Benefits for manufacturers in using the IECEx Scheme – From certification to repair

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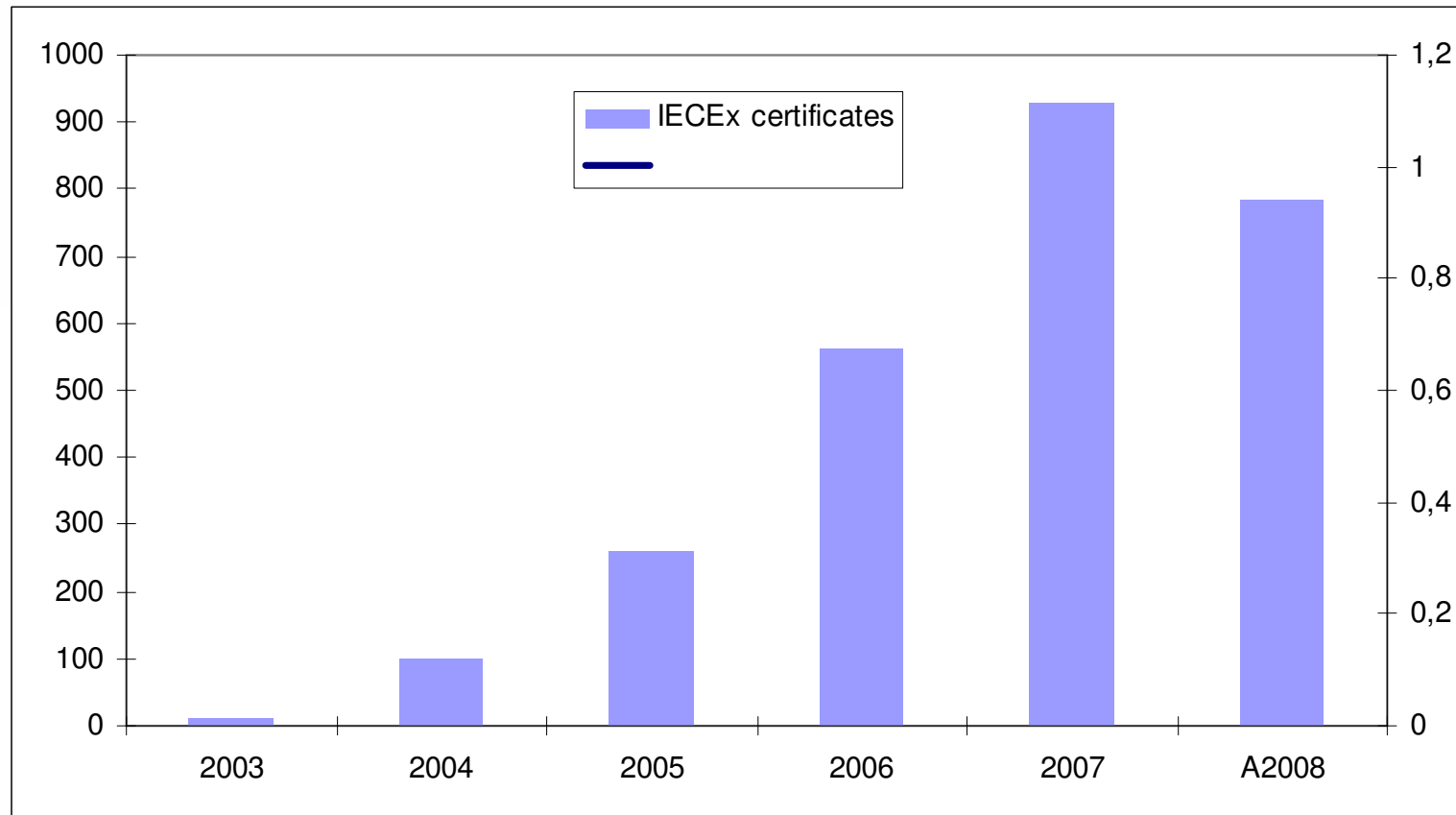Automation Products Division
ABB

Content of presentation

▸ Development of Issued IECEx Certificates

▸ Coverage of IECEx Certification

▸ Product certification and its requirements

▸ Repair & Maintenance of IECEx equipment

▸ Summary of the values to different parties

Development of IECEx certificates

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Coverage of IECEx certificate

Full coverage of whole life-time from engineering to maintenance

▸ Technical compliance per IEC product standards

▸ Production quality per OD005

▸ HSE

Product certification

▸ Repair & maintenance

Repair shop approval

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Certification of Global product

▸ The product certificate shall also have legal value in a country of use
(Note, there is exception as all countries don't have this requirement)

▸ However, the requirements from global or national standards are typically identical in respect of technical features, testing and documentation

▸ Therefore, technically identical Global Product shall have a certificate issued in all countries, e.g.

  ▸ Europe

  ▸ China

  ▸ Russia

  ▸ Australia

  ▸ India

  ▸ US

  ▸ Canada
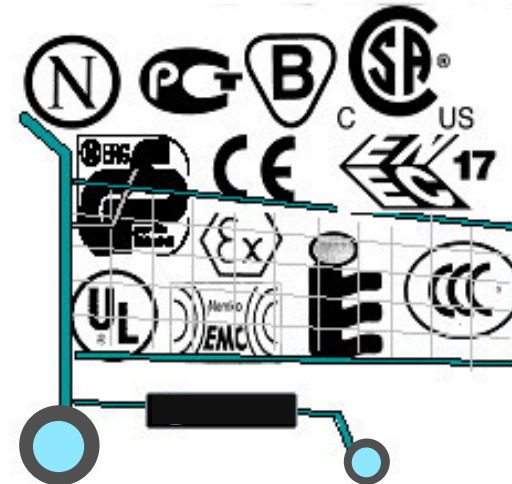
Local market

Certification of Global product

▶ **Global product certification Country by Country**

Select suitable standard
Select suitable standard
Select suitable standard
Test samples Select suitable standard
Test samples Select suitable standard
Test samples Select suitable standard
Issue Test Report Select suitable standard
Issue Test Report Select suitable standard
Issue Test Report Test samples
Technical review Test Report
Technical review Test Report
Technical review Test Report
Issue certificate review of Test Report
Issue certificate review of Test Report
Issue certificate review of Test Report
Issue certificate review of Test Report
Issue certificate
Issue certificate
Issue certificate

▶ **Global product certification per IECEx to get local certificate**
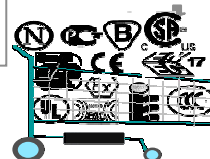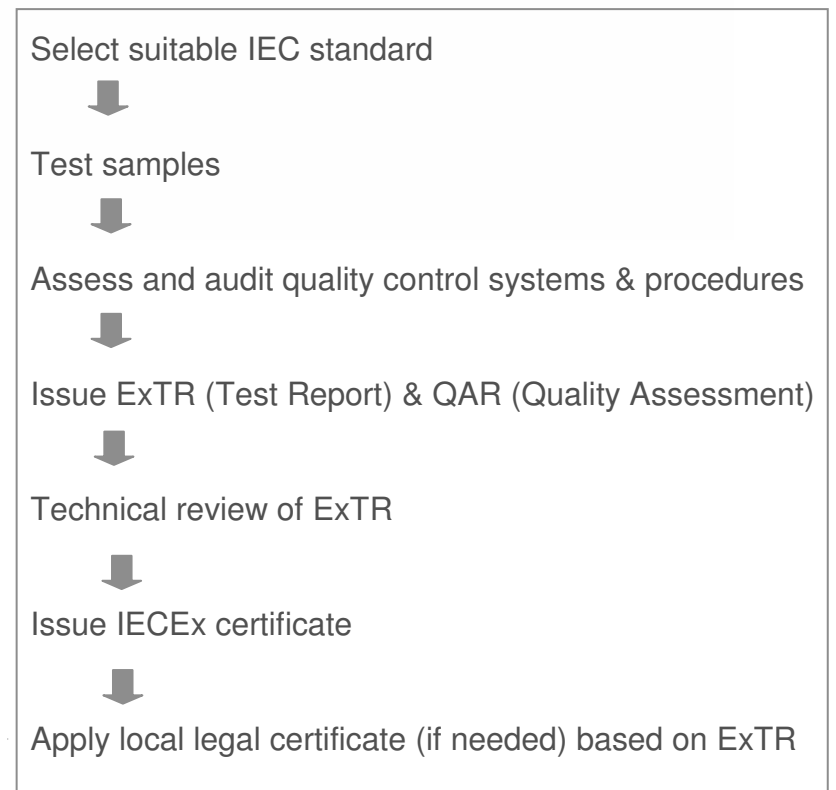
Select suitable IEC standard

⬇

Test samples

⬇

Assess and audit quality control systems & procedures

⬇

Issue ExTR (Test Report) & QAR (Quality Assessment)

⬇

Technical review of ExTR

⬇

Issue IECEx certificate

⬇

Apply local legal certificate (if needed) based on ExTR

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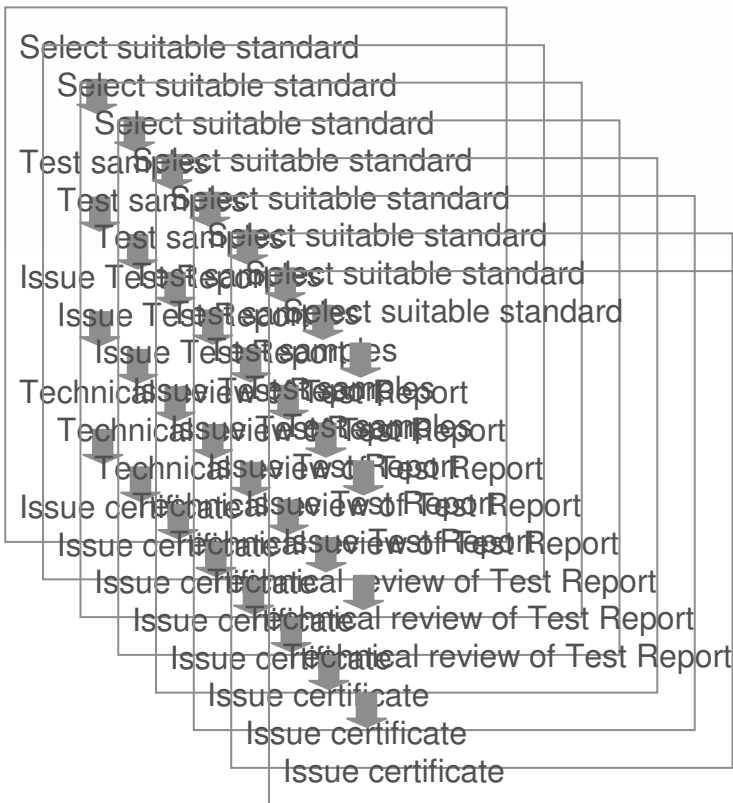
▸ Summary of the values to different parties

What is difference between IECEx and ATEX

ATEX Directives

▸ Responsibility of repairs & maintenance is covered by:

- ▸ Original manufacturer

  (covered by 94/9/EC)

or

- ▸ End Users

  (covered by 99/92/EC)

IECEx Scheme

▸ Responsibility of repairs & maintenance is covered by <u>ALL</u>:

- ▸ Original manufacturer

- ▸ End Users

- ▸ Certified service facility

▸ This recommendation - no legislation behind

IECEx - Responsibility of maintenance & repairs

▶ Service partners

  ▶ Needs to be authorized to perform repair & maintenance work per IEC 60079-17 or/and IEC 60079-19

  ▶ Authorization can be given either by ExCB or Authorized Manufacturer and its process.

▶ Minimum role of manufacturers

  ▶ To provide all necessary information of the equipment for save repair for Authorized Repair shop

▶ End Users role

  ▶ Select the partner for service & repair, so that the certification stays valid or they need to take responsibility of compliance by themselves after repair.

IEC 60079-19
Edition 2.0 2006-10

INTERNATIONAL
STANDARD

NORME
INTERNATIONALE

Explosive atmospheres –
Part 19: Equipment repair, overhaul and reclamation

Atmosphères explosives –
Partie 19: Réparation, révision et remise en état du matériel

IEC 60079-17
Edition 4.0 2007-08

INTERNATIONAL
STANDARD

NORME
INTERNATIONALE

Explosive atmospheres –
Part 17: Electrical installations inspection and maintenance

Atmosphères explosives –
Partie 17: Inspection et entretien des installations électriques

▸ Technical information and allowed activities are quite clear, but the traceability and communication establishment is the issue between parties

4.4.1.5   Documentation

4.4.1.5.1   General

The repair facility should seek to obtain all necessary information/data from the manufacturer or user for the repair and/or overhaul of the equipment. This may include information relating to previous repairs, overhauls or modifications. He should also have available and refer to the relevant explosion-protection standard.

The data available for the repair and/or overhaul should include but need not be limited to, details of the

–   technical specification;

–   drawings;

–   explosion protection performance and conditions of use;

–   dismantling and assembly instructions;

–   certificate limitations (special conditions for safe use), where specified;

–   marking (including certification marking);

–   recommended methods of repair/overhaul for the equipment;

–   list of spare parts.

The information may be subject to amendments including those relative to certification.

NOTE 1   It is not reasonably practicable to assume that adequate information is, or can be, so widely circulated that it is always available where and when it is needed. Sources of adequate information are users, manufacturers or certifying authorities.

NOTE 2   As from IEC 60079-0 (Edition 4), manufacturers are required to give instructions including repair.

The repair facility shall maintain controlled copies of any relevant explosion protection standards with which repaired/overhauled equipment is claimed to comply.

Who will provide all this information to repair shop?

ABB way to support Service Shop in their repair activities

Accredited authorization process for service shop partners

▸ A full audit to repair partners is made to ensure that competence and facilities are at an acceptable level and clarify their ranking with respect to IEC60079-17 and IEC 60079-19

▸ The audit repeated every 3rd year

▸ Two full days service training to all partners and their personnel is organized with a rehearsal every 3rd year

▸ Teach communication channel and ensure product repair traceability

Goal of program

▸ To give insurance & confidence to end users that by using these work shops the product is still safe after repairing and the certificate still remains valid

▸ Traceability and communication channel between workshop and manufacturer is well established.

Tools for communication

Web paged communication channels

▶ Fast communication with latest & updated information

▶ Detailed drawings and manufacturer data

▶ Spare parts

▶ Traceability is organized

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Summary of Benefits for Manufacturers & End Users

Manufacturers

▸ Simplifies the certification of Global Products

▸ Save time and money

End Users

▸ Ensures safe equipment to the sites

▸ Ensures safe maintenance and repairs for their equipment, especially if they request service shop to have well established & maintained connections to Manufacturers

Service partners (authorized & audited with Manufacturers)

▸ Access to the original manufacturer's documentation and information

▸ Latest information of the technology development

▸ Fast deliveries of spare parts

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