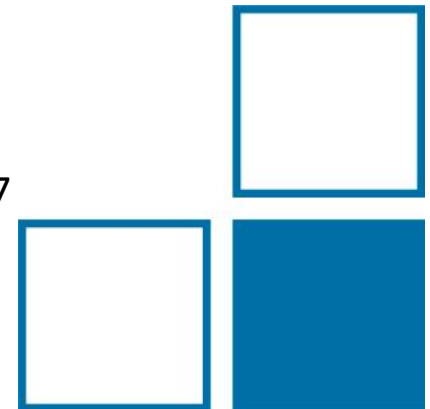


Status and operation of the IECEx Proficiency Testing Program

Interlaboratory comparisons in explosion protection

Tim Krause, ExTAG Training Workshop, Washington D.C., 25th of September 2017



What is an interlaboratory comparison?

Definition given in ISO/IEC 17043:

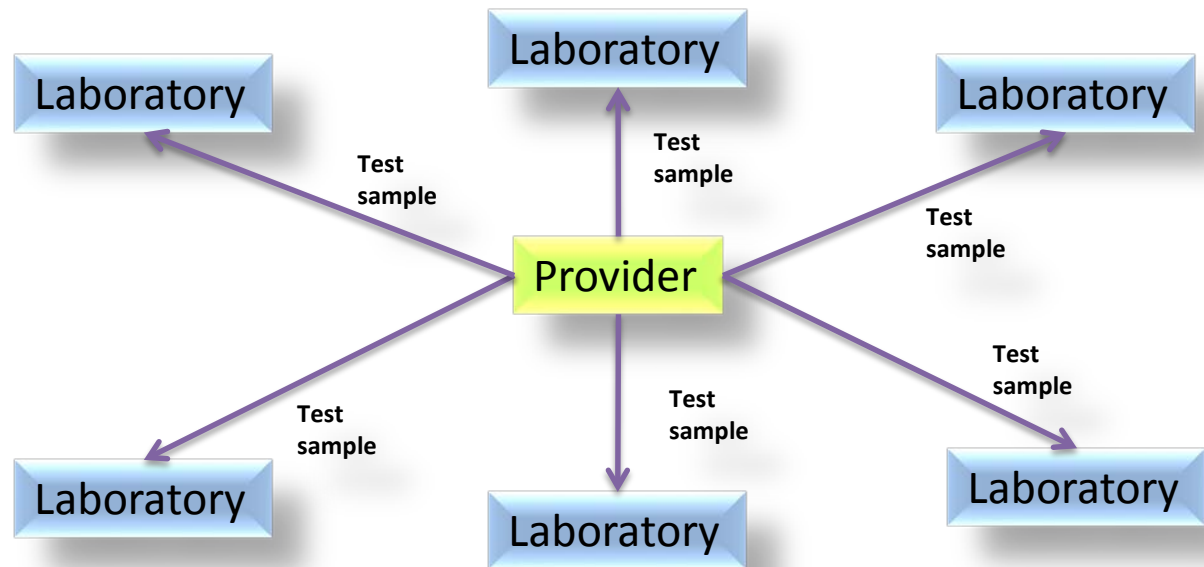
“Organization, performance and evaluation of measurements or tests on the same or similar items by two or more laboratories in accordance with predetermined conditions”.

ISO/IEC 17043 “General requirements for proficiency testing”

Scope:

This international standard specifies general requirements for the competence of providers of proficiency testing schemes and for the development and operation of proficiency testing schemes. These requirements are intended to be general for all types of proficiency testing schemes, and they can be used as a basis for specific technical requirements for particular fields of application.

Simultaneous system





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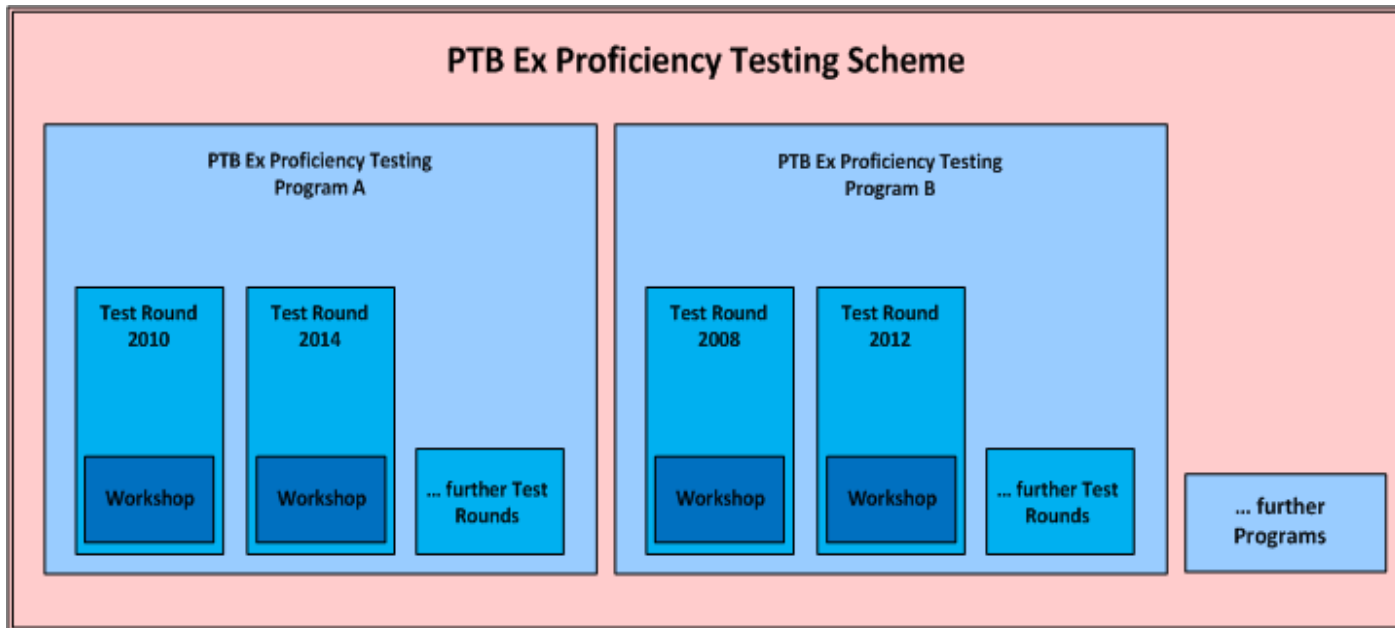


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... with the support of many expertes from PTB and partners !!!



“Explosion Pressure - 2010”



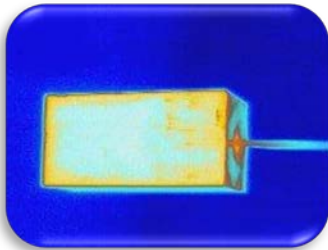
“Spark Ignition – 2010”



“Flame Transmission - 2013”



“Temperature Classification - 2013”



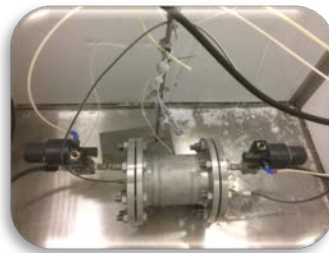
“Electrostatic Charge - 2015”



“Intrinsic Safety - 2015”



“Explosion Pressure - 2017”



“Pressurized Enclosure - 2017”

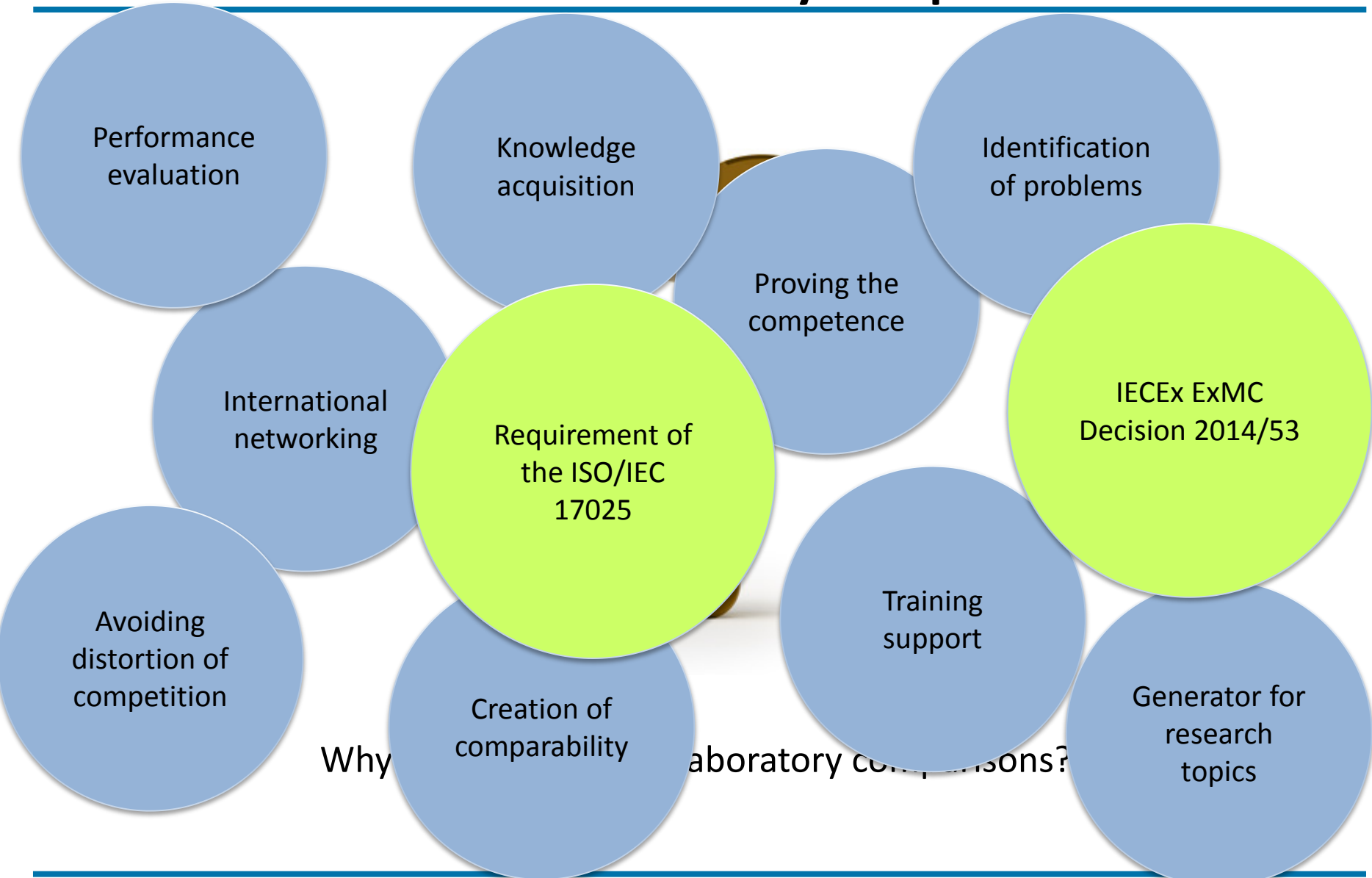


Participating laboratories

- Program “Explosion Pressure – 2010”
Number of participating laboratories: 44
- Program “Flame Transmission – 2013”
Number of participating laboratories: 50
- Program “Electrostatic Charge – 2015”
Number of participating laboratories: 56
- Program “Explosion Pressure – 2017”
Number of participating laboratories: 63
- Program “Spark Ignition – 2010”
Number of participating laboratories: 34
- Program “Temperature Classification – 2013”
Number of participating laboratories: 47
- Program “Intrinsic Safety – 2015”
Number of participating laboratories: 59
- Program “Pressurized Enclosure – 2017”
Number of participating laboratories: 58

A total of 94 participating laboratories from 33 countries!

Interlaboratory comparisons



The mandatory nature of the PTP

Decision 2014/53 taken at the 2014 IECEx Management Committee (ExMC) Meeting in The Hague

The Meeting accepted a proposal from the ExTAG that participation in the Proficiency Testing Program be mandatory for all accepted and applicant IECEx ExTLs and their associated laboratories (noting that this does not include laboratories operating under the provisions of IECEx OD 024)

IECEX OD 202 - 6 Participation

Applicant ExTLs shall, prior to completion of the assessment process

- complete the programs relevant to the scope of their application; or
- demonstrate satisfactory compliance by other means with past programs, for example by demonstrating tests on program artefacts as part of the assessment process.

ExTLs are required to participate in all programs which are relevant to their scope, with the priority being given to new topics.

The IECEX Secretariat shall ensure that each accepted ExTL and applicant ExTL participates in the applicable programs that fall within the testing scope of the laboratory.

Edition 1.0 vs. Edition 2.0

6 Participation

...

Candidate ExTLs shall, prior to acceptance, complete the IECEx Proficiency Testing Programs relevant to the scope of their application prior to acceptance as an ExTL.

...



...

Applicant ExTLs shall, prior to completion of the assessment process

- complete the programs relevant to the scope of their application; or
- demonstrate satisfactory compliance by other means with past programs, for example by demonstrating tests on program artefacts as part of the assessment process.

NOTE It is anticipated the bodies will have prior/current involvement in IECEx or similar proficiency testing programs to satisfy the requirements of ISO/IEC 17025.

...

Edition 1.0 vs. Edition 2.0

7 Ex PTP Provider

...

IECEX PT Program Providers shall be formally accredited by an IAF/ILAC Accreditation Body according to:

- ISO/IEC 17043, "Conformity assessment - General requirements for proficiency testing" OR
- alternatively submitted to the peer assessment procedures of IECEX and the relevant principles and requirements of ISO/IEC 17043.

...

A stylized graphic of the letters 'VS' in a bold, brush-stroke font. The 'V' is red and the 'S' is black with a red outline. The letters have a slight shadow and a gradient effect.

The competence of the Ex PTP Provider shall be demonstrated by assessment. The general competence, efficiency, experience, familiarity with the relevant standards used for the programs as well as compliance with ISO/IEC 17043 shall be assessed. Accreditation by a recognized national accreditation body, where existing, shall be taken into account. The ExMC shall decide upon the extent of the assessment that is necessary (considering the period of new programs).

...

Edition 1.0 vs. Edition 2.0

10 Results

The confidentiality of results of individual laboratories is essential.

The results will be communicated only to the individual ExTL and to the IECEx secretary. The individual ExTL may discuss their results with the IECEx assessment team or national accreditation bodies who may ask on its own for the results of Ex PT programs. It is not permitted to publish Ex PT program results. Only general information about results of Ex PT programs can be provided. IECEx assessors shall be trained accordingly.

VS



Edition 1.0 vs. Edition 2.0

10 Results

...

If requested by the IECEx Secretariat the Ex PTP Provider provides a summary report about the performance of accepted or applicant ExTLs to the IECEx Secretariat (see clause 11). In preparation of an initial or re-assessment the IECEx Secretariat provides the following information to assessment teams:

1. that individual accepted or applicant ExTLs have participated in the programs relevant to the scope of their application; and (2 or 3 below as appropriate)
2. the results of an individual accepted or applicant ExTL suggests that they are in line with results obtained from other ExTLs in the programs; or
3. the results of an individual accepted or applicant ExTL suggests that there may be issues that the assessment team should look at closely during their assessment.

...

Edition 1.0 vs. Edition 2.0

11 Program Reports

The Ex PT Program Reports shall be prepared and distributed by the IECEx PT Program provider according to the requirements of ISO/IEC 17043. In addition to the comprehensive reports, summary reports are to publish in order to highlight the essential results of a program.

VS



Edition 1.0 vs. Edition 2.0

11 Program Reports

...

The following list provides an overview of the reports to be prepared for a program:

- Full interim report on the program in accordance to ISO/IEC 17043;
- Full final report on the program in accordance to ISO/IEC 17043;
- Summary final report focussing on accepted ExTLs in accordance to ISO/IEC 17043 (to be provided to the IECEx Secretariat and ExTAG WG10);
- Additional information/report regarding an ExTL's performance for a certain program (if requested by the IECEx Secretariat);

...

Edition 1.0 vs. Edition 2.0

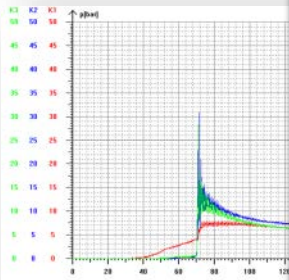
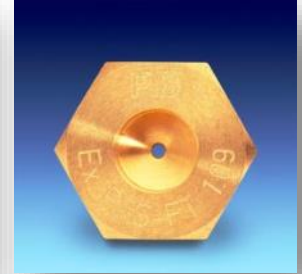
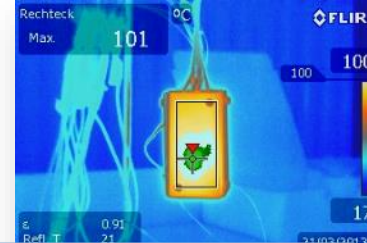
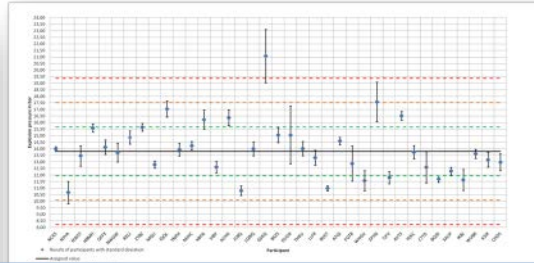
11 Program Reports

...

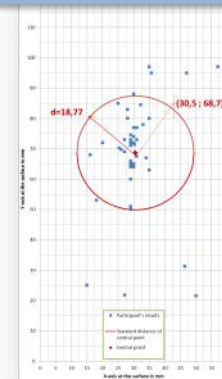
In addition to program reports, a summary report may be prepared on an individual accepted or applicant ExTL about the overall performance of all programs performed by the laboratory. This would be for the purposes of an initial assessment or re-assessment. The report would include all programs the body has been, or is, signed up for. For each of those programs that are completed, the report should provide an indication of how the body has performed, including a comparison (for example in a chart) of how it compares with other bodies. It is anticipated that the process for providing this report to the assessment teams would be:

- The Secretariat to provide the Ex PTP Provider with advice as early as possible when an initial or re-assessment for a particular body is expected, with (if possible) an indicative date
- The Ex PTP Provider to provide a report to Secretariat on that body's participation on all programs as early as possible before the indicative date
- Secretariat to provide that report to the assessment team in time for them to take it into account when preparing their assessment plan, noting that the information may affect the tests that the team wish to include for their witness of testing

Would you like to know more?



<http://www.ex-proficiency-testing.ptb.de/>





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