



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

IECEX Personnel Certification Committee, ExPCC

**Confirmed Minutes of the First Meeting of ExPCC held in Paris
on Thursday 31 May and Friday 1 June 2012, at**

**INERIS Paris
60/62 Rue d'Hauteville
75010 Paris
Confirmed Minutes**

Following circulation of the draft minutes of the ExPCC Committee Meeting, (ExPCC/003/R), we note with appreciation comments from various Members supporting the minutes for confirmation.

Included with the supporting comments were some very minor editorial changes which have been included in these confirmed minutes.

Members Attending the meeting:

Name	Country	Organisation	Interest Represented
Mr Ralph Wigg - Chairman	AU	Ex Solutions	IECEX Executive
Mr John Allen – Deputy Chairman	UK	Dowding&Mills	IECEX Executive
Mr Ian Neeson	AU	Industry Skills Council (EE-Oz TS)	Other
Mr Luiz Mauro Alves	BR	Abendi	Other
Ms Ursula Aich	DE	RP Darmstadt	Regulator
Mr Thierry Houeix	FR	INERIS	ExCB
Mr Allan Ogden	UK	BASEEFA	ExCB
Mr Bob Cooper	UK	SIRA	ExCB
Mr Harman Alang Kasim	MY	SIRIM	Observing ExCB
Mr Dave Adams (Representing Mr N Maalouf)	CA	QPS	Observing ExCB
Mr Eriks Zvaigzne	UK	AEMT	Other
Mr Gerhard Schwarz (Representing Mr P Thurnheer)	DE	Cooper Crouse Hinds	Regulator
Mr Bjorn Spongsveen	NO	NEK	Other
Mr Thore Andersen	NO	Trainor as	Training Body
Mr Geir Larsen	NO	Trainor as	Training Body
Kerry McManama – IECEX Chairman	US	UL	IECEX Executive
Chris Agius – Executive Secretary	CO	IECEX	IECEX Executive
Wal Robson – IECEX Secretariat	CO	IECEX	IECEX Executive
Mr Julien Gauthier	FR	LCIE	Observer
Ms Elodie Forestier	FR	French Ministry of Labour	Observer

1 Opening of meeting and welcome (Start at 0930 Day 1)

Mr Ralph Wigg, ExPCC Chairman opened the meeting welcoming members to this the first meeting of this committee. He thanked members for their attendance. He especially thanked Thierry Houeix and INERIS for providing the meeting facilities. He especially welcomed Mr Kerry McManama, Chairman of the ExMC.

Members introduced themselves.

The Chairman reminded Members that seven meetings of WG 12 had been held to establish the IECEX Personnel Competency Scheme. Now it had been established a formal Committee had been formed to maintain and progress the Scheme. He highlighted that there was a difference between the operation of a Working group and a committee. Members have a different role and responsibility in the committee. These would be discussed during consideration of working procedures.

He added that there were additional matters to be discussed under Agenda Item 13 General business. These were:

1. Training
2. Implementation of latest edition of ISO/IEC 17024.

Members endorsed the Agenda.

2 Apologies

Members noted the following apologies

Mr Erik Folgering	NL	DEKRA	ExCB
Mr Nick Maalouf	CA	QPS	Observing ExCB
Ms Patricia Pasemko	US	Intertek	Observing ExCB
Mr Klauspeter Graffi	DE	TÜV Rheinland	Observing ExCB
Mr P Thurnheer	CH	Thuba	Regulator

3 Constitution

Confirmation of ExPCC Constitution
Document for consideration ExPCC/001/Inf

Members noted the present constitution as contained in document ExPCC/001/Inf.

The Chairman asked if the membership including the different organisations and roles should be identified in document IECEX 05 (Rules of procedure).

Gerhard Schwarz felt that the members should be listed in the Rules as they are not representing National Committees but are attending the meeting because of their expertise.

John Allen expressed the opinion that it was not necessary to have the names of the members in the Rules because if they were every change would need to be approved by the ExMC and this could occur frequently.

Chris Agius said that listing the names of the members in Document ExPCC/001/Inf would be sufficient. If it was considered necessary the Rules could be clarified with regards to organisations represented and this referred to ExMC for approval.

The Chairman said there were two issues:

- What are the categories?
- Who are the members filling these roles?

Decision 2012/01: Members agreed that WG 1 should be asked to review the Rules and propose some changes including guidance notes based on the following:

- Organisations are the members of the committee.
- Organisations provide a contact person.
- Organisations nominate the person to attend the meeting. This person to have the appropriate expertise.
- The Organisations presently listed in Document 001 are adequate.
- However for participating ExCBs and applicant ExCBs, the ExCB is the member.
- The attendance of "An applicant ExCB" should be limited to no more than three meetings.

The proposals from WG 1 are to be reviewed by the Committee prior to referral to the ExMC for approval.

Action item: WG 1 to conduct final review.

4 Confirmation of ExPCC WG Constitutions

- 4.1 WG1 Rules*
- 4.2 WG2 Units of Competence*
- 4.3 WG3 Questions*

Members noted the Current status of the Working groups.

The Chairman reminded members that with regards to WGs it was the individual expert who was the Member and not the Organisation. The nomination for membership of a WG would normally be through the nation Committee.

Bob Cooper said that additional members were required for WG to assist with the question bank.

Members agreed that the responsibility for nominating individual members for WG 3 is with the participating ExCBs and also Training Organisations.

The Chairman said that all members of WGs should sign a Confidentiality Agreement.

This was endorsed by the Members of the Committee.

Members accepted Gerhard Schwarz's nomination that Ursula Aich be added to WG2.

John Allen suggested that if a WG Member did not attend or actively participate in the work for three meetings, their name should be removed from the membership list and any nominating organisation be advised.

Decision 2012/02: Members agreed that if a WG Member did not attend or actively participate in the work for three meetings, their name should be removed from the membership list and any nominating organisation be advised

Action item: Secretariat to update WG2 membership list.

5 Reports from WGs

- 5.1 WG1 "Rules"*
- 5.2 WG2 "Units of Competence"*
- 5.3WG3 "Questions"*

5.1 WG1 “Rules”

Chris Agius, as Convenor of WG1, reported that the WG was waiting for assignment of work from this meeting and any future proposals from WG2 and WG3.

Secretariat Note; During the course of the meeting it was agreed that WG1 hold a meeting on Sunday 2 September 2012, in Calgary immediately prior to the 2012 Annual series of IECEX Meetings.

5.2 WG2 “Units of Competence”

Members noted that WG2 was not intending to meet in the short term.

Allan Ogden advised he was of the opinion that Unit Ex 001 was becoming a base unit for all other Units and there may be a need to establish another Unit, Possibly Ex 000 as a basic general unit.

Members agree that they should wait for WG2 to establish a position with regards to the use of Unit Ex 001 and the possible establishment of a new Unit Ex 000 and this be brought to the Committee for consideration. However if there was a proposal for a new Unit Ex 000, WG3 should establish the appropriate questions for the knowledge test and if any special skills were required.

Members noted that a meeting of WG3 was held a few weeks prior to this meeting and were having difficulty in establishing a suitable single consolidated question bank. However they had reviewed information from a company looking at developing software to assist with storing questions and setting knowledge examinations for the various Units of competence.

Members agreed that WG3 prepare a firm specification with regards to software requirements for consideration by ExPCC with the aim for a submission to the September meeting of the ExMC.

In discussion members raised the immediate need for a single consolidated set of questions and agreed that this could be handled manually, until an IT solution is operational.

Decision 2012/03: Members agreed that all new ExCBs are to provide a full set of questions for each Unit included in their application so a full assessment can be carried out. This is to be referred to WG1 for inclusion in the Rules and OD 501.

Action item: WG 1 to include this decision in the revised rules.

6 Feedback on Scheme operation

Thierry Houeix reported that INERIS had certified one person and were not experiencing any problems at this stage.

Bob Cooper said that there was an increasing number of candidates from training bodies and that a detailed discussion would need to be had later in the meeting about where training providers fit into the scheme.

Allan Ogden felt the scheme was working reasonably well but some issues were arising. One of these was the cost of certification to the individual. Also the pass mark needed to be reviewed especially where applicants applied for multiple units.

Following a lengthy discussion the Chairman proposed that existing ExCBs be required to submit all questions they are using for each unit for review and collation into a consolidated document. He added that this is required of new applicant ExCBs so it should also apply to existing ECBS.

Decision 2012/04: Members agreed that each existing ExCB provide a full list of questions they are using for each unit, mapped by Clause number in OD 504, to the Secretariat for review and collation. The Secretariat to review the number of questions related to each unit from each ExCB and may seek additional questions from individual ExCBs. Members agreed that these questions should be provided by the end of June 2012.

Action item: Secretariat to collate the questions when received from the ExCBs.

7 IECEx 05 IECEx Scheme for Certification of Personnel Competence for Explosive Atmospheres –Rules of Procedure
Document for consideration IECEx 05 – Ed 2 WG draft 06

The Chairman advised that there were basically two tasks under this Agenda Item:

- a) First the review of the draft revision of IECEx 05; and
- b) Secondly the consideration of items resulting from the Re-assessment of SIRA.

Members reviewed the draft revision of IECEx 05 and endorsed the following changes:

Secretariat Note; Detail discussion is not recorded. Each Clause changed and a brief description of the change is listed below.

- Clause 1: Add reference that scheme deals only with assessment and not training.
- Clause 3: Retain definition of “examiner”.
- Clause 4: Amend to include ExPCC requirements.
- Clause 5: Add “of Personnel Competence” in second line of Paragraph one.
- Clause 6.1: Delete “within” and add “in or associated with” in second line of Paragraph one.
- Clause 8.6: Delete note.
- Clause 8.7: Reword last paragraph to clarify where application for re-certification is made to an ExCB other than the original issuing ExCB.
- Clause 9.1: Add additional item that the applicant ExCB shall supply the IECEx sufficient and suitable questions for each Unit of Competence included in the scope of application.
- Clause 9.12: Expand to clarify action require if ExCB withdraws from scheme.

Decision 2012/05: The Members agreed that a revised document should be referred to WG 1 for final review prior to issue to ExMC for approval.

Action item: Chairman to provide copy of the draft document amended at the meeting to the Secretariat. The Secretariat to prepare the document and issue to WG 1 prior to referral to ExMC.

Matter referred from SIRA re-assessment report

Members noted that the following was being referred to ExPCC for consideration:

1. Assessments are being undertaken prior to completion of application forms. The scheme rules are silent on this subject.

In discussion, Members did not support this approach as it was felt that this could be considered as being covered by the OD 503 and it was important that the process steps contained in OD 503 are followed.

2. Concern is expressed at the level of control of advertising from training organisations that do not clearly separate training and assessment. Sira are linked with training organizations that include wording in publications that indicates or infers training and assessment with Sira Certification Service.

Bob Cooper indicated that Sira do not have control of the activities of other organizations. He suggested that IECEX could investigate the endorsement of training bodies.

Ian Neeson said that the market place should be clearly advised that the IECEX is an assessment scheme and is not involved in training.

Decision 2012/06: Members agreed that document IECEX 05 should be amended to clearly indicate that scheme deals only with assessment and not training.

Secretariat Note; This has been included in IECEX 05; See above.

8 OD 501 –IECEX Scheme for Certification of Personnel Competence for Explosive Atmospheres –Assessment procedures for IECEX acceptance of Certification Bodies(ExCBs) for the purpose of issuing and maintaining IECEX Certificates of Personnel Competence (CoPCs).

Document for consideration *IECEX OD 501 Ed 2 WG draft06*

Members reviewed the draft revision of OD 501 and endorsed the following changes:

Secretariat Note; Detail discussion is not recorded. Each Clause changed and a brief description of the change is listed below.

- Introduction: Delete “including TGDs”
- Step 5 in Table: Amend to clarify requirements for “questions” and “artefacts”
- Step 11 in Table: Amend to add reference to “OD 505”.
- Flowchart: To be updated.
- Section 2: Clause 1.2: Delete “annual” and insert “18 months”
- Section 2: Clause 2.2: Delete “annual” and insert “18 months”
- Annex A: Delete.

Decision 2012/07: The Members agreed that a revised document should be referred to WG 1 for final review prior to issue to ExMC for endorsement.

Action item: Chairman to provide copy of the draft document amended at the meeting to the Secretariat. The Secretariat to prepare the document and issue to WG 1 prior to referral to ExMC.

9 OD 502 –IECEX Scheme for Certification of Personnel Competence for Explosive Atmospheres –Application for an IECEX Certificate of Personnel Competence (CoPC), documentation and information requirements

Document for consideration *OD 502 Ed 2 WG draft07*

The Chairman advised that there were basically three tasks under this Agenda Item:

- a) First the review of the draft revision of OD 502;
- b) Secondly the consideration of items resulting from the Re-assessment of SIRA; and
- c) Thirdly the consideration of items resulting from the Re-assessment of Baseefa.

Members reviewed the draft revision of OD 502 and endorsed the following changes:

Secretariat Note; Detail discussion is not recorded. Each Clause changed and a brief description of the change is listed below.

- Clause 2.3.4: Agreed not to include voltage levels.
- Annex A: To remain in document but refer to WG2 for consideration in terms of ISO/IEC 17024.

Decision 2012/08: The Members agreed that a revised document should be referred to WG 1 for final review prior to issue to ExMC for approval.

Action item: Chairman to provide copy of the draft document amended at the meeting to the Secretariat. The Secretariat to prepare the document and issue to WG 1 prior to referral to ExMC. Also Secretariat to refer Annex of OD 502 to WG2 for consideration in terms of ISO/IEC 17024.

Matter referred from SIRA re-assessment report

1. Non IECEX Statement of Attainments (Knowledge Notification) are being issued where insufficient information relating to education, training, experience etc is provided.

Bob Cooper advised that Sira were issuing “Knowledge Notifications” to applicants indicating that they have been assessed by Sira and found to meet the knowledge requirements of Unit Ex 001 of the IECEX Operational Document OD 504. These documents included the IECEX Logo.

Members, after consideration of the Sira proposal with regards to the issue of “Knowledge Notifications”, did not support the SIRA proposal in its present form as it was felt that it was not in accordance with the rules especially the reference to IECEX Units of Competence and the display of the IECEX Logo.

The Chairman asked if there was any validity in considering a new document that identifies a knowledge test requirement.

Decision 2012/09: The Members agreed that it would be beneficial to provide a document that recognised “knowledge” and this should be referred to WG1 to prepare a proposal for referral back to ExPCC for consideration. If accepted it would then be referred to ExMC for approval.

Action item: WG 1 consider the introduction of a document that addressed the knowledge component of the assessment.

Matter referred from Baseefa re-assessment report

1. Acceptance of sufficiency of prior evidence is made on a judgement call without the use check lists or any other criteria.

In discussion various members felt that Unit Ex 001 is too demanding and the need for a Unit that is a level lower than that of Unit Ex 001. Possibly called Unit 000 or Unit 00A.

During further discussion members considered a proposal to remove second paragraph of 4.2.2 of OD 504, as follows:

“Competence in this unit shall be assessed in combination with, or after the gaining of, other competencies required by a given industry or enterprise for plant or machinery operation or installations, maintenance or service functions. (see Annex A).”

In noting various views the Chairman put this proposal to vote with the conclusion being Not to support this removal. Therefore the paragraph remains in the document.

Decision 2012/10: Members agree that the issue of a possible Unit that is not as demanding as Unit Ex 001 be considered by WG2.

- 10 **OD 503 –IECEX Scheme for Certification of Personnel Competence for Explosive Atmospheres –ExCB Procedures for issuing and maintaining IECEX Certificates of Personnel Competence**
Document for consideration *OD 503 Ed 2 WG draft07*

The Chairman advised that there were basically two tasks under this Agenda Item:

- a) First the review of the draft revision of OD 503;
- b) Secondly the consideration of items resulting from the Re-assessment of SIRA

Members reviewed the draft revision of OD 503 and endorsed the following changes:

Secretariat Note; Detail discussion is not recorded. Each Clause changed and a brief description of the change is listed below.

- Flowchart: To be updated.
- Clause 4.3.1.3: A new table prepared based on Clause 5 of OD 504. The table with regards to number of questions to be completed by WG2 and WG3 by mid July.
- Clause 4.3.2: Consideration needs to be given to the full requirements for questions as no Data bank of questions is available.
- Clause 4.3.3: Delete “module” and insert “unit”.
- Clause 4.3.4: Editorial changes.
- Clause 4.3.6.3: Updated to clarify candidates use of own unmarked documents.

Decision 2012/11: The Members agreed that a revised OD 503 should be referred to WG 1 for final review prior to issue to ExMC for approval, noting the need for further consultation with WG2 and WG3 with regards to the number of Questions for inclusion in the Table of item 4.3.1.3.

Action item: Chairman to provide copy of the draft OD 503 amended at the meeting to the Secretariat. The Secretariat to prepare the document and issue to WG1 for final review, noting the need for future consultation with WG 2 and WG 3.

Matters referred from SIRA re-assessment report.

1. Clause 4.3 of OD503 is not clear regarding assessment of evidence and work experience.

2. It was noted that candidates are permitted to bring written documents with them to the examinations but some material has been found to contain inaccuracies.

Members noted that these matters were considered during the review of the draft revision of OD 503 and the outcomes incorporated with the changes to OD 503 listed above.

11 OD 504 –IECEX Scheme for Certification of Personnel Competence for Explosive Atmospheres –Specification for Units of Competence Assessment Outcomes Document for consideration *OD 504 Ed 2 WG draft08*

Ian Neeson informed the meeting of a review that has been undertaken within Australia concerning proposed modifications to the IECEx Units of Competence and requested that, when available, the report be submitted to ExPCC WG2 for consideration.

Members accepted this proposal.

John Allen proposed a number of amendments to OD 504 as contained in Annex A to this report.

Members agreed that these proposed amendments should be referred to WG2 for review and inclusion where possible in the revision of OD 504.

The Chairman raised the question should the various Units be split into two levels, one for an Operative and one for a Responsible Person or should there different Units.

Decision 2012/12: Members agreed for the proposals from both Ian Neeson and John Allen be considered by WG2 and WG3 along with agreement that as an interim measure Clauses 4.2.5.5 and 4.2.5.6 could be added to all Units except Ex 001.

Action item: Conveners of WG2 and WG3 to implement this decision.

Members reviewed the draft OD 504 and endorsed the following changes:

Secretariat Note; Detail discussion is not recorded. Each Clause changed and a brief description of the change is listed below.

- Clause 3.9: Add “or associated with” in second line.
- Clause 4.3.4: To be expanded to include and Scope limitations, noting that Scope limitations do not apply to Unit 02.
- Table 4.12: The repeated Clauses referenced in this Table to be included in a new Clause. This would result in the appropriate Clause would only appear once and not as separate Clauses in each Unit. This would eliminate Table 4.12.

Decision 2012/13: The Members agreed that a revised OD 504 should be referred to WG 2 and WG 3 for final review prior to issue to ExMC for approval.

Action item: The Secretariat to forward a draft OD 504 to WG 2 and WG 3 prior to referral to ExMC.

12 INQUIRY FROM DEKRA CERTIFICATION B.V.

Use of IECEx Logo

(Note this item has also been referred to ExMarkCo)

The meeting discussed a request for use of the IECEx Logo on certificates or diplomas issued by related training organisations that provide training to underpin the knowledge component of the IECEx CoPC Units. The Member's Position is not to support the use of the IECEx logo to Certificates or diplomas but noted that this is also a matter for discussion at the upcoming meetings of ExMarkCo and the Executive. It was also acknowledged that the issue will not go away and we should develop a mechanism or program to cater for Training Bodies.

13 Other Business

13.1 Training

The Chairman reminded Members that the ExPCC Scheme was all about assessment and not involved in any way with training. He also advised that the same individuals operating both training and assessment were in conflict with ISO/IEC 17024.

John Allen suggested that there may be some benefits if ExPCC could find a way to assess training organisations. By doing this ExPCC could assess the competence and delivery of training and detect any deficiencies within training organisations.

Ian Neeson felt there could be some value in allowing training organisations access to OD 504 and arrange their training accordingly.

The Chairman said that there were several aspects to training as follows:

- The information;
- The delivery techniques; and
- The structure of the training organisation.

Kerry McManama suggested that there may be a way to use OD 504 to endorse training organisations.

Decision 2012/14: Members agreed that this matter should be reviewed and all Members be asked to provide comments for consideration at the next ExPCC meeting.

Action item: The Secretariat to arrange for this matter to be placed on the Agenda for the next ExPCC meeting.

13.2 Implementation of Next Edition ISO/IEC 17024

The Chairman reminded members that ExPCC needs to review how to implement the differences between the 2003 and 2012 editions of ISO/IEC 17024.

He added that his knowledge of the 2012 edition of ISO/IEC 17024 gives him the impression that the changes do not have a significant bearing on the ExPCC documents.

Decision 2012/15: Members agreed that modified ExPCC documents to reflect the changes in ISO/IEC 17024 could be prepared by the end of 2012 and then allow ExCBs 2 years to comply. Any ExCB entering the scheme after 2012 would be assessed to ISO/IEC 17024-2012.

14 Next Meeting

Members noted that the next meeting was scheduled to be held in conjunction with other meetings such as WG1 & 5, Executive, and ExMarkCo and a date to be determined during the Executive meeting to be held 7 June 2012.

Secretariat NOTE: Arising from the IECEx Executive meeting, the next meeting group of meetings is scheduled for 3 June 2013, Buxton UK hosted by SGS Baseefa.

The Chairman advised that he would investigate the possibility of holding the 2014 series of meetings in Adelaide, Australia.

15 Close of Meeting

The Chairman thanked Thierry Houeix and INERIS for providing the meeting facilities. He thanked all members for their cooperation and valuable input during the meeting. He closed the meeting at 3.45 PM on the second day.

Annex A to ExPCC First Meeting Report

**Amendments to OD 504
Proposed by John Allen**

Original clause in OD 504 Ed 1 had clause 4.6.5.11 which was identical to clause 4.6.5.1 as a result clause 4.6.5.11 should be deleted

Clauses 4.6.6.1 & 4.6.6.2 are to do with assessment of knowledge specific to overhaul & repair and should be re-numbered as indicated below

I believe that within these clauses we should make reference to the repair standard IEC 60079-19

4.6.5.11 Critical aspects of evidence for the Responsible Person / Operative

The Responsible Person / Operative requires an understanding of the knowledge and associated skills essential to performance as follows:

4.6.5.11.1 Explosion-protected equipment overhaul and repair – General requirements (Old 4.6.6.1)

Evidence shall show an understanding of overhaul and repair procedures of explosion protected equipment to an extent indicated by:

- a) The scope and limitations for overhaul and repair of explosion-protected equipment encompassing:
 - i) the requirements for compliance of a workshop;
 - ii) the requirements of a 'competent person' for a registered workshop engaged in the overhaul/repair of explosion-protected equipment; and
 - iii) the scope and limitations of work permitted under workshop registration.
- b) Overhaul and repair (technical) Standard encompassing:
 - i) the documentation/information required to enable overhauls/repairs to be undertaken;
 - ii) categories of work, for example, overhaul; no repair; overhaul-repair;
 - iii) modifications that are, and are not, permitted within the equipment certification; and
 - iv) the requirements for overhaul/repair processes relevant to the type of protection and equipment.
- c) Requirements for documentation and identification of overhauled/repared explosion protected encompassing:
 - i) overhaul/repair report document; and
 - ii) requirements for distribution of overhaul/repair reports.
- d) Quality management systems as covered by international Standards encompassing:
 - i) documentation regime of a quality management system;
 - ii) principle of document and data control covering both internally and externally generated documents and data; and
 - iii) principles of process control as applied to the overhaul and repair of explosion protected equipment.

4.6.5.11.2 Explosion-protected equipment overhaul and repair specific to each technique (Old 4.6.6.2)

Evidence shall show an understanding of overhaul and repair for specific explosion-protection techniques to an extent indicated by:

- a) The use of Standards in determining the requirements to which the design of explosion protected apparatus shall comply.
- b) The level of overhaul/repair required encompassing:

- i) Standards and their use for determining the requirement for a specific explosion protection technique;
 - ii) measurement/tests and equipment required to determine whether an item of equipment meets the certification requirements;
 - iii) requirements for maintaining the accuracy/calibration of measuring/test equipment;
 - iv) measurement/test procedures for determining whether an item of equipment meets the certification requirements;
 - v) level of overhaul/repair required from comparisons of test results and requirements specified in the original certification; and
 - vi) specifying overhaul/repair work required to restore an item of explosion-protected equipment to conform to the original certification.
- c) Measurement/tests procedures to verify that an item of equipment meets the original certification requirements.

4.6.6 Critical Evidence of overhaul and repair work performance

The Responsible Person / Operative requires an understanding of the knowledge and associated skills essential to performance as follows:

4.6.6.1 Explosion-protected equipment overhaul and repair work performance – Operative

In assessing competent hazardous area overhaul and repair work performance evidence regarding the following aspects of competency shall be considered:

- a) Interpretation of nameplate data, correct identification of equipment classification & standards to which it was manufactured.
- b) Identification of faulty or worn components correct identification of component & competent use of documentation.
- c) Verification of surface finish compliance with standard against roughness gauge.
- d) Dimensional checks on components with identification of flame path gap compliance with certification document or standard with competent use of record documentation.
- e) checking internal threads for wear or damage with competent use of record documentation.
- f) Induction motor core flux test calculations with competent use of record documentation.
- g) Induction motor stator winding dimensional measurements with competent use of record documentation.
- h) Induction motor stator winding wire conversion with competent use of record documentation.
- i) Correct interpretation of certification drawings (Optional).

4.6.6.2 Explosion-protected equipment overhaul and repair work performance – Responsible Person

In assessing competent hazardous area overhaul and repair work performance – Responsible Person evidence regarding the following aspects of competency shall be considered:

All requirements of operative given in 4.6.6.3 plus:

- a) Following OH&S procedures.
- b) Correct interpretation of certification documentation, including drawings, and standards.
- c) Identification of appropriate reclamation procedures for defective component based on fault and equipment classification type.
- d) Measuring, testing and inspecting equipment for compliance with certification and Standards.
- e) Specifying overhaul/repair work.
- f) Documenting overhaul/repair work.