



Aspects of ATEX and IECEx

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READING THE (ATEX) INSTRUCTIONS

A question we regularly get asked at Baseefa, and one which directly affects both manufacturers and installers of Ex Equipment, is about the permissible form in which the manufacturer may pass instructions to customers.

First of all, let me emphasise that no Notified Body is in a position to give a legal interpretation of the ATEX Directive, or of any other directive. Therefore, in what follows, I am trying to present information that I believe is already, at least partially, in the public domain and which I believe best represents the views which have been expressed by DG Enterprise of the European Commission in relation to the supply of instructions.

I regularly attend the EU Commission Standing Committee Working Group on the ATEX Directive and listen to the views of the Commission DG Enterprise representatives on a number of issues and to the debates between the various member state representatives. I also make an input on behalf of the standard makers. I am therefore privy to some of the discussions which have led to publication of various documents in the ATEX field, including the comprehensive ATEX Guidelines document which can be accessed at:

<http://ec.europa.eu/enterprise/atex/guide/index.htm>



Figure 1: Instructions must be in paper form.

The Commission has taken similar views on the provision of all documentation which is required, by the directive, to accompany the product. In 10.1.3 of the guidelines (see box 1), clear reference is given to underlining the text of the directive with respect to both instructions and the Declaration of Conformity (DoC). In this case the text refers to the "DoC / written attestation for components", indicating clearly that a written form is anticipated. However, the reference to "instructions" is open to interpretation as regards the specific form in which they are to be supplied.

Because of the background knowledge on how the guidelines were written, I have always favoured the interpretation that the words were meant to imply that the instructions should also be supplied in written form.

It was not until the subject was raised in 2006 that we were handed an authoritative interpretation by the Commission. Following a discussion between Notified Bodies which had revealed the different interpretations, the matter was formally raised at the Standing Committee Working Group meeting in November 2006 (see box 2). It is up to each member state to determine how the information from the meetings is made public. In the UK, BERR (The Department for Business, Enterprise and Regulatory Reform – previously part of DTI – which is the responsible government department) publish an ATEX Stakeholder Report, which is both actively circulated and publicly available on the BERR web site.

The appropriate report covering the November 2006 meeting is available at:

<http://www.berr.gov.uk/files/file36994.pdf>

"(Stop Press: Under the June ministerial reshuffle of the British Government, BERR has become part of the Department for Business Innovation and Skills, and this may affect the URL by the time this article is published.)"

Extract 1: Extract from the ATEX Guidelines

10.1.3. Documents accompanying the product

According to Articles 4(2) and 5(1) of Directive 94/9/EC and for the purposes of market surveillance the EC declaration of conformity/the written attestation of conformity must accompany the information given with each single product, or each batch of identical products delivered for the same end user.

The product is also accompanied by instructions for safe use (see EHSR 1.0.6). The manufacturer does not have to provide the full technical file to the user.

With respect to assemblies, it is important to the safe installation, operation and maintenance of the assembled unit that all relevant information is passed to the end user. The manufacturer of the assembled unit should do this by including all related information in a package supplied to the end user.

From the three sources quoted, I believe I am correct in saying that both the DoC and the instructions should accompany the product (or batch of products) in paper form.

I should also add that, although not recorded in the minutes, the tenor of the discussion was that under no circumstances should anyone rely on access via specific web URL addresses, as these must be regarded as transitory and subject to change. A similar discussion – and a vehement "no" – had been heard at a previous meeting when the suggestion was raised that perhaps it would be adequate to use a URL instead of a physical address to satisfy the requirement for equipment marking that the product must carry the manufacturer's address. In this case, a compromise was reached that for countries such as the UK, where a Post Code is reasonably permanent and definitive, this would be adequate, if space was at a premium. Thus, if we were a manufacturer, our address would become simply: Baseefa, SK17 9RZ, UK.

So where does this leave the manufacturer and purchaser if the instructions are particularly extensive and may be required in more than one language, or if the customer specifically requests the instructions in electronic form?



Figure 2: Ron Sinclair (centre) presents the first IECEx Service Facility Certificate for a UK motor repairer to Carl Mudd, Regional Director of Dowding and Mills, accompanied by John Allen, Technical Director.

My personal belief is that strict compliance with the legal requirement and interpretation established by the Commission must be combined with an element of pragmatic common sense based on the actual customer requirement.

The "ATEX Instructions for Use" are only those aspects listed in clause 1.0.6 of Annex II (the Essential Health and Safety Requirements) of the directive (albeit that the list is fairly extensive). Thus the manufacturer is perfectly entitled to use any medium that he and his customer may agree for all other aspects. And, of course, there is nothing that prohibits the supply by CD-ROM or web in addition to the paper copy.

The manufacturer may also take advantage of the derogation on language provided in 1.0.6 (b) if he can justify providing a single language version, for example on the basis of normal installation by personnel understanding that language. In this case, it would be reasonable to provide other language versions via CD-ROM or a URL, as a back-up, for local printing.

However, what both manufacturer and customer must keep in mind is that legally, they are not entitled to agree to waive the requirement for the paper copy of the instructions as, if the instructions are not supplied as required, the equipment does not fulfil the Essential Health and Safety Requirements of the Directive. Therefore the Declaration of Conformity is, theoretically, invalid. In this case, not only is the manufacturer not entitled to sell the equipment within the European Economic Area, but the purchaser (if covered by the ATEX User Directive 1999/92/EC) is not entitled to install it either.

An International Service Facility

As the IECEx Product Certification Scheme goes from strength to strength (with about 9000 product certificates and reports currently available for public search on the internet – see www.iecex.com), so the

Extract 2: Extract from the ATEX Standing Committee Working Group Minutes for the meeting on 30th November 2006 in Brussels

7. Any other business

Mr. Jockers (ExNBG) presented the question on information to be provided by manufacturers, as instructions, on paper or electronic (CD-ROM, DVD, website) form. He referred to the clear answer reached in the Machinery sector: important information as instructions should be provided on paper form.

The Chairperson confirmed that also for ATEX, the same clear answer should be given: instructions should be provided on paper form, as electronic supports could not offer the same level of availability as on paper.

related Service Facility Certification Scheme is gaining momentum. Just as the numbers of certificates for the Product Certification Scheme were fairly low in the first two years, so the numbers for the Service Facility Scheme are also fairly low at this stage. What is not shown, however, in the public database on the IECEx web site, is the large number of enquiries from all over the world and the number of applications currently under assessment.

Apart from one certificate issued in Australia and one in Scandinavia, it is interesting that, at the time of writing, the current certificates are issued to just three locations; the UK, the Netherlands and South East Asia.

From the number of enquiries that we are dealing with, it is clear that South East Asia, particularly

Singapore and Malaysia, has been crying out for this scheme. A lot of this is being driven by Malaysian oil company Petronas and also by Shell, Brunei, where the oil companies are looking for an independent evaluation of the competency of the local repair facilities. Both companies have said that they welcome the development of the IECEx scheme to assist their choice of which repairer to use.

In both the UK and the Netherlands, the impetus is a development from pre-existing national schemes. KEMA were in a strong position to effectively mandate all their existing Dutch customers to change to the international scheme, in a way that was not possible in the UK. Although Baseefa has about 20 motor repair workshop customers in the existing national scheme (based on the earlier edition of IEC 60079-19), so far only two have completed the upgrade to the later edition and qualify for international acceptance. So congratulations to Dowding and Mills (UK) in Middlesbrough and to Kirkby Lindsey Engineering in Hull. Several other locations are in the pipeline and should follow later this year or early next. You can keep up to date by visiting www.iecex.com.

Summary

Baseefa is often asked if it is permissible for the "instructions" for ATEX Equipment to be sent as a CD-ROM or by reference to a web address. The answer is not always as might be expected, as the European Commission has some very forceful ideas on this subject. The IECEx Service Facility Certification Scheme is now maturing and it is interesting to consider the different rates of take-up around the world.

About the author

Ron Sinclair has been active in the certification of equipment for use in explosive atmospheres for over 30 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. 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 GEL/31; Chairman of Cenelec Committee TC31; and a major contributor to the development of IEC standards as well as the CEN standards for non-electrical equipment. He attends the European Commission's ATEX Standing Committee, and is well placed to interpret the latest thinking from the legislators. Last autumn he was elected to the position of 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.

ATEX Transmitter Offers the Fastest Monitoring of Flammable Gases



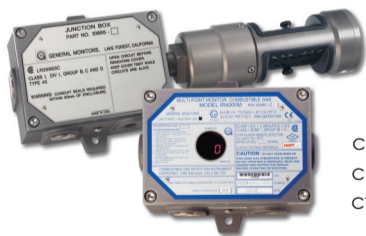
Wherever flammable gases or vapours are found, GfG's (Germany) CC28 provides the best solution for safe monitoring. ATEX-certified design, built-in EX-certified horn and bright LED lights allow safe operation within highly flammable areas. The gas alarm is transmitted to the central control panel, simultaneously warning the control room and the worker in the danger area.

Using GfG's unique sensor technology, coupled with a special "chimney-effect" the CC28 transmitter has the shortest response time in the market, detecting flammable gases using catalytic bead technology. When used in conjunction with our GMA controller series, a programmed delta alarm can shorten the response time still further. This gives an extra level of safety when handling explosive gas risks. Installation and sensor exchange are quick and easy using pre-calibrated smart, plug-in sensors. One-man calibration / adjustment is possible directly at the transmitter, without opening the housing.

Some flammable gases are lighter than air (e.g. methane). If a transmitter is installed close to the ceiling, it can be connected by a fixed installed cable with a plug connection to the remote control. Thus, all adjustments can be made comfortably from floor level. With one remote control device, an unlimited number of transmitters can be controlled in this way. Using transmitters without display, the remote control shows the current values on its' own display. The display of the remote control mimics the transmitter display exactly. Inspection, maintenance and adjustment are therefore greatly simplified. Using the remote control inspection, service and calibration can be performed easily by one person.

Reader Reply Card No 80

New IR Sensing Combustible Gas Detection System is Scalable for Small to Large Applications



The new IR4000 Infrared Combustible Gas Detection System from General Monitors (USA) is a scalable plant safety solution with voting. The system's IR4000M Multi-Point Monitor can connect up to eight IR400 Point IR Gas Detectors and read their status with one command, one detector at a time. The IR4000M can also calibrate, gas check and zero each IR400 sensor with a single command, reducing the cycle time for routine maintenance.

The IR4000M is highly versatile. The monitor incorporates a display, relay module and a data concentrator in an explosion-proof enclosure and magnetic interface, which permits installation and calibration in hazardous locations. Optional 8-Amp relays expand system functions, reducing the need for integration with other controllers. HART and Modbus permit the device to convey device IDs, concentration readings, and time-stamped diagnostic, maintenance, and warning and alarm records to the control room.

The versatile IR4000 System is suitable for a wide range of hazardous industry processes and plant applications: LNG/LPG processing and storage, electric power generation plants, oil and gas production platforms, petrochemical refining, compressor stations, aerospace facilities and wastewater treatment. The system is certified by FM, CSA, ATEX, CE Marking and IECEx for worldwide application and is also suitable for use in SIL 2 environments.

Reader Reply Card No 81

ATEX Certified Gas Sensor Head Enclosure for IR Sensors

N.E.T. (Italy) is offering full conformity Ex certified heads containing the complete range of N.E.T. NDIR sensors. Two dimensions of heads are available; one small disposable head for 20 mm size sensors and one larger decomposable head, fitted with a 32 mm sensor that can be substituted if needed.

The stainless flameproof heads are available with "Genius", IRNet, IRPell, or IRIS sensors. Intrinsically safe barrier is available on request.

The IRad detector head is available for hydrocarbon detection, including methane, in % LEL and % volume and for CO₂ with detection level in ppm, low % volume and high % vol. The output will be determined by the sensor used.



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