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

To: Ex Management Committee, ExMC

Title: Report from WG 12 (Personnel Competencies) to WG 13 (Business Development) for a business case to support the new IECEx Certified Persons Program and to assist WG 13 develop an overall IECEx Scheme Business Plan.

INTRODUCTION

This document contains a report from the WG 12 meeting held in April 2008 that addresses specific questions raised by WG 13, Business Development, in order for WG 13 to prepare an overall IECEX Scheme Business Plan (refer ExMC/469/CD Annex B).

This report is issued for consideration during the ExMC Paris October 2008 meeting.

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

Title: IEC Ex MC-WG12 Personnel Competencies

Report to WG13 from Meeting held on 14th, 15th & 16th April 2008

MEETING of IEC ExMC WG12

REPORT to WG13 – Business Development

Present:

RW	Ralph Wigg	E-x Solutions International	Australia - Convener
JA	John Allen	Dowding & Mills	UK
TA	Thore Andresen	NEK	Norway
JH	Jeff Healey	Dow Corning	UK
TH	Thierry Houeix	Ineris	France - (Only 15th & 16th)
PH	Paul House	Thermon	USA
PL	Patrick Leroux	Total	France
AO	Alan Ogden	Baseefa	UK
RS	Ron Sinclair	Baseefa	UK
PT	Peter Thurnherr	Thuba	Switzerland
WT	Wayne Thomas	SIRA	UK
WG	Working Group 12		

Background:

At the meeting of WG13 – Business Development in March the following was recorded.

7.3   IECEx Competency Personnel Certification

The history of the project to prepare documentation for the proposed IECEx Competency of Personnel Certification was noted. This had led to the first work item for WG13 which is to prepare a Business Plan to support the work of WG12.

Mr Ralph Wigg, Convenor of WG12 provided the following report.

The next meeting of WG12 was scheduled to be held in Birmingham, UK in April 2008. Draft of IECEx 05 Rules, Operational Document for ExCBs and Operational Document for Applicants are to be considered. It is intended that complete drafts of these documents to be forward to Secretary by mid year.

He added that the WG12 meeting could consider any requests from WG13.

Members noted that a final WG12 report is to be submitted to the ExMC Paris 2008 meeting for consideration of a request to CAB for expansion of the IECEx activity in this area.

Members further noted that a major driver for the establishment of WG13 was the ExMC request for a business plan concerning the IECEx WG12 work. It was agreed that to start this work WG13 would establish a list of dot points to be considered.

See Annex B (of WG13 meeting as given in following text) for list of dot points and responsibility for providing information.

OBSERVATION c)

To advise ExMC that information provided as a result of Annex B could be considered at the next meeting of WG13.

Annex B

Guidelines for Business Plan for WG12 – Personnel Competencies

- *In noting the previous report of the Survey of IECEx Member Bodies (ExMC/320/CC), a single page summary of the questions asked and results to be prepared.*

  Responsibility: Mr R Wigg convenor of WG12 and Members

- *Proposed Certificate system / format, Validity period*

  Responsibility: Recommendation from WG 12 (noting existing thoughts for an extension to the current On-Line system)

- *Certificate Fee to be applied*

  Responsibility: WG 13

- *Estimated annual cost to administer the program*

  Responsibility: Secretariat

- *Marketing plan, strategies / costs*

  Responsibility: WG 13 with input from WG 12

- *Demand Drivers for this new program*

  Responsibility: WG 12

- *Need to clarify the limit of service to be provided (Only addresses the assessment, IECEx will not provide training)*

  Responsibility: WG 12

In response to the request from WG13 the following is reported from WG12.

The convenor reported that when WG12 was first established the first activity was to make a survey of all IECEx member countries to establish what competency assessment was currently being carried out and where member countries felt the need for competency assessment was necessary. The result was in favour of developing a program for the Assessment of Competency of persons working in Ex Atmospheres. However some member countries failed to respond to the survey and some failed to provide information on existing competency schemes

Members discussed and agreed with the need of a Business Plan but for a new program this needed to be realistic in the level of detail in evidence required.

During lengthy discussion it was noted that:

- ExMC has at present NOT given the green light for this Program to proceed

- WG members were polled to establish their opinion that the Program should proceed and all but one member was in support.

- Some misunderstanding were evident and items such as manufacturer's designers having to go through this Program were raised. This was clarified and stated that this was not the case. "Design" as stated in the Program proposals relates to the design, planning, specification , equipment selection of Ex installations not design of product. The competence of a designer within a manufacture is assessed when the manufacturer's product is assessed by an ExCB and therefore the designer would not require separate certification through this program. However if you are talking of a designer within a build and construct company that is different and this is a design requirement where the competency of that installation designer is critical to getting the installation design right first time. The WG agreed to include a competency for installation design but not for product design.

- The consensus of the WG members was that the Program was important and agreed to work to develop the Program documentation to present to ExMC in Paris

- The working group agreed to prepare the information for WG 13 to prepare a Business Plan and to prepare the Scheme Rules and operating documents

The scope of competencies to be included was discussed and it was agreed that although repair & overhaul was the most immediate requirement there would be insufficient demand in that area alone to support the program , the program needed to include at least the following areas of competency:

Repair & Overhaul

Area Classification

Selection

Installation

Maintenance

Inspection

It was agreed that where practical these would be based on competency to work to IEC 60079-10, 14, 17 & 19 it should not be limited to just IEC standards since many users work to National or other standards such as the Institute of Petroleum Codes, and the base pre-requisites requirement need to meet National legislation

The working group considered the information request from WG13

WG 12 agreed to initially propose the assessment of competencies in the areas

Area Classification, Installation, Inspection & Maintenance and Repair & overhaul but have the documents structured that the area of competencies are not limited to these specified but can be expanded to meet the needs identified by users. There was discussion with regard to Selection whether it should be incorporated as part of Installation or stand alone and there was general agreement to keep selection as a standalone competency. Tthe example of this was a person selecting equipment for a paint storage area classified Zone 2 needs a much lower competency than a person selecting equipment for a paint manufacturing and mixing area.

It was agreed that there was a need to be flexible with regards to the standards, codes or specifications to which competency was being assessed for example in USA an installation to 60079-14 may not be acceptable therefore USA competency for installation would need to be structured around USA National Electrical Codes NEC70?

There will be different pre-requisites requirement dependent upon the competency being assessed e.g. for area classification the applicant will probably need to be a graduate engineer whilst an applicant for repair and overhaul may only be verified as a skilled craftsman by an employer due to the lack of formalized qualifications for that sector.

There was debate with regards to the validity of a certificate and this ranged from 3 years to 5 years. It was noted the Quality systems are 3 years and the ISO/IEC17024 specifies a validity of not longer than 5 years.

It was agreed to recommend a validity of 3 years with surveillance every 18 months not being a visit but a paper assessment or peer assessment.

Evidence for pre-requisite qualification and surveillance may incorporate some company training records and annual review assessments

It was recommended to WG13 that the certificate fee should not exceed CHF 250 and a re-assessment fee not exceed CHF 100

The cost of re-assessment & re-validation was a concern and concern was expressed that setting of fees of Certification of Personnel Competency did not reside with WG12 but had been taken into WG13 scope.

The need to have a 'Live Certificate' on the web site was discussed in relation to Data Protection [privacy] and it was agreed to have the Web site certificate identifiable by the certificate number and exclude the Competent Person personal data.

The competent person would be issued a Certificate and/or ID Card both with a photograph of the competent person together with their scope of competency and the certificate number neither of which will have an expiry date only a date of issue and a statement to inspect the IECEx web site to confirm validity.

Issue of ID Card to be an IECEx central function not an ExCB function.

If a user needs to verify the validity of the competency they search the IECEx web site against the certificate number and the web site will confirm the competency scope, expiry date and make reference to the PCAR.

Operating cost for the program to be estimated by IECEx Secretariat

Marketing Plan & Strategy was discussed

The primary target was USERS and the objective to have a product they want at a price they are prepared to pay, the drivers to get users to adopt the Program are:-

a) Improved safety by ensuring competency of workers

b) Improved efficiency by having competent works getting things right first time, faster commissioning of projects,

c) Improved reliability of plant i.e. knowing where seals must be fitted, reduction in plant loss

d) Legal defence of competent workers in H&S litigation by demonstration of competency to internationally set standards set independent of the employer and assessed by competent assessors independent of the employer

e) Potential to negotiate reduced insurance premiums (Comment from PT insurers not interested)

f) Legal defence by competent workers working to defined standards

g) Evidence of being pro-active in ensuring competency of workers

h) Ability to demonstrate worker competency under H&S regulations

i) Reduction in corporate risk and commercial risk

j) Secondary benefit may be in quality improvement or energy saving

k) External control of employee training quality by having independent assessment

Under H&S legislation the User is responsible for ensuring workers are competent to do the work they are being asked to do over the last decade there has been a shift by regulators to shift the responsibility for H&S and in particular ensuring workers are competent away from the regulators to the users or plant operators.

There has been a requirement for many years for employers to provide a safe place of work and safe (competent) workers. The latest tool to ensure companies are aware of their responsibilities in UK is the Corporate Manslaughter legislation

WHY (are competencies needed)

• WG 12 survey results – see Annex A

• Letter from Brunei (as a result of an Industry conference organised and endorsed by Shell)

• Letter to be sought from Malaysia   CA/IECEx Officers

• Letter to be sought from Singapore   CA/IECEx Officers

• Letter to be sought from Statoil   TA

• Letter to be sought from any other countries which have expressed an interest in assessment of competency

• Patrick Leroux's presentation in Denver confirming the needs of TOTAL for a 'package' of Conformity Assessment Programs which includes Personnel Competencies.

It was accepted that the program may be adopted in protected countries like AU but less likely to have acceptance in an un-protected market like CH

WHO (needs the competencies)

The marketing plan should be targeted at USERS primarily but also plant design & build contractors like Kvaerner, Bechtel etc with secondary targets, trade associations, regulators & departments of education, insurers were thought by some to be potential targets but it was stated that insurers would not offer benefit or discounts to their customers for ensuring they use competent workers.   Unions potentially

could be part of the target audience but the downside might be if they use the gained competency to obtain higher wages

WHAT (will the competencies provide)

- IECEx Vision
- High level of integrity
- Assessment of competency by impartial, independent, Ex expert assessors
- Assessment to globally accepted standards IEC 60079 -10, 14, 17, 19
- Competency assed for working to standards, codes etc
- Global input from worldwide experts on what are the essential competencies required
- Distilled knowledge of global experts
- Relieves companies of monitoring standards of competency assessment
- Voluntary International Scheme
- Complementary with other IECEx programs
- Provision of worker standards for countries where no existing standards exist

HOW (will the competencies be promoted)

- For the program to succeed the large multi-national COG (chemical , oil , gas) companies need to adopt the program as their standard of competency
- IEC Network
- Word of mouth
- Petroleum & Chemical Industry (Europe) conference presentation
- Trade Journals Members in each country to identify appropriate journals
- WGs 12 & 13 to develop articles for publication through ExCB's and National Committees

WG 12 thought some developing countries may accept programme almost immediately however take up in countries such as USA are unlikely except where a multi-national company who worked to IEC standards set up a plant in that country who would require IECEx assessment of competency for workers.

The approved IECEx Personnel Competency ExCB's cannot provide training, and assessment of training is NOT part of the programme.   Where an organization wishes to undertake training then separation of the ExCB activities will need to be VERY clear.

We trust this information is sufficient for WG13 to complete the business plan for presentation to ExMC meeting in Paris.   WG12 will be presenting the initial documentation for consideration by National Committees prior to discussion at the ExMC meeting and are reluctant to release this information unless the full 'package' is available.

Ralph Wigg
Convenor IEC ExMC-WG12

ANNEX A

In early 2006 WG12, in considering the subject of competencies surveyed National Committees and asked to complete a questionnaire to assist this process, in order to gain an insight into the real needs for Competency.   A total of 17 National Committees responded.

The following results were recorded. (percentages are expressed as a result of positive replies)

Are persons working in the Ex field required to demonstrate their competency?	74%
If Yes, is this a regulatory requirement?	60%
Does any formal nationally recognised training exist to help gain competency?	40%
Is there an assessment process to verify the level of competency?	47%
If Yes, is there a nationally recognised qualification or certificate of competency? or	N.R.
Is there an industry recognised qualification or certificate of competency?	N.R.

If competencies are in place do they cover:

Design of installations?	33%
Standards representation?	33%
Classification?	53%
Assessment of product to standards?	60%
Installations?	67%
Inspection?	67%
Audit inspections either internal or external?	60%
Maintenance?	67%
Overhaul & Repair?	67%

Would it be of benefit if the verification of Competencies were established on an International basis and assessed by a recognized body? e.g. IEC Ex	74%
Are there obstacles (e.g. regulations or laws) that would need to be overcome?	33%

If it is established that support exists for the introduction of a system for the Certification of Competencies what level of importance and priority does your National Committee believe should apply?

In order:

Installation	Very high
Area Classification	Very high
Overhaul & Repair	Very high
Maintenance	Very high
Inspection	High
Design	High
Ex related Auditing	Medium
Plant Operators	Low
Management	Low