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IEC IECEx

UNITED NATIONS
ECONOMIC COMMISSION FOR EUROPE

International Electrotechnical Commission System
for Certification to Standards Relating to Equipment
for Use in Explosive Atmospheres (IECEx System)

IECEx Certified Services Scheme
Opportunities and Developments

IECEx 2018
International Conference
Split, Croatia
23rd April 2018

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INTRODUCING

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- **Technical Manager**
- **SGS Baseefa**

SGS Baseefa

IECEx Philosophy

The IECEx Certification System started with Product Certification but was designed to expand to cater for all aspects related to explosion safety in the possible presence of flammable atmospheres.

Certification of companies offering related services is therefore an integral part of the philosophy

Certification of Personnel Competence integrates well with the Certification of Service Facilities

IECEx from Start to Finish

Equipment Design and Manufacture

Hazardous Area Classification

Installation Design and Equipment Selection

Equipment Installation

Equipment Inspection and Maintenance

Equipment Repair and Overhaul

Service Facility Certification

Repair, Overhaul and Reclamation

IEC 60079-19

Inspection (Initial), Visual, Close, Detailed and Maintenance

(IEC 60079-14), IEC 60079-17

Installation (on site)

IEC 60079-14

Installation Design and Selection of Equipment

IEC 60079-14

Area Classification

IEC 60079-10-1, IEC 60079-10-2

Historical Background

UK:

Baseefa started a scheme in response to a request from British Coal, then taken up by the Oil Companies

Technically worked to a repair code developed with Baseefa and AEMT known as the BEAMA/AEMT Code

Netherlands:

National Scheme operated by KEMA

Both formed a major input to IEC 60079-19 and were subsumed into the IECEx Service Facility Certification Scheme

Number of Certified Service Facilities by Country (1 April 2018)

The Netherlands	38	Qatar	2
United Kingdom	23	UAE	2
Malaysia	13	USA	2
Australia	11	Brazil	1
Singapore	10	Croatia	1
Thailand	8	Indonesia	1
Belgium	3	Ireland	1
Denmark	3	Saudi Arabia	1
Germany	3	Slovenia	1
Norway	3	Switzerland	1
		Vietnam	1

Service Facility Certification is NOT:

Certification by IECEx of a particular Installation
Certification by IECEx of an Area Classification
Certification by IECEx of a Repaired Equipment

Service Facility Certification IS:

Certification by an IECEx accepted Certification Body (an ExCB) of the ABILITY of the Service Provider to provide an expected level of Service with an appropriate level of Competence

The Certified Service Facility can:

Use the fact of certification in publicity, letterheads, etc. by the inclusion of the IECEx logo

Identify their reports, designs, etc. with the IECEx logo to show that the documentation has been produced by an IECEx Certified Service Facility

Refer customers and prospective customers to their information on the IECEx Certificate Database to confirm their scope as an IECEx Certified Service Facility

Product Certification is:

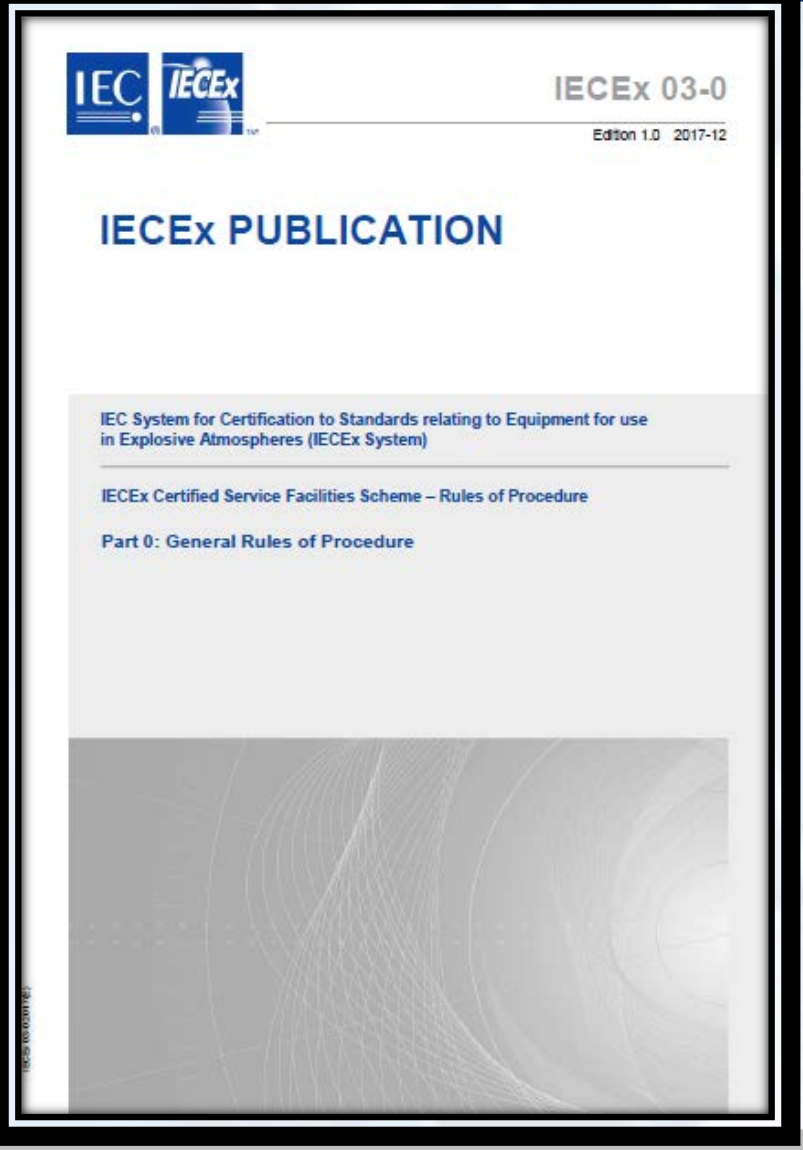
Type Examination plus a QA Process

Construction Standards plus
IECEx Operational Documents plus
ISO/IEC 80079-34

Service Facility Certification is:

A QA Process

IECEx Operational Documents plus
IEC 60079-10-1 and -2
IEC 60079-14
IEC 60079-17
IEC 60079-19



Part 0:
General Rules of Procedure

Part 2:
Selection of Ex equipment and design of Ex installations

Part 3:
Ex installation and initial inspection

Part 4:
Ex inspection and maintenance

Part 5:
Repair, overhaul and reclamation of Ex equipment

IECEx Operational Documents (ODs)

Put “flesh” on the bare bones of the Rules”

Like all IECEx Publications, the Operational Documents are available for free download from the publications section of www.iecex.com

ODs are available for each part of the Service Facility Certification Scheme, covering:

OD 316 – Procedures for acceptance of Candidate Certification Bodies
OD 315 – (Part 5 only) Additional requirements for Service Facilities involved in Repair, Overhaul and Reclamation
OD 314 – Quality Management System Requirements of the Service Facility
OD 313 – Assessment and Certification of the Service Facility

OD 314 Parts 2, 3, 4 and 5

Specific QA Requirements for the particular service

Augments ISO 9001 requirements

Aligns with role of ISO/IEC 80079-34 in the product Certification Scheme

Repair, overhaul and reclamation

The first and (for many years) only part of the scheme

Initially targeted at motor rewind and repair workshops

Subsequently extended to cover repair, overhaul and reclamation of other types of equipment including specialist repair of Intrinsically Safe equipment

Based around IEC 60079-19
Augmented by OD 315-5

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BS EN 60079-19:2011+A1:2015

BSI Standards Publication

Explosive atmospheres

Part 19: Equipment repair, overhaul and reclamation

bsi.

...making excellence a habit.™

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IECEx OD 315-5

Edition 1.0 2013-07

IECEx OPERATIONAL DOCUMENT

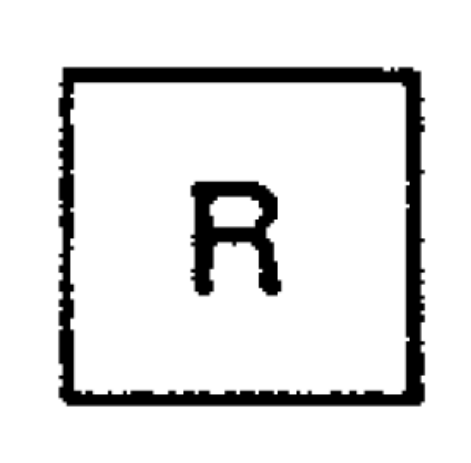
IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEx System)

IECEx Certified Service Facilities Scheme – Part 5: Repair, overhaul and reclamation of Ex equipment

Additional requirements for IECEx Service Facilities involved in the repair, overhaul and reclamation of Ex equipment

Repair Marks

Used when Repair is in accordance with the original manufacturer's documentation



Used when Repair information is not available from the manufacturer and the repair is "to standard"

IEC 60079-19 provides the “what to do”

OD 315-5 adds some “how to do it”

plus forms to record what has been done

Thirteen report formats covering:

- motors with various protection concepts
- enclosures with various protection concepts
- contents of enclosures
- intrinsically safe equipment


Tumpal Siunjak

Inspection and Maintenance (IEC 60079-17)

The second part of Service Facility Certification to get underway (seeing the most enquiries from potential certified facilities)

Unlike IEC 60079-19, IEC 60079-17 already contains the basic formats for reporting inspections

Therefore Part 4 to OD 315 has not been produced but the situation will be monitored to see if it might be desirable at some stage in the future

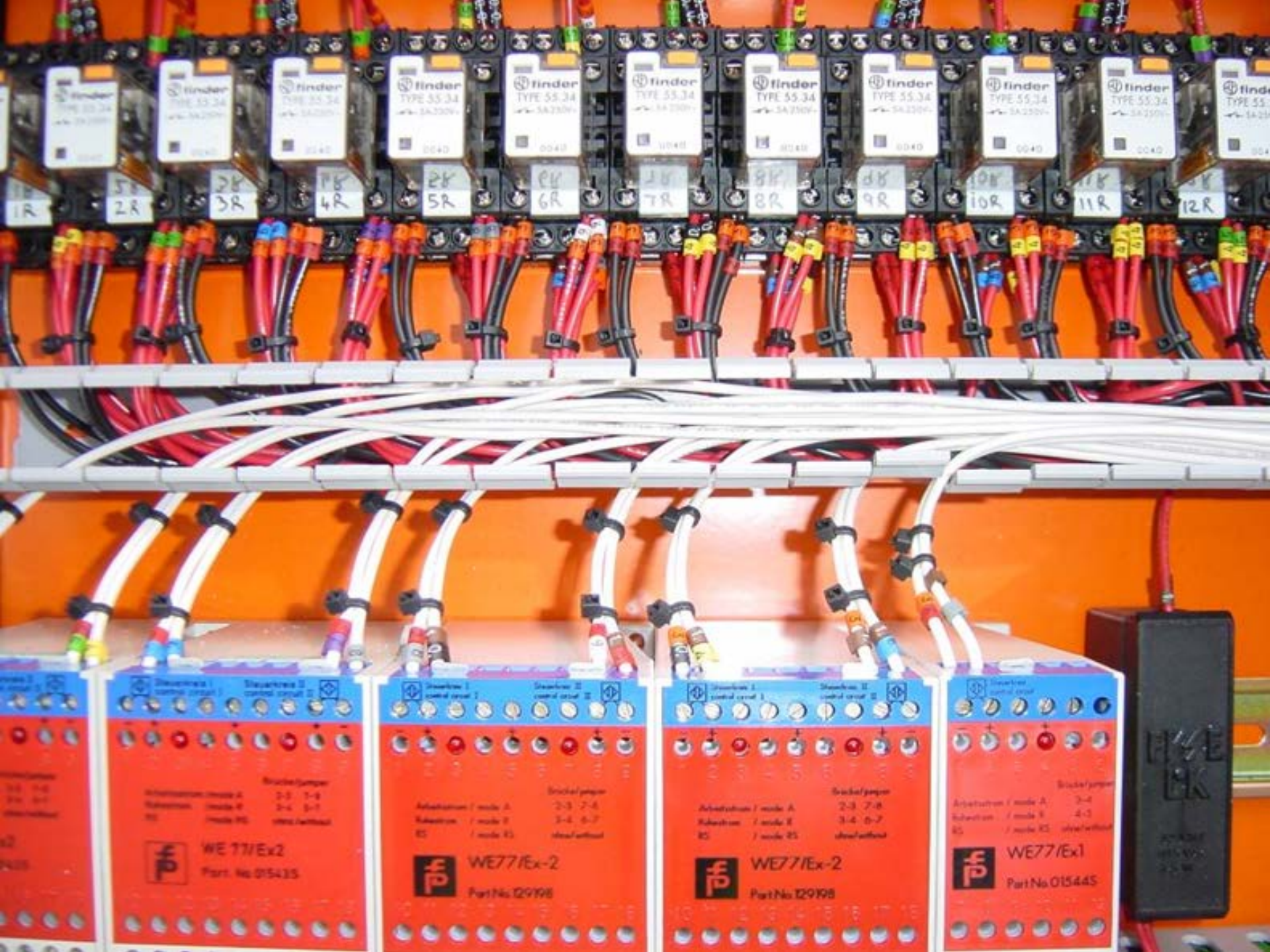
Inspection and Maintenance (IEC 60079-17)

The standard covers:

- Visual Inspection
- Close Inspection
- Detailed Inspection

These apply to all ages of equipment that exist at present

Initial Inspection is actually in IEC 60079-14, but is covered in this part of the scheme, as it is effectively Detailed Inspection, but only requiring knowledge of current standards


finder
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1R
2R
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5R
6R
7R
8R
9R
10R
11R
12R
WE77/Ex2
WE77/Ex-2
WE77/Ex-2
WE77/Ex1

Installation (on site) IEC 60079-14

The physical act of placing equipment in position, connecting cabling and commissioning

Followed by a detailed initial inspection

IEC 60079-14 is comprehensive but does need competence in interpretation and implementation

Installation Design and Selection of Equipment IEC 60079-14

The engineering work before the physical work is started

IEC 60079-14 is comprehensive but does require competence to implement

Remember that a few Euros saved on the price of cable may add many Euros to the cost of the time taken to gland the cables

Area Classification IEC 60079-10-1 and -10-2

An exercise in teamwork

Documents not yet prepared

As yet no evidence of a demand for the scheme to operate in this area, but it will complete the portfolio

Service Facility Certification – The Opportunities

For Service Companies:

- A badge of honour that means something in the market place
- Confidence that their system and practices have been accepted
- Publicity through use of the IECEx Logo and in being on the IECEx database

Service Facility Certification – The Opportunities

For the purchaser and user of services

- Ability to search the IECEx database for service suppliers
- Confidence that the systems and practices of the service facility have been accepted and are monitored through an appropriate QA System

Thank you

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