



IECEX 03

Service Facilities Program

John Allen
Dowding & Mills





IECEX Certification Scheme



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEX Scheme visit www.iecex.com

Certificate No.:	IECEX PTB 06.0099X	Issue No.:	0
Status:	Current		
Date of Issue:	2006-12-27	Page 1 of 3	
Applicant:	VEGA Orlichaber KG Am Hohenstein 113 77761 Schlach Germany		
Electrical Apparatus:	Ultrasonic Sensor VEGA10N80 type series SN8+ C11H111		
Optional accessory:			
Type of Protection:	General Requirements, Intrinsic Safety		
Marking:	Ex Ia IIC T8		

Approved for issue on behalf of the IECEX Certification Body: Dr.-Ing. Ulrich Johannmeyer
Position: Department Head "Intrinsic Safety and Safety of Systems"

Signature: (for printed version) _____
Date: _____

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The status and authenticity of this certificate may be verified by visiting the Official IECEX Website.

Certificate issued by:
Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

PTB

New Ex Equipment

IECEX CoC Certified Service Facility

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEX Scheme visit www.iecex.com

Certificate No.:	IECEX SIM 0001	Issue No.:	0	Certificate history:
Status:	Current	Date of Issue:	2007-12-04	
Applicant:	Wohyia Sdn. Bhd. Lot 1745, Block 3 MCID Jalan Pintas 3 PIAGAU Industrial Estate 90000 Miri Sarawak Malaysia			
Type of Service:	Repair and Overhaul according to IEC 60079-10			
Type of Protection:	Flameproof Enclosure "d" Increased Safety "e" Type of Protection "n"			
Scope of Service:	Repair and Overhaul of Ex d, Ex e and Ex n rotating machines and Ex d enclosures			
Locations covered by this Certificate:	Wohyia Sdn. Bhd. Lot 1745, Block 3 MCID Jalan Pintas 3 PIAGAU Industrial Estate 90000 Miri Sarawak Malaysia			

Facility Audit Report: AU/SIM/AR07/0001/00
This certificate is issued as verification that the Service Facility and associated locations were assessed and found to comply with the IECEX Scheme requirements, marking in the type and scope of service listed above. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX GS and Operational Documents as amended.

Approved for issue on behalf of the IECEX Certification Body: Ashraf Chowdhury
Position: Principal Engineer - Certification

Signature: _____
Date: _____

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3. The status and authenticity of this certificate may be verified by visiting the Official IECEX Website.

Certificate issued by:
Safety in Mines Testing and Research Station (Simtars)
2 South Street
REDBANK QLD 4301
Australia

Simtars
Queensland Government

Repair + Services

Dowding & Mills





IECEX 01

IECEX 02

IECEX Certificate of Conformity	
INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres <small>for rules and details of the IECEx Scheme visit www.iecex.com</small>	
Certificate No.: IECEx PTB 06.0099X	Issue No.: 0
Status: Current	
Date of Issue: 2006-12-27	Page 1 of 3
Applicant: VEGA Orlichaber KG Am Hohenstein 113 77761 Schiltach Germany	
Electrical Apparatus: Ultrasonic Sensor VEGA SON80 type series SN8-C1H*** Optional accessory:	
Type of Protection: General Requirements, Intrinsic Safety	
Marking: Ex Ia IIC T8	
Approved for issue on behalf of the IECEx Certification Body: Dr.-Ing. Ulrich Johannmeyer Position: Department Head "Intrinsic Safety and Safety of Systems"	
Signature: (for printed version) _____ Date: _____	
<small>1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.</small>	
Certificate issued by: Physikalisch-Technische Bundesanstalt (PTB) Bundesallee 100 38116 Braunschweig Germany	

New Ex Equipment

IECEX 03

IECEX CoC Certified Service Facility	
INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres <small>for rules and details of the IECEx Scheme visit www.iecex.com</small>	
Certificate No.: IECEx SIM 00001	Issue No.: 0
Status: Current	Date of Issue: 2007-12-04
Applicant: Wehaya Sdn. Bhd. Lot 1745, Block 3 MCID Jalan Pintas 3 PIAGAU Industrial Estate 50000 Mel Seremak Malaysia	
Type of Service: Repair and Overhaul according to IEC 60079-10	
Type of Protection: Flameproof Enclosure "d" Increased Safety "e" Type of Protection "n"	
Scope of Service: Repair and Overhaul of Ex d, Ex e and Ex n rotating machines and Ex d enclosures	
Locations covered by this Certificate: Wehaya Sdn. Bhd. Lot 1745, Block 3 MCID Jalan Pintas 3 PIAGAU Industrial Estate 50000 Mel Seremak Malaysia	
Facility Audit Report: AU/SIM/FA007/0001/00 <small>This certificate is issued as verification that the Service Facility and associated locations were assessed and found to comply with the IECEx Scheme requirements, making in the type and scope of service listed above. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 03 and Operations Documents as amended.</small>	
Approved for issue on behalf of the IECEx Certification Body: Ashraf Chowdhury Position: Principal Engineer - Certification	
Signature: _____ Date: _____	
<small>1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.</small>	
Certificate issued by: Safety in Mines Testing and Research Station (Simtars) RESEARCH QLD-4501 Australia	

Repair + Services

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IECEX Service Facility Program



**What does an IECEX Certification Body
(ExCB) certify when issuing an
IECEX Certificate of Conformity
for an Ex Service Facility?**





IECEX Service Facility Program



The ExCB is confirming the service facilities' capability to consistently carry out overhaul and repair activities in compliance with IEC 60079-19 and IECEx Scheme requirements, within the scope listed on the IECEx certificate.





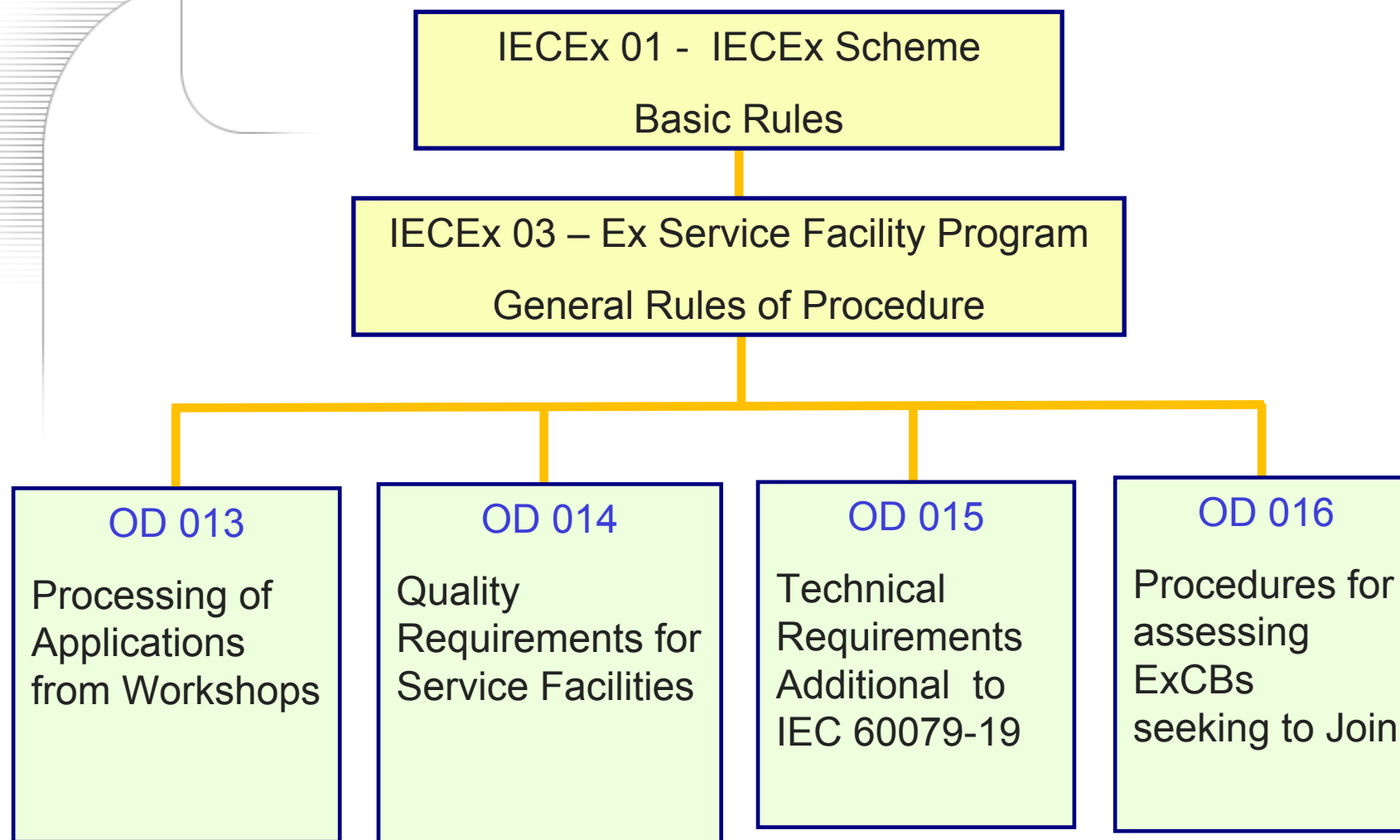
IECEX System Rules



IECEX 03: 2005 Clause 5.1 Extract:

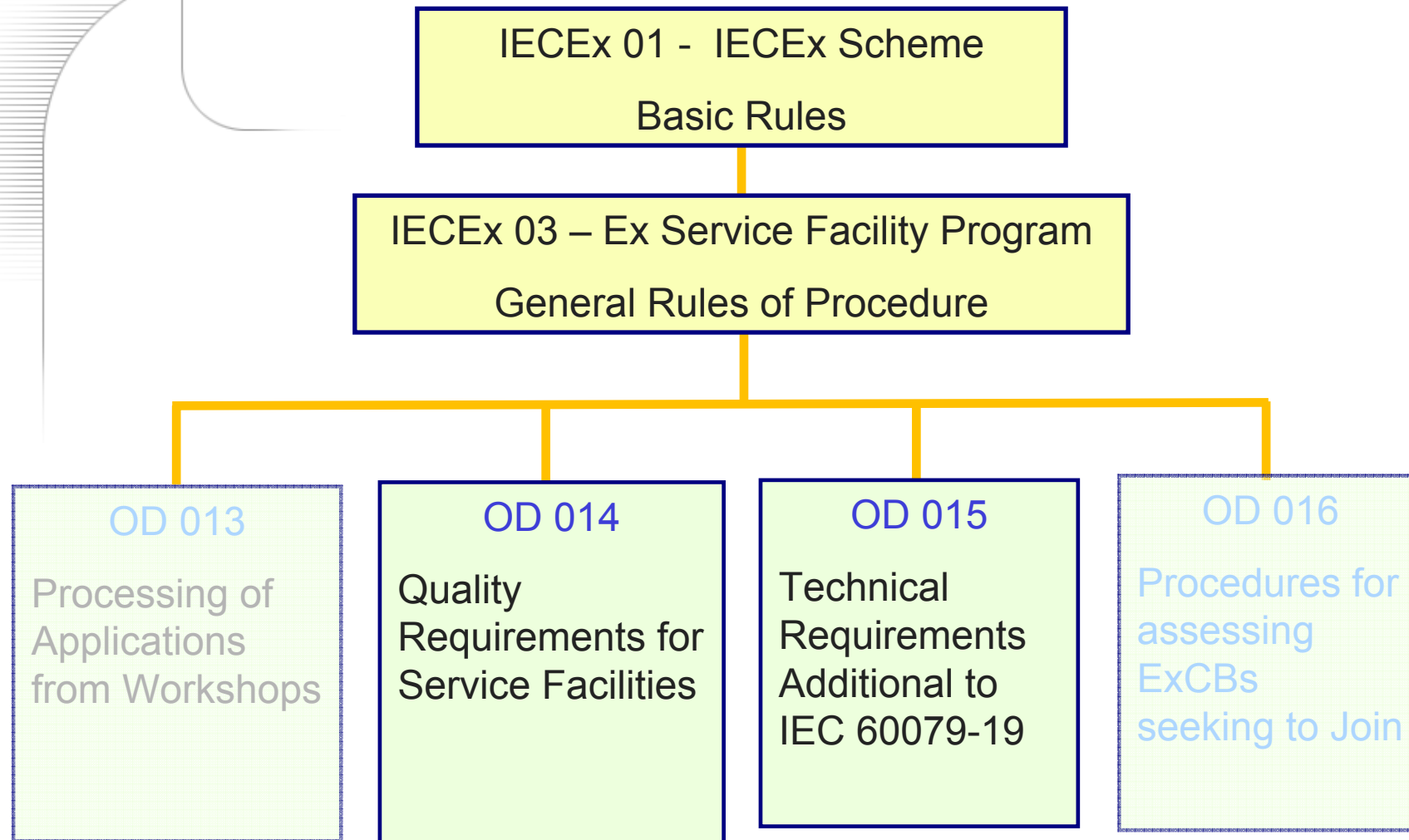
“The IECEx Certified Service Facilities Program provides the means for Service Facilities to obtain an IECEx certificate that is intended to provide the international Ex community with confidence that such Service Facilities undertake repair and overhaul work in accordance with the technical and quality system requirements of the IECEx Service Facilities Program.....”







IECEX Service Facility Program



www.iecex.com

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OD 014



Quality Management System

- The Ex Service Facility shall have an effective QMS
- The QMS shall be based on the requirements of ISO 9001, and
- The QMS shall incorporate the additional quality assurance, process control and personnel requirements within IECEx Ex Certified Service Facility Program





IECEX Service Facility Program



When the IECEx Ex CB audits the Service Facility they will NOT be conducting an audit of the quality management systems for compliance with ISO 9001,

The Ex CB will be auditing the effectiveness of the QMS to ensure compliance with IEC 60079-19 & the IECEx Service Facility Requirements by examination of product, processes and personnel





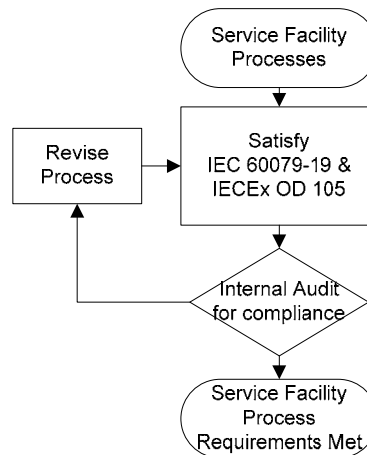
IECEX Service Facility Program



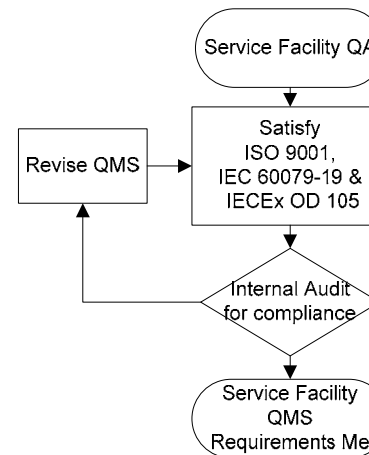
Personnel



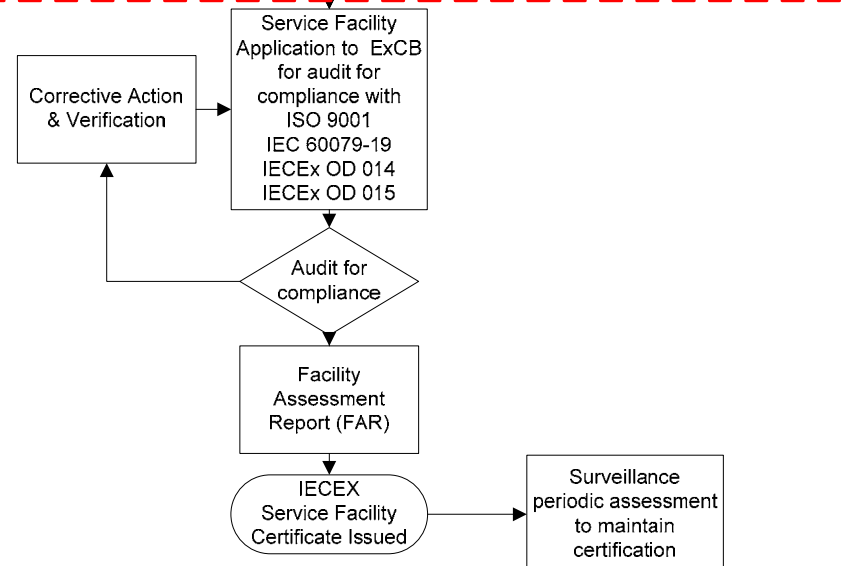
Technical



Quality



Service Facility Responsibility



ExCB Responsibility

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IECEX Service Facility Program Personnel



Responsible Person & Ex Operatives

Demonstrate compliance with requirements of IEC 60079-19 Annex B, by:

3rd Party assessment of competency by IECEX ExCB, or by the ExCB conducting:

www.easa9.org.uk

- Assessment of Qualifications & Work History
- Technical Interview / Assessment
- Witnessed Assessment of Skills

With periodic re-assessment





Responsible Person & Ex Operatives

Qualifications & Work History

ExCB Assessment of:

- Experience in explosive atmosphere work
- Experience in Ex techniques
- Working with/assessing engineering drawings
- Experience with Ex certification requirements/standards
- Knowledge in documentation & record requirements
- Experience in Ex test requirements





Responsible Person & Ex Operatives

Technical Interview / Assessment

- What is a hazardous atmosphere? i.e. what is:
 - Explosive Gas, Dust Cloud, Dust Layer, Conductive / Non-Conductive dust
- Understanding of MESG, Ignition Temperature, LEL & UEL, Gas Groups, Zones 0, 1, 2 & 20, 21, 22
- Explanations of where Ex techniques are used



Responsible Person & Ex Operatives

Witnessed Assessment of Skills

- Mechanical test equipment use
 - Shaft/hole diameter, depth, thread, flatness, surface finish, pressure, etc.
- Electrical test equipment use
 - Winding resistance, insulation resistance, winding temperature, surface temperature, current, voltage, etc.
- Calibration status, history, understanding measurement traceability, what to do if faulty or out of calibration
- Can demonstrate how test status is maintained through overhaul/repair process



IECEX Service Facility Program



Reclamation Personnel

Demonstrate competency by practical skill test in recovery process

Demonstrate continuity of process use or re-test

Periodic re-test





IECEX Service Facility Program



Reclamation Personnel

Practical Skill Test

Metal Spray Techniques

- Coat test piece & conduct tensile test

Welding Techniques

- Weld test piece, NDT test, section & inspect





IECEX Service Facility Program



Reclamation Process Control

Reclamation Record

When a component is reclaimed/repaired using reclamation techniques i.e. metal spray or welding

The reclamation technique shall be controlled as required in IEC 60079-19

A record shall be produced in accordance with the requirements of IEC 60079-19





IECEX Service Facility Program



Reclamation Process Control

Sub - Contracting

Sub-contractors conducting operations that have the potential to impact the explosion protection type shall be subject to audit by the IECEX ExCB





IECEX Service Facility Program



Quality Assurance

All measurements **shall be** traceable to International or National Standards

Any measurement will need to identify test equipment used to provide traceability

All test equipment traceable to unique calibration certificate





IECEX Service Facility Program



Quality Assurance

Assessment of validity of previous measuring results when test equipment is found out of calibration

- Appropriate action when test equipment is out of calibration
- Appropriate action for any product affected





IECEX Service Facility Program



Conclusion

The Service Facility has to demonstrate to the ExCB:

That it has competent personnel – IEC 60079-19

That it has suitable equipment to overhaul & repair the equipment and protection types within its scope

That it has effective control of all its processes including sub-contracted processes

That the processes meet the requirements of IEC 60079-19 & the IECEX Service Facility Program



Thank You

Questions