



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

**Title: Re-assessment Report for continued acceptance of SP Sweden as Ex  
Testing Laboratory**

**To: Members of the IECEx Management Committee, ExMC**

---

**Introduction**

This document contains the IECEx Re-assessment Report for SP of Sweden as an Accepted ExTL in accordance with the 5-year re-assessment plan for the surveillance and monitoring of bodies under the IECEx Scheme.

This Report is issued for endorsement at the 2005 ExMC Buxton Meeting.

*Chris Agius*  
*IECEx Secretariat*

**Address:**

**SAI Building  
286 Sussex Street  
Sydney NSW 2000  
Australia**

**Contact Details:**

**Tel: +61 2 8206 6940  
Fax: +61 2 8206 6272  
e-mail: [chris.agius@iecex.com](mailto:chris.agius@iecex.com)  
<http://www.iecex.com>**



# IECEx RE-ASSESSMENT REPORT FORM

## For ExTL

### (Accepted Ex Testing Laboratory)

#### 1. OBJECT AND FIELD OF APPLICATION

1.1 **Country:** SWEDEN

1.2 **ExTL under Re-Assessment**

SP Swedish National Testing and Research Institute

1.3 **Members of the Assessment Team**

Jim Munro (Lead Assessor)  
Heinz Berger (Assessor)

1.4 **Place and Date of Assessment**

Brinellgatan 4  
Borås  
SWEDEN

6-7 September 2004

1.5 **Assessment References**

Document:

- i) IECEx 02 Second Edition
- ii) IECEx Operational Document OD/009/V1
- iii) ISO/IEC 17025
- iv) IECEx Technical Guidance Documents

1.6 **Current Scope of Acceptance**

Product Category	Standard
General Requirements	IEC 60079-0
Flameproof enclosures "d"	IEC 60079-1
Pressurisation "p"	IEC 60079-2
Powder filling "q"	IEC 60079-5
Oil-immersion "o"	IEC 60079-6
Increased safety "e"	IEC 60079-7
Intrinsic safety "i"	IEC 60079-11
Type of protection "n"	IEC 60079-15
Encapsulation "m"	IEC 60079-18
Apparatus for combustible dusts	IEC 61241-1-1



### 1.7 Any Changes in Scope

The following changes of scope were requested:

Product Category	Standard
Intrinsically Safe Systems	IEC 60079-25
Group II Zone "O" Electrical Apparatus	IEC 60079-26
Field bus Intrinsically Safety concept (FISCO)	IEC 60079-27
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

### 1.8 Candidate ExTL Persons Interviewed

Name	Position
Peter Bremer	Technical Team Manager/Senior Technical Officer
Robert Carlsson	Testing Officer/ Project Coordinator
Ari Antikainen	Testing Officer/ Project Coordinator
Anders Nilsson	Section Manager, Electronics -Product Safety
Henrik Andersson	Testing Officer

### 1.9 Any changes in Legal Status of the ExTL

No change. SP is a limited company fully owned by the Swedish State, Ministry of Industry and Commerce.

### 1.10 Associated Certifying ExCBs

ExTL and ExCB are organisationally separated in different departments within SP the ExCB having its own board.

### 1.11 Financial Support

It is essentially self-funded under a not-for-profit concept.

## 2. ORGANISATION

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

Name	Title
Claes Bankvall	President
Hans Andersson	Vice President and Technical Director
Jan Jacobson	Head of Department, Electronics
Anders Nilsson	Section Manager, Product Safety
Peter Bremer	Technical Team Manager, Explosion Protection

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

Name	Title	Experience
Lisbeth Pilgård	Quality Manager, Electronics	> 3 years

### 2.3 Name and Title of Nominated Principal Contact

Name	Title	Experience
Peter Bremer	Technical Team Manager, Explosion Protection	> 15 years



#### **2.4 Other Employees in ExTL activity**

<b>Name</b>	<b>Title</b>	<b>Experience</b>
Ari Antikainen	Testing Officer/ Project Coordinator	> 7 years
Robert Carlsson	Testing Officer/ Project Coordinator	> 6 years

#### **2.5 Organisational Structure (Including Changes since Last Assessment)**

Essentially no change. The organisation is appropriately structured and satisfies the requirements of ISO/IEC 17025. A copy of organisational arrangement is shown at Annex A

### **3. RESOURCES**

The availability of resources appears well managed. The ExTL facilities are a small entity of a large organisation and it is apparent that both physical and human resources may be expanded or contracted as necessary to suit the need. The laboratories used for Ex testing have ample space. Those areas used for flameproof and intrinsic safety spark testing have recently been upgraded.

Sub-contract testing is not presently required in the Ex field. However, if it were necessary, the procedure for acceptance of sub-contractors is well documented.

### **4. TEST METHODS**

#### **4.1 Procedures**

The on-site assessment confirmed availability of suitable and well-defined test procedures and work instructions for testing. Ex test methods are well documented in method binders. Methods also provide calculation methods for "Uncertainty of Measurement".

#### **4.2 Staff Work Instructions**

Same result as for 4.1 above.

### **5. TEST REPORTS AND RECORDS**

#### **5.1 ExTRs Issued during the Past 2 Years**

ExTRs have not yet been issued. The number of performed commissions revealed a sufficient number of product testing and assessments for the areas within the scope, to demonstrate a thorough understanding of the Ex technology.

#### **5.2 Other Test Reports Issued During the Past 2 Years**

Total of 94 in the Ex field.

#### **5.3 Test Records**

Test records appeared to be well managed and controlled.

### **6. CALIBRATION**

SP is the National Measurements Laboratory for Sweden and it was evident from examination of equipment used for testing Ex products that the calibration of equipment is well maintained. Instruments were in calibration.



## **7. DOCUMENTATION**

### **7.1 *Quality Manual***

The quality manual used by the ExTL is the SP Corporate manual together with the department (Electronics) manual, which is well structured to the business of testing. The Management System provides a clear differentiation between the operating procedures for testing and certification, under the requirements of IECEx and that conducted as part of national accreditation by SWEDAC.

### **7.2 *Document Change Control***

Examination of documents under document control indicates that the implementation of document change control is sound.

## **8. INTERNAL AUDIT AND PERIODIC REVIEW**

An internal audit is performed once per year by SP and is arranged to sample a number of a wide range of test activities on SP. The last audit was performed 2 September 2004 and did also include Ex testing activities.

## **9. COMPLAINTS**

The complaint system is well documented and supported by records of action taken on complaints received.

## **10. REVIEW OF ISSUED ExTRS BY ASSESSMENT TEAM**

ExTRs have not yet been issued, as noted in 5.1 above. However, the procedure for compiling ExTRs is well documented and conforms to the applicable IECEx OD. Sample reports written using the ExTR approach, but to CENELEC standards, were sighted and found to be very well completed and presented.

## **11. FINDINGS FROM THE ASSESSMENT**

In general the laboratory was found to have experienced, competent staff, excellent facilities, and appropriate management structures and procedures.

A number of minor issues were found during the assessment and reported to SP. These were all satisfactorily resolved. A record of these issues, including subsequent actions, has been provided to the IECEx Secretariat.

## **12. RECOMMENDATIONS**

Based on the results of the re-Assessment performed during 6-7 September 2004, the assessment team recommends continued acceptance of SP as an IECEx TL with a scope as shown in Section 1.6 and additional standards listed in Section 1.7 of this report.

## **LIST OF ANNEXES**

Annex A:       Organisational structure  
Annex B:       SWEDAC accreditation



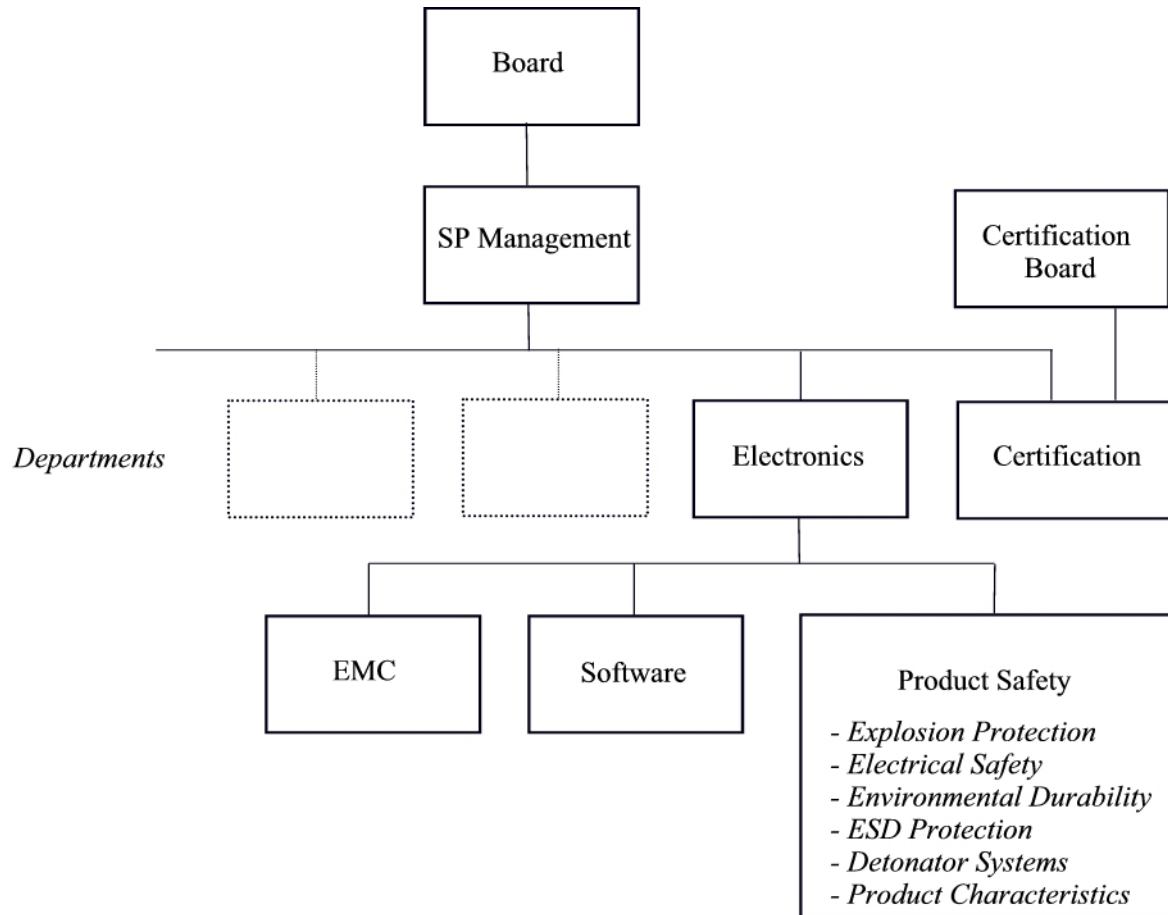
**ExMC/265/R**  
August 2005

**Jim Munro**  
**Lead Assessor**

**Heinz Berger**  
**Expert Assessor**

**14 January 2005**

**Annex A**  
**Organisational Chart of SP**



Division of Industry

Ulla Blume

033-17 77 41

BESLUT

Datum  
2004-06-17

Ert datum

Beteckning **Annex B**  
04-69-51.1002/80

Er Beteckning

SP Swedish National Testing and Research Institute  
Box 857  
SE-501 15 BORÅS  
SWEDEN

## Decision on extended scope of accreditation


(2 Annexes)

The laboratory has during the latest surveillance applied for an extension of the accreditation within the field of explosion protected equipment and overfill prevention devices. Therefore after assessment a complementary decision is issued.

Based on assessment, assessment report and corrective actions SWEDAC decides, according to 15 § of Law (SFS 1992:1119) on technical conformity assessment, to grant the Department of Electronics at SP Swedish National Testing and Research Institute an extension of existing scope of accreditation referring to IEC standards with methods stated in Annex 1 to this decision. Annex 2 to this decision states all the IEC standards that are included in the accreditation of the laboratory. The total scope of the accreditation is given in the previous decision on SP Swedish National Testing and Research Institute (organization number 556464-6874) dated 2004-02-01, Dnr 03-484-51.1002/01 (the main decision).

This decision means that SWEDAC has found that the accredited laboratory meets the requirements applicable for accredited laboratories within the relevant scope of accreditation. The laboratory meets the requirements in ISO/IEC 17025 and also the requirements according to SWEDAC's regulations.

This decision has been taken by Head of Division Agneta Ebbesson together with the Accreditation Manager Ulla Blume who has prepared and presented the underlying facts.

  
Agneta Ebbesson  
Head of Division

  
Ulla Blume  
Accreditation Manager

Annexes: Annex 1, Extension of accreditation concerning IEC standards  
Annex 2, Scope of accreditation concerning IEC standards

1(1)

G:\BRS\TAIE\Beslut med bilagor\1002 SP\Elektronik\beslut tillägg 04 expl utr eng vers.doc

### HUVUDKONTOR / HEAD OFFICE

Postadress	Besöksadress	Telefon	Telefax
Postal address	Visiting address	033-17 77 00	033-10 13 92
Box 878	Österlånggatan 5	Telephone	Fax
SE-501 15 Borås	Borås	+46-33 17 77 00	+46-33 10 13 92
Sweden			
Hemsida: <a href="http://www.swedac.se">www.swedac.se</a>		E-post: <a href="mailto:fornamn.efternamn@swedac.se">fornamn.efternamn@swedac.se</a>	

### STOCKHOLMSKONTOR / OFFICE IN STOCKHOLM

Postadress	Besöksadress	Telefon	Telefax
Postal address	Visiting address	08-406 83 00	08-791 89 29
Box 2231	Slussplan 9	Telephone	Fax
SE-103 15 Stockholm	Stockholm	+46-8 406 83 00	+46-8 791 89 29
Sweden			

Postgiro 2 55 90-1 Bankgiro 5617-4659