type of equipment in scope. All of this is after logging educational qualifications, training records and work experience, validated by the employer. There is no other world-wide scheme that can provide equal confidence in the certificate holder. Remember that the IECEx CoPC Scheme is not tied in with any training course, so the certification body has no added incentive to ensure that candidates pass the rigorous tests.

The IECEx System for certification, together with the associated standards produced by the IEC TC31 Technical Committee (mainly those in the IEC 60079 series), has been acknowledged by the United Nations as the world's best practice to ensure an acceptable level of safety in hazardous areas.



By recommending a Common Regulatory Framework, the intention is to provide an equally high level of protection throughout the world and to free up movement of products in this field. With more and more countries accepting IECEx Certification, where specific laws do not prevent it, the onward movement is irresistible and it is even foreseeable that the mighty bastions of the European Union and the USA will come on board at some time in the future.

Even in these areas, IECEx reports, if not certificates, allow a short-cut process to obtaining the regional certification. Here, and in other major industrial nations with their own legal systems, such as Russia and Brazil, the acceptance of IECEx reports as an input to local certification can provide commercial opportunities that would not otherwise exist at an economical price.

About the Author

Ron Sinclair has been active in the certification of equipment for use in explosive atmospheres for nearly 40 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. SGS 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 Working Group, and is well placed to interpret the latest thinking from the legislators. For six years, he has been chair of ExTAG, the Test and Assessment Group of the international IECEx Certification Scheme, as well as vice-chair of the European Notified Bodies Group (ExNB) for the ATEX Directive