



ExMC/311DV
May 2006

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

Ex Management Committee, ExMC

TITLE: IECEx Assessment Report for the acceptance of *VTT Technical Research Centre of Finland* as an IECEx Certification Body (ExCB)

INTRODUCTION

This document contains the IECEx Assessment Report for the acceptance of *VTT Technical Research Centre* as an Ex Certification Body (ExCB) within the IECEx Scheme.

The report is hereby submitted for voting.

Please consider the assessment report which is issued for final vote by 2006 07 08.

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IECEx Secretariat

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ExMC/311V
May 2006

IECEX ASSESSMENT REPORT (IECEX Certification Body)

Type of Assessment:

Initial Assessment for Candidate ExCB



1. OBJECT AND FIELD OF APPLICATION

1.1 *Country:*

Finland

1.2 *Name of Candidate ExCB*

VTT Technical Research Centre of Finland

1.3 *Members of the Assessment Team*

Jim Munro, Lead Assessor
Heinz Berger, Assessor
Vijay Varma, Off-Site Assessor

1.4 *Place and Date of Assessment*

VTT Technical Research Centre of Finland
Otakaari 7 B
FI - 02044 VTT
ESPOO, Finland

27th – 30th September 2005

1.5 *Assessment References*

- i) IECEx 02 Second Edition 2003-06
- ii) IECEx Operational Document OD/003
- iii) IECEx Operational Document OD/009
- iv) ISO/IEC Guide 65 1996
- v) ExCB application documents dated 26th August 2005

1.6 *Scope of Application*

Product Category	Standard
General Requirements	IEC 60079-0
Pressurised Enclosures "p"	IEC 60079-2
Powder Filling "q"	IEC 60079-5
Oil Immersion "o"	IEC 60079-6



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Increased Safety “e”	IEC 60079-7
Intrinsic Safety “i”	IEC 60079-11
Type “n” Protection	IEC 60079-15
Type “m” Protection (encapsulation)	IEC 60079-18
Intrinsically Safe Systems	IEC 60079-25
Group II Zone “0” Electrical Apparatus	IEC 60079-26
Apparatus for combustible dust atmospheres	IEC 61241-1-1
Combustible dust - General requirements	IEC 61241-0
Combustible dust - Protection by Enclosures tD”	IEC 61241-1
Combustible dust – Type of protection “pD”	IEC 61241-4
Combustible dust – Type of protection “mD”	IEC 61241-18

Note: Since the original application was received VTT have altered their scope application as follows-

- delete IEC 60079-1,
- add IEC 60079-5, IEC 60079-6 and IEC 60079-25.

1.7 Candidate ExCB Persons Interviewed

Name	Position
Hannu Hossi	Service Manager
Risto Sulonen	Senior Research Scientist
Martti Siirola	Research Scientist

1.8 Legal Entity of the Candidate ExCB

VTT is a state owned non-profit organisation.

1.9 Associated Testing Laboratories

The ExTL is integral with the ExCB. There is staff common to both operations with separation of roles achieved by procedures.

1.10 Associated Certification Functions

VTT is registered as ATEX Notified Body (NB) under number 0537 since June 2000.

1.11 National Marks and Certificates

There are no marks and certificates in this area of activity.

1.12 Financial Support

VTT is a non-profit organisation.

1.13 History

Since its establishment over 60 years ago, VTT has become an important centre of technological expertise and developer of new technologies. The development path



of Finland as a whole as well as the events and phenomena of each era are reflected in VTT's history. It reveals one of the keys to VTT's success: the organisation has always been able to meet challenges by adapting to changes in its environment.

VTT's six decades

1940s: President Ryti signs the Act on the Technical Research Centre of Finland

1950s: The Post-war era

1960s: VTT becomes Finland's biggest research institute

1970s: Reorganised research centre moves to Otaniemi

1980s: Research programmes serving the needs of industry

1990s: Electronics and information technology research as the engine of development

2000-2004: Strategic technology themes steer research

VTT started Ex- Testing in 1981, was accepted as a testing laboratory under the old EU directive and became ATEX Notified Body in 2000.

The above listed decades can be seen in the Internet under

<http://www.vtt.fi/vtt/inbrief/history/index.htm>

1.14 Standards Accepted

Product Category	Standard
General Requirements	IEC 60079-0
Pressurised Enclosures	IEC 60079-2
Powder Filling "q"	IEC 60079-5
Oil Immersion "o"	IEC 60079-6
Increased Safety	IEC 60079-7
Intrinsic Safety "i"	IEC 60079-11
Type "n" Protection	IEC 60079-15
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Combustible dust – Type of protection "mD"	IEC 61241-18



1.15 *National Differences to IEC Standards*

National differences to IEC standards are listed in the latest version of the IECEx Scheme Bulletin.

2. ORGANISATION

2.1 *Names, Titles and Experience of the Senior Executives*

Name	Title	Experience
Hannu Hossi	Service Manager	31 years
Risto Sulonen	Senior Research Scientist	25 years

2.2 *Name, Title and Experience of the Quality Management Representative*

Name	Title	Experience
Henry Weckman (for Services)	Senior Research Scientist	30 years
Risto Sulonen (for Ex Services)	Senior Research Scientist	25 years

2.3 *Name and Title of Nominated Principal Contact*

Name	Title	Comments
Risto Sulonen	Senior Research Scientist	-

2.4 *Name and Title of Signatories for Certification*

Name	Title	Comments
Risto Sulonen	Senior Research Scientist	-
Marti Sirola	Research Scientist	-

2.5 *Other Employees in ExCB activity*

Name	Title	Responsibility
None		

The CV's of personnel listed above were checked during the assessment and found to be acceptable.

2.6 *Organisational Structure*

Since the on-site assessment VTT has conducted a review of its organisation. This review has been limited to the restructure of the organisation and does not change the ownership which remains under the auspices of the Finnish Ministry of Trade and Industry. This new structure took effect on January 1st, 2006. The charts



presented reflect the new situation. See Annex 1 for the VTT overall organisation. The ExCB is part of the organisation unit "Expert Services". See Annex 2 for the organisation chart of the Expert Services. Annex 3 shows the organisation chart of the Ex Team.

2.7 Administration

2.7.1 Administrative Structure

Administrative work is performed by the Expert Services administration supported by technical personnel.

2.7.2 Terms of Reference of the Governing Board

IECEX Certification and ATEX activities are the only areas in VTT where certification is involved. Hence, the Governing Board (also called Advisory Board) is included in the organisation of the Expert Services. The rules of operation are laid down in procedure NB-001v2.1. The latest minutes of the board are dated September 19th, 2005. The advisory board consist of members from the Finnish industry and representatives from VTT Expert Services Department. All members signed a confidentiality agreement.

2.7.3 Indemnity Insurance

VTT of Finland is a Government organisation established by, and existing under, laws of Finland and under the auspices of the Finnish Ministry of Trade and Industry. As a Government organisation VTT is bound by the provisions of the Decision of the State, dated 12.4.1995, Nr. TM 9509, concerning the general provisions for the state budget.

According to Article 6.6 of the said Decision the Government organisations are not allowed to conclude agreements on insurance but the Finnish state is finally responsible for indemnity coverage.

The final responsibility for indemnity coverage is by the Finnish Government this was confirmed amongst the relevant documents from VTT which were presented during the assessment

3. RESOURCES

All necessary resources for ExCB operation are available (see also clause 2 of this report).

4. COMMITTEES

See clause 2.7.2 (Advisory Board).

5. CERTIFICATION OPERATIONS

5.1 *National Approval/Certification Methods*

VTT is following the requirements of the ATEX processes.

5.2 *Certification Policy*

Document IECEx-001v1.0 "Rules for operation as an IECEx Testing and Certification Body" is an internal document, also dealing with the certification policy.

Document "Guide to Testing and Assessment Services for IECEx Certification under IECEx Scheme" was prepared and is available to customers as part of the contract documentation.

5.3 *Staff Work Instructions*

Document "Procedures for issuing of IECEx Certificates of Conformity (CoCs), IECEx Test Reports and IECEx Quality Assessment Reports", number IECEx-002v1.0 is dealing with procedures given with document OD 009, OD 005, and other relevant documents.

5.4 *Application for Certification*

The IECEx Scheme Application Form carries the number IECEx-005v1.0. It has to be updated in order to meet IECEx Scheme rules.

6. STATISTICS

Number of certificates issued under the ATEX directive and according to IEC standards in the preceding three years for each type of protection:

Year	Exe	Exn	Exi	Exd	Exp	Exm	DIP	Σ
2002	69	7	16	2	12	3	-	109
2003	74	23	41	2	31	8	9	188
2004	49	21	24	2	13	4	5	118

7. DOCUMENTATION

7.1 *Document and Change Control*

Responsible personnel perform the document change control process. TO-001 in the Quality Manual deals with the document handling and change control. Documents concerning testing and certification are stored for 25 years.



8. RECORDS

The VTT Ex-Team is maintaining an Excel list showing all Ex-Certificates and Quality Assessment reports issued. The list is available by the public on request.

IECEX certificates will be listed in the IECEX Homepage. Hence, VTT does not plan to issue an extra list.

9. CONFIDENTIALLY

Clause 22 of the VTT employment contract deals with the confidentiality issue. Evidence was given during the assessment.

10. PUBLICATIONS

The VTT Ex -Team offers its services on the homepage (see http://www.vtt.fi/tuo/26/pdf/ex_testing.pdf). Furthermore, printed documentation is available.

With the reorganisation of VTT a new Homepage concept was introduced.

11. APPEALS

See clause 2.7.2 (Advisory Board).

12. NATIONAL ACCREDITATION

There is presently no national accreditation held for Ex certification operation (ISO/IEC Guide 65) and VTT will therefore be subjected to annual surveillance by IECEX. VTT does hold registration as an ATEX Notified Body since June 2000 under number 0537. See Annex 4 for the NB confirming letter.

13. RECOGNITION AND AGREEMENTS

There is a co-operation contract with Test Safe Australia.

14. QUALITY MANUAL

VTT holds an ISO 9001:2000 certificate issued by Lloyd's Finland. The number is 330079. The certificate is valid until August 31st, 2006. However, VTT is planning to renew the certificate following the introduction of the restructured organisation on January 1st, 2006.

The Quality Manual is available on the VTT Intranet. With the restructured organisation to be introduced on January 1st, 2006, the Quality Manual experienced changes in the top level. There are three hierarchy levels in the new Quality System. Changes occurred in the IECEX related process numbering which will be maintained by the Ex team.



15. INTERNAL AUDIT AND PERIODIC REVIEW

Under the organisation at the time of the site assessment (until December 31st, 2005) Quality Manual procedures TO-002 and TO-003 dealt with internal audits.

Internal audit reports for 2004 and 2005 were presented during the assessment as well as the audit plan for 2005.

Corrective actions are listed on the VTT Intranet and strongly controlled by responsible personnel.

With the restructured organisation of VTT on January 1st, 2006, the processes were updated.

Quality Manual procedure TO-004 is dealing with periodic management reviews. The minutes are available on the VTT Intranet. The last meeting was held on November 16th, 2005. A copy of the minutes is held by the Secretariat.

16. COMPLAINTS

Quality Manual procedure TO-003 is dealing with the complaint issue. Complaints are listed in the VTT Intranet. In case the complaint cannot be solved through VTT internal channels the customer has the possibility to call on the advisory board described in clause 2.7.2 of this report.

17. WITHDRAWAL AND CANCELLATION OF CERTIFICATES

Quality Manual procedures IECEx-002v1.0 (VTT internal) and IECEx -006v1.0 (customer related) are dealing with the withdrawal and cancellation of certificates.

18. SPECIAL FACTS TO BE NOTED

Subcontracting/Witness testing

Presently, no subcontracting is being done for IECEx activities. However, VTT includes requirements in the subcontracting process to take into account IECEx and Guide 65 rules.

In the case of CTI testing VTT will be subcontracting to SGS FIMKO, in Helsinki.

Presently Ex p purging tests and some other tests are performed at ABB Oy, Helsinki. There is a witness-testing contract for this based on document ExTAG/76A/CD WG6 Document - IECEx Rules of Procedure covering the use of "Other Testing Laboratories".

Quality Assessment Reports (QARs)

Up to date, the VTT Ex-Team has issued more than 20 Quality Assessment Reports following the ATEX regulation.



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The following files were crosschecked:

VTT 04 ATEX Q 002 ABB Oy, Helsinki
VTT 03 ATEX Q 003 Centaurea Oy, Hyllykallio
VTT 04 ATEX Q 003 Sabik Oy, Porvoo
VTT 02 ATEX Q 001 SKS-tekniikka Oy, Vantaa

The processes have to be updated in order to meet IECEx requirements (see below).

On 29 September the on-site assessment team witnessed Risto Sulonen of VTT carrying out an ATEX surveillance audit of a manufacturer. This was found to provide sufficient practical evidence of the capability of VTT to carry out audits of manufacturers for the IECEx Scheme.

Training

Quality Manual procedure I018-004 is dealing with personnel education. Training records and training plan were presented during the assessment.

Supporting Documentation

Copies of additional supporting information for this assessment have been provided to applicant and the IECEx Secretariat. These include:

- Details of issues raised and how these have been resolved.
- Checklist for ISO/IEC Guide 65.
- Report on witness audit of manufacturer.

19. COMMENTS

Some issues were found during the assessment that required rectification. These included the need to update the IECEx Certification Application Form, the Quality Manual (for the restructured organisation), the subcontracting processes, see Item 18, and the process for the performance and maintenance of Quality Assessment Reports (QARs).

The Assessment Team has reviewed the necessary changes and is satisfied that IECEx requirements have been met.

20. RECOMMENDATION

Based on the initial assessment performed on 28 and 30 September 2005, VTT is recommended for acceptance into the IECEx scheme as a Certifying Body (ExCB) according to the scope of the standards listed in this document.

Jim Munro
Lead Assessor

Heinz Berger
Assessor

Vijay Varma
Assessor

26 April 2006



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List of Annexes:

- Annex 1: VTT Overall Organisation Chart
- Annex 2: VTT Expert Services Organisation Chart
- Annex 3: VTT Ex Team Organisation Chart
- Annex 4: VTT Acceptance Letter as Notified Body for ATEX

Erkki KM Leppävuori, Director General

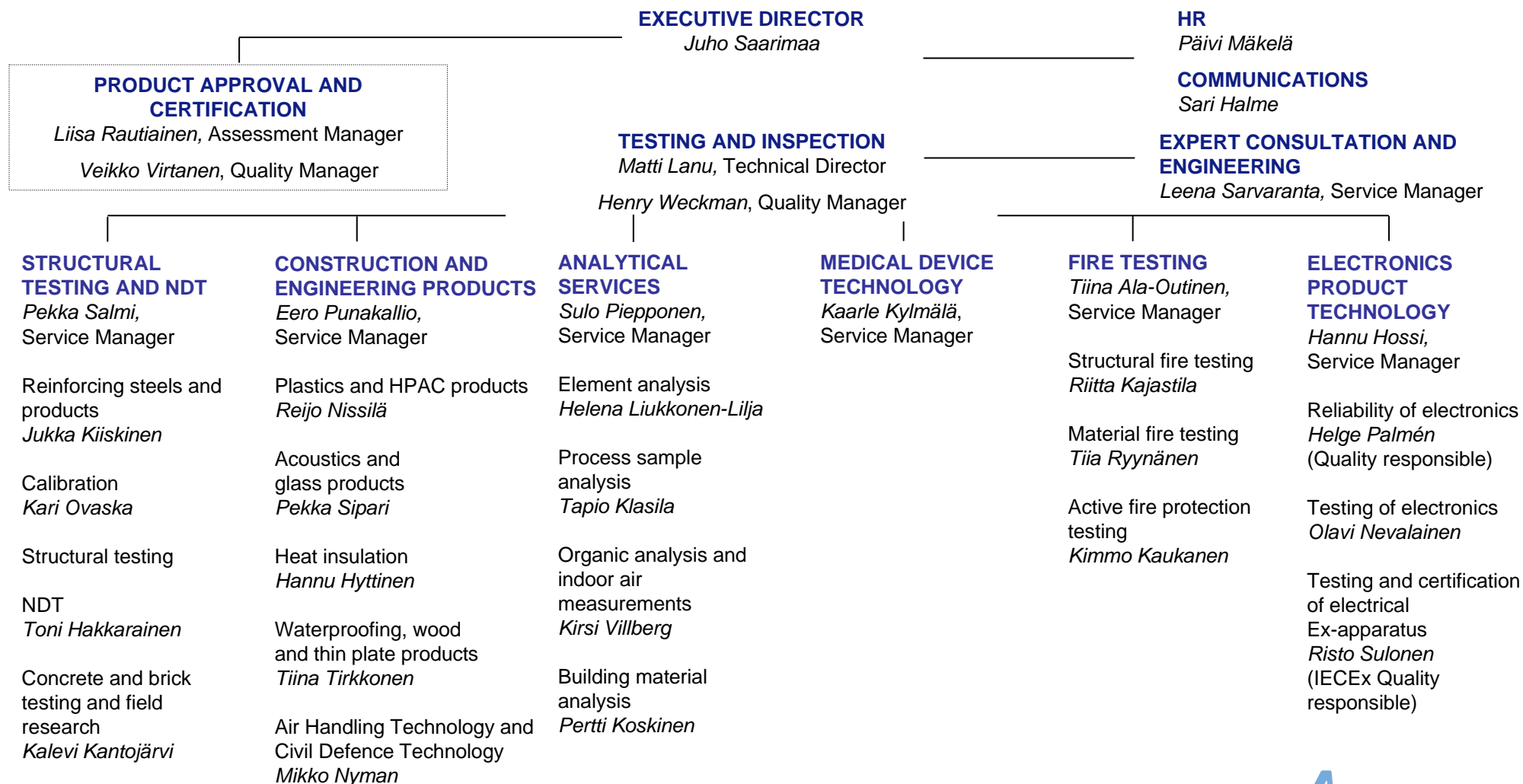
ORGANISATION

1.1.2006

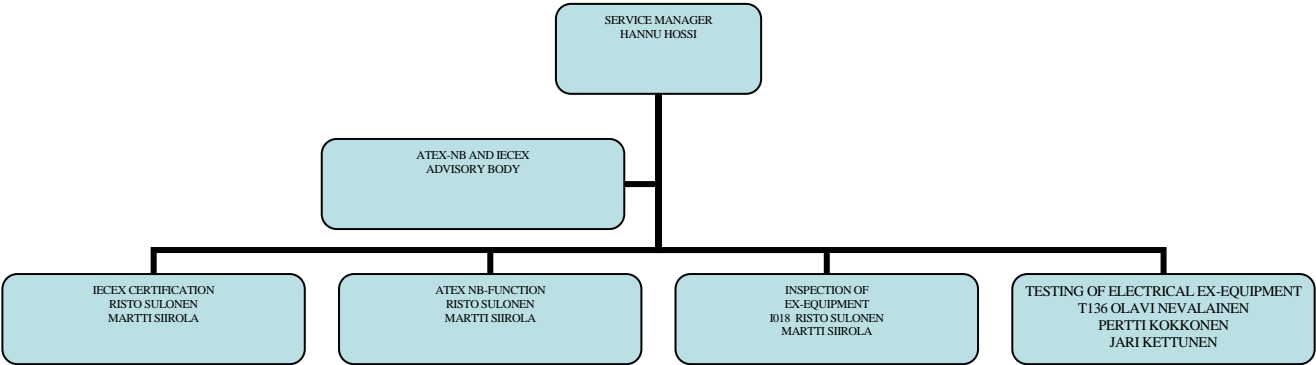


ANNEX 2

ORGANISATION OF EXPERT SERVICES 1.1.2006



ANNEX 3



PERMANENT REPRESENTATION OF
FINLAND

EUEC073-67

19.06.2000

Corrigendum

Mr Rogero Madeira Horta
European Commission
Enterprise DG
Rue de Science 15
1040 Bruxelles

Subject:

NOTIFIED BODY; Directive 94/9/EC/ equipment and protective
intended for use in potentially explosive atmospheres

Please find enclosed of notification of VTT Automaatio(N:o 537) as
a notified body in methods of measurement for the Directive 94/9/EC.

Desregard the notification EUEC073-066 dated 16.6.2000 consequently

Yours sincerely,

Matti Oivukkamäki
Matti Oivukkamäki

Counsellor

Encls.

4 pages

Postit/Miten 7089	Fax nro/No:	456 7042	→Telefax
	Kenelle/To:	RISTO SUKONEN	
	Keneltä/From:	Yhtiö	
	Pvm/Date:	20.6	Sivuja/Pages: 1

NOTIFICATION OF A BODY PURSUANT TO A TECHNICAL
HARMONIZATION DIRECTIVE

Date: 16.6.2000

From:

Ministry of Trade and Industry
PO Box 32
FIN-00023 Government,
Finland

To

European Commissio
Directorate-General for Enterprise
G/1
rue de la Loi/Wetstraat 200
B-1049 Brussels

Other Member States

1. Reference 94/9/EEC

2A. Name of the body, acronym, address, telephone/fax

VTT Automation
P.O.Box 13071
FIN-02044 VTT, Espoo
Finland
tel. +358 9 4561 fax +358 9 456 70422B. Identification number
of the body:

537

3. Period of validity of the notification:

Unlimited: ☒

Valid until.....

4. Body's technical responsibilities (accreditation or other reasons)

VTT Automation meets the requirements in annex XI

☐ Accreditation (45003 or 45010) / or ☒ assessment:☐ EN 45001☒ EN 45004☐ EN 45011☐ EN 45012☐ Other (specify):...

Note! The standards indicated must meet the requirements of the relevant conformity assessment procedures.

5. Tasks performed by the body

Product/product range	Procedures/modules	Articles/Annexes of the directive
Electrical equipments and their components for potentially explosive atmospheres	Type examination / B Product verification / F Conformity to type/C Unit verification / G	Article 8 / Annex III Article 8/ Annex V Article 8/ Annex VI Article 8/ Annex IX

VTT Automation (537)