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Guidance on the use of products certified to out of date Ex standards – Bob Johnson – President Source IEx

One of the topics that is often brought up by many end users and packaged equipment manufacturers is the use of products that are certified, but not necessarily to the latest EN or IEC 60079 set of standards and whether or not these certificates are still valid. Fortunately, clarifications have been provided by both the IEC and the European Commission on this topic that gives guidance to both users and manufacturers of Ex equipment on whether or not the existing certificate(s) are still valid or can be accepted.

On the IECEx website (www.iecex.com/extag_decisions.htm), a list of specific decisions has been made public that is a tremendous reference tool for addressing specific issues such as this. The specific decision that references the use of older standards is ExTAG DS 2014/001 from March of 2014. Some of the key points referenced are the following:

- a) *Ideally, all incorporated Components shall be certified to the same edition of the standard as the equipment.*
- b) *It is recognised that this is not always possible, in which case the following applies:*
 - i. *A Component certified to an earlier edition of the standard can be accepted provided that either a study of the differences between the standards shows that none applies to the particular Component, or the ExCB/ExTL re-evaluates the Component against the clauses where there is an applicable technical difference. (Re-evaluation will require that the ExCB/ExTL has access to the original ExTR for the component.)*
 - ii. *The record of the assessment of the differences or of the re-evaluation shall be given in the ExTR of the equipment.*
 - iii. *The Component Certificate Number shall be listed in the CoC, along with the edition of the standards referenced and a statement such as "No applicable Technical Differences" or "Technical Differences evaluated and found satisfactory – for detail see ExTR". Older editions of standards need only be identified adjacent to the relevant Component Certificate Number,*
 - iv. *The relevant technical differences are those listed in the foreword of the IEC Standard. Where the differences are not listed, the ExCB/ExTL shall state what differences have been taken into account and any reference for such a list. Note that the European Commission publishes such lists on its ATEX web site in the form of an **ExNB Clarification Sheet** referencing older editions of EN standards based on IEC standards which cover editions prior to IEC providing such information.*

In the passage above, the ExNB Clarification Sheet is ExNB/10/388/CS which provides detailed specific changes from previous standards with the latest versions. ExNB/10/397/CS provides specific examples on interpretation from the committee on the validity of the certificate depending on whether or not the change(s) from the previous standard(s) to the latest are minor, extension or major changes.

The three examples listed in the ExNB are listed below:

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Case 1: Equipment certified to earlier standards where there are only changes classified as 'Minor and editorial changes'

- The manufacturer continues to use his existing certificate. It is still considered to demonstrate compliance with the EHSRs of the Directive.
- The EC Type Examination Certificate and the marking of equipment are not modified (for standards in the EN 50014 series, the marking remains "EEEx" as the equipment does not necessarily comply with the standards EN 60079-0, etc.)

In this case, the certificate is still valid but the manufacturer must compare the latest standard to the older standard and typically will issue a revised EC (or now EU) DoC stating compliance. The manufacturer can certainly engage a test lab to re-test to the latest standard as well.

Case 2: Equipment certified to earlier standards where there are changes classified as 'Extension'

The manufacturer has the option to continue with the existing design (see case 2a) or to use the extension if this will be of advantage (see case 2b).

• *Case 2a: The manufacturer can continue to use the existing EC-Type Examination Certificate without modification as the basis for a Declaration of Conformity, because the extension of requirements do not contract the former requirement but provides additional options which are not used.*

• *Case 2b: If conformity with the extension of requirement is presumed, the manufacturer engages a Notified Body to carry out those examinations and tests according to the revised standards which are different from the standards mentioned on the existing EC-Type Examination Certificate. Upon confirming compliance, the Notified Body issues a statement or supplement to the existing EC-Type Examination Certificate, confirming compliance with the new harmonised standards. (In the case of change from the EN 50014 series of standards to EN 60079-0, etc., the marking may change from "EEEx" to "Ex".) The EC declaration of conformity, the instructions and the marking are updated to show compliance with the new harmonised standards.*

An example of an extension could be a change in the ambient temperature range allowed for Ex d enclosures. Under the older standard, the range was established at -20°C - +40°C. However, the newer standard allows manufacturers to mark products at an ambient range wider than the previous standard. However, if the manufacturer still only allows the product to be 'certified' under the previous ambient range, a manufacturer can continue to supply the product under Case 2a.

Case 3: Equipment certified to earlier standards where there is changes classified as 'Major technical changes'.

- The manufacturer cannot continue to use the existing EC-Type Examination Certificate without modification as the basis for a Declaration of Conformity, as it no longer can be considered to confirm compliance with the EHSRs of the Directive.
- The manufacturer engages a Notified Body to carry out all examination and tests according to the revised standards which are different from the standards mentioned on the existing EC-Type Examination Certificate. Upon confirming compliance, the Notified

Body issues a supplement to the existing or a new EC-Type Examination Certificate, confirming compliance with the new harmonised standards.

• The EC Declaration of Conformity, the instructions and the marking shall be updated to refer only to the new standards and the new EC-Type Examination Certificate.

An example of a major technical change to the 60079-1 is the End of Life requirement for the use of electronic ballasts in Ex light fittings. With this new requirement, the manufactures in this case would as noted above, need to engage a NB (or IECEX ExTL/CB) to recertify a product.

For further information and to download the full set of decisions from the European Committee, visit the Europa website at http://ec.europa.eu/growth/sectors/mechanical-engineering/atex/index_en.htm and download the ExNB Clarification Document (6mb)