



ExMC/920/DV
May 2014

**INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC SYSTEM FOR
CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN
EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

TITLE: IECEx Assessment Report for an extension of scope for IMQ S.p.A. (Istituto Italiano del Marchio di Qualità) an existing Accepted Ex Certification Body (ExCB) and an Accepted Ex Test Laboratory, ExTL, to include IEC 60079-1, within their scope.

INTRODUCTION

This document contains the IECEx Assessment Report for IMQ S.p.A. (Istituto Italiano del Marchio di Qualità), an existing Accepted Ex Certification Body (ExCB) and an Accepted Ex Test Laboratory ExTL, to include IEC 60079-1, within their scope.

The report of the special assessment to address the scope extension to include IEC 60079-1 is now hereby submitted for voting by the ExMC

Please consider the assessment report and return the completed voting form to the Secretariat by **2014 06 10**

Your speedy response to the voting process will be very much appreciated.

Chris Agius

IECEx Secretariat

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IECEX ExCB/ExTL ASSESSMENT REPORT FOR IMQ S.p.A. (Istituto Italiano del Marchio di Qualità)

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1 Assessment Information

1.1 Type of Body covered by this assessment:

ExCB for IECEX Certified Equipment Scheme	✓
ExTL for IECEX Certified Equipment Scheme	✓
ExCB for IECEX Certified Service Facilities Scheme	
ExCB for IECEX Conformity Mark Licensing System	

NOTE 1 ExCB - IECEX Certification Body

NOTE 2 ExTL - IECEX Testing Laboratory

1.2 Type of assessment:

Pre-assessment for candidate body	
Initial assessment for candidate body	
Surveillance	
Re-assessment	
Scope extension and IECEx surveillance	✓

1.3 Details of body

1.3.1 Country

IT

1.3.2 Name of body

IMQ S.p.A. (Istituto Italiano del Marchio di Qualità)

1.3.3 Name and title of nominated principal contact

Name	Title	E-mail address
Mauro Casari	Certification Manager	Mauro.Casari@imq.it

1.4 Assessment information

1.4.1 Members of the assessment team

Name	Role (modify as necessary)
Ron Webb	Lead Assessor for IECEx,

1.4.2 Place(s) of assessment

Via Quintiliano, No. 43, 20138 Milano, Italy 13 November 2013 + post assessment reviews	
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During the site Assessment visit and post reviews, completed TCD and Site Assessment Reports were completed and provided to the Secretariat.

1.4.3 Assessment date(s)

11 – 13 November 2013 + post visit assessments

1.5 Application information

Application for an extension of scope to cover IEC60079-1.

1.6 Scopes

1.6.1 ExCB scope for equipment certification scheme

Current scope of IMQ for both ExCB and ExTL consists of:

NUMBER	Title
60079-0 Edition 4 Edition 5 Edition 6	Explosive atmospheres - Part 0: Equipment - General requirements
60079-5 Edition 2 Edition 3	Explosive atmospheres Part 5: Equipment protection by powder filling «q»
60079-7 Edition 3 Edition 4	Explosive atmospheres - Part 7: Equipment protection by increased safety 'e'
60079-11 Edition 5 Edition 6	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i'
60079-15 Edition 3 Edition 4	Explosive atmospheres - Part 15: Equipment protection by type of protection 'n'
60079-18 Edition 2 Edition 3	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus
60079-26 Edition 1 Edition 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
60079-31 Edition 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
61241-0 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
61241-1 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures 'tD'
61241-11 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 11: Protection by intrinsic safety 'iD'

Scope extension sought:

Number	Title
IEC 60079-1 Edition 6	Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures “d”

1.6.2 ExTL scope

The ExTL scope extension sought is the same as for the ExCB.

2 Common information

2.1 Legal entity of body

Not applicable for scope extension. Previously covered during last assessment

2.2 Financial support

Not applicable for scope extension. Previously covered during last assessment

2.3 History

Not applicable for scope extension. Previously covered during last assessment

2.4 Documentation

2.4.1 Quality manual

IMQ has a comprehensive Quality Manual and supported procedures which have been expended to include testing, assessment and certification to IEC 60079-1 according to the IECEX rules and Operational Documents.

2.4.2 Procedures

Procedures and Work Instructions have been introduced to cater to IEC 60079-1, with the following examples that were reviewed during the assessment visit and found to comply with IECEX requirements and those test procedures of IEC 60079-1.

Procedure title	No
Reference pressure measurement	IO-43-P77-E
Test for non-transmission of an internal ignition	IO-43-P79-E
Overpressure test – static method	IO-43-P78-E
Mechanical measures and joints assessment on flameproof enclosures	IO-43-P80-E
Adjustment of mixing analysing unit (IT version)	IO-43-P06
Good practice rules for usage of explosion chamber P-02974 (IT version)	IO-43-P05
Management of mixing analysing unit in order to test performing according to IEC/EN 60079-1 and IEC/60079-15 (IT version)	IO-43-P30

The flameproof test lab was viewed and some testing witnessed. The equipment is partly existing equipment that has been used for ATEX work for several years, with the addition of a new test vessel, to allow the work to be carried out safely. The equipment is considered adequate to carry out the work and the tests witnessed were carried out in a very professional manner by IMQ Staff. The results of the tests were considered very acceptable. The test facility had been used to carry out the interlaboratory tests organised by PTB. During these interlaboratory tests some improvement to the operating method evolved and this has been incorporated into the operating procedure. Overall, the testing was impressive.

To supplement the test part of IEC 60079-1 mechanical measurements were undertaken in a climate controlled room. The equipment included a substantial CMM machine which was demonstrated.

The new format TCD document was completed and submitted to the Secretariat.

2.4.3 Work instructions

See above 2.4.2.

2.4.4 Records (including test records where relevant)

Procedure PI-401 covers the Management of Documentation and Records which was reviewed and found to comply with IECEx requirements including that of ISO/IEC Guide 65

2.4.5 Document change control

Covered as part of the assessment of the Procedures.

2.5 Confidentiality

Covered by the IMQ quality system, MQ Sect, 15/2.

2.6 Publications (Hard cover and Electronic)

Not applicable for scope extension. Previously covered during last assessment

2.7 Recognition and agreements

Not applicable for scope extension. Previously covered during last assessment

2.8 Internal audit and periodic management review

An internal audit was held on 16.2.2012 and the next is planned for 26.11.2013. All issues were dealt with satisfactorily

2.9 Contracting, subcontracting, use of other labs and use of other locations

For the purpose of this scope extension IMQ make use of the following subcontractors which are IECEx Approved ExTLs for the following tests:

INERIS IEC 60079-0

- Cl. 26.5.3 Small component ignition test (Group I and Group II)
- 26.14 Measurement of capacitance

Ex Agencija IEC 60079-1

- 15.4 Tests of flameproof enclosures with breathing and draining devices

Signed agreements were verified as part of the assessment.

2.10 Training and competence

Appropriately competent staff were confirmed by way of both technical interview and witnessing of tests being conducted as part of the site assessment visit along with verification of a documented skills/competency matrix

Personnel involved in the IECEx activity assessed during the visit

Name	Job title	Experience
Mauro Casari	Certification Manager	27 years at IMQ, 4 years in current position
Cristina Pulvirenti	Quality Manager	11 years at IMQ, 17 years in the field of Quality Management
Giuseppe Gozzoli	Quality area	15 years at IMQ
Claudia Spialtini	Accreditation area of quality department	9 years at IMQ
Paolo Paraboschi	Laboratory Manager	10 years at IMQ, 3 years in Ex
Stefano Sibilio	Accreditation manager	2 years at IMQ, 14 years in the Conformity Assessment field
Roberto Zilio	Test Engineer	7 years at IMQ, 6 years in Ex
Roberto Sidoti	Test Engineer	24 years at IMQ, 6 years in Ex
Giovanni D'Ambrosio	Test Engineer	<1 year in Ex - under training
Maurizio Falomi	Test Engineer	<1 year in Ex - under training
Davide Carioni	Test Engineer	<1 year in Ex - under training
Paulo Corbo	TL Technical Advisor (external)	11 years in Ex
Maurizio Toninelli	CB Technical advisor (external)	27 years in Ex

2.11 Complaints and appeals (including appeals to IECEx)

Not applicable for scope extension. Previously covered during last assessment

2.12 Special facts to be noted

As IMQ do not yet hold National Accreditation, IMQ is subjected to annual surveillance assessment visits. IMQ will consider obtaining Accredia accreditation covering its IECEx activities.

2.13 Recommendations

Based on the site assessment and follow up reviews of actions the scope extension request to include IEC 60079-1 for IMQ as both ExTL and ExCB is recommended for acceptance in the IECEx scheme as:

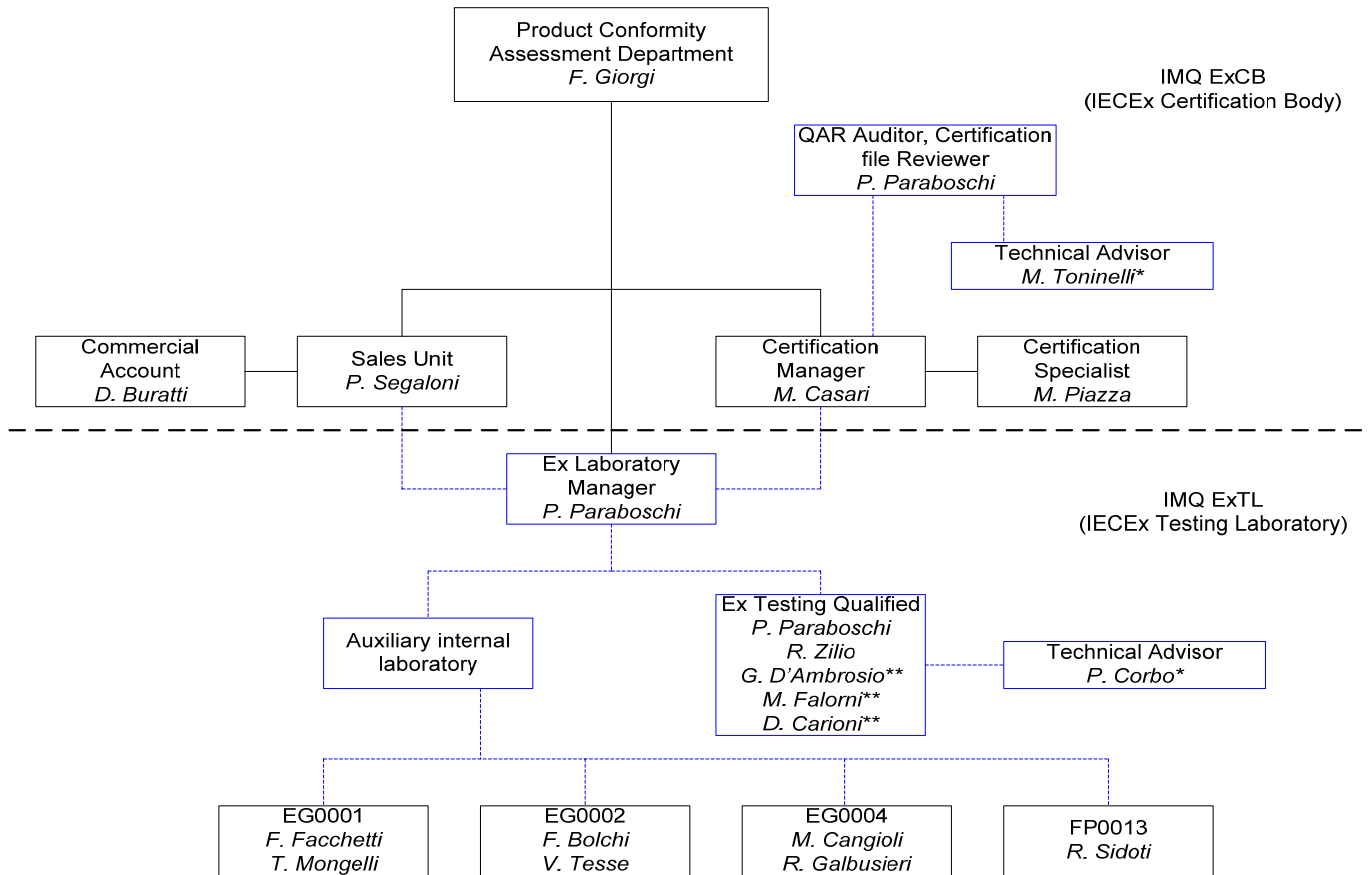
Ron Webb
Lead Assessor

Attachments

A- Organisation Structure





B- Photos taken during the site assessment visit

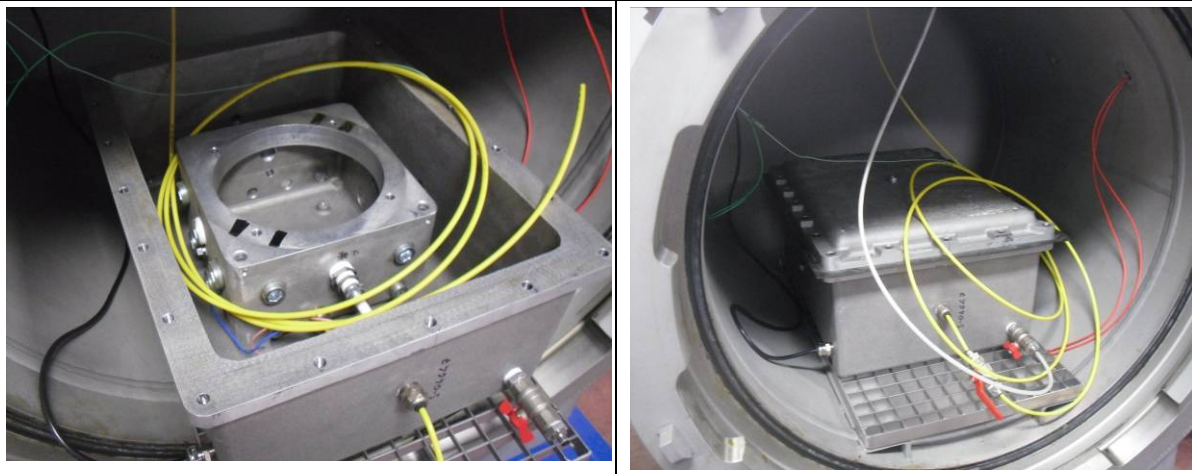

Annex A – Organisation Chart



Annex B – Photos taken during the site assessment visit

Standard: IEC 60079-1 Ed 6 Flameproof enclosure 'd'		
Clause	Requirement – Test	Result – Remark
15.1.2	Determination of Reference Pressure – WITNESSED TEST	
	Maintenance and adequacy of equipment:	good
	Calibration:	In calibration
	Competency of operation:	good
	Comments	
Photos		

		
15.1.3	Overpressure test	
	Maintenance and adequacy of equipment:	good
	Calibration:	Uses calibrated gauge
	Competency of operation:	good
	Comments	Hand operated. IMQ are looking to purchase a motor driven pump
Photos		
15.2	Test for non-transmission of an internal ignition WITNESSED TEST	
	Maintenance and adequacy of equipment:	good
	Calibration:	In calibration
	Competency of operation:	good
	Comments	Used large flp box as an explosion vessel

Photos		
C.3.3.1	Type tests for Ex blanking elements - Torque test	
C.3.4.1	Maintenance and adequacy of equipment:	good
	Calibration:	In calibration
	Competency of operation:	good
	Comments	
Photos		
	Mechanical measurements	
	Maintenance and adequacy of equipment:	good
	Calibration:	In calibration
	Competency of operation:	good
	Comments	
Photos	