

**SP rapport**  
**Träullit Akustik 25 mm**

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## Production quality control - Fire and Factory Production Control (FPC) according to standard EN 13168 (3 appendices)

Agreement dated: February 22, 2006.  
Control directions dated: February 22, 2006 (appendix 2) and May 19, 2006 (appendix 4).

### Product and type approval covered by the assignment

Product: See appendix 1.  
Type approval number: See appendix 1.

### Result from supervisory control

Visit: February 18, 2008 at the factory in Österbymo, Sweden.

Inspection of the internal production control: The internal production control was performed according to the directions.

Sampling:

Controlled product	Fire technical properties	Method	Result
Trällit Akustik 25 mm (prod. date 2008-02-12)	Tendency to heat release and smoke generation	SS 02 48 23 (NT FIRE 004)	Appendix 2

Samples were selected for the VIM-control. Test results from this control are shown in SP test report no P701370-08A.

Supervisory control for Nemko AS regarding license 689 was performed together with the FPC control, see appendix 3.

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Third party inspection regarding Factory Production Control (FPC) as specified in product standard EN 13168 has been performed, see appendix 3.

Remarks: The product fulfils the technical fire requirements when tested according to SS 02 48 23 (NT FIRE 004).

**Assessment**

SP recommends approval of the production quality control.


**Note**

SITAC AB and SP- Certifiering in Sweden, ETA-Danmark A/S in Denmark, Nemko AS in Norway will be informed of the results.

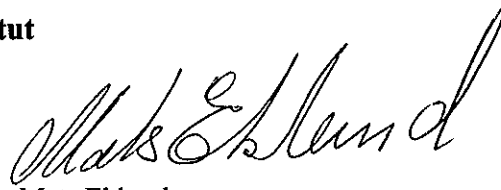
The test given in appendix 2 is performed by a laboratory with accreditation according to ISO/IEC 17025.

The surveillance control inspection was performed according to SP BES 4022.

**SP Sveriges Tekniska Forskningsinstitut**  
**Fire Technology - Fire dynamics**



Per Thureson  
Technical Manager



Mats Eklund  
Technical Officer

**Appendices**

- 1 List of products
- 2 Test result
- 3 Protocol from FPC

## Appendix 1

**List of approved products and type approval numbers (Fire) -  
Company**
**Approval agency: SP – Certifiering in Sweden**

Product	Type approval no	Criteria	Valid to
“Trällit Akustik normal”	0402-CPD-41 26 03	Euroclass B-s1,d0	October 31, 2010

**Approval agency: SITAC AB in Sweden**

Product	Type approval no	Criteria	Valid to
“Trällit-Akustik innertak”	0119/01	Ceiling in class EI 30 (see type approval no 3175/79)	May 23, 2011
“Trällit-Takelement typ normal och special”	3173/79	Fire class REI 30, Roof	May 23, 2011
“Trällit-Standard / Akustik / Akustik Korridorpanel”	3175/79	Covering	May 23, 2011

**Approval agency: ETA - Danmark A/S in Denmark**

Product	Type approval no	Criteria	Valid to
“Trällit Akustik”	MK 6.31/1682	Lining class I / Euroclass B-s1,d0	January 1, 2010

**Approval agency: Nemko AS in Norway**

Product	Type approval no	Criteria	Valid to
“Treullitt”	689	K1 / In 1	Remains valid until revoked

Appendix 2

**Test results - SS 02 48 23, 1987 (NT FIRE 004)**

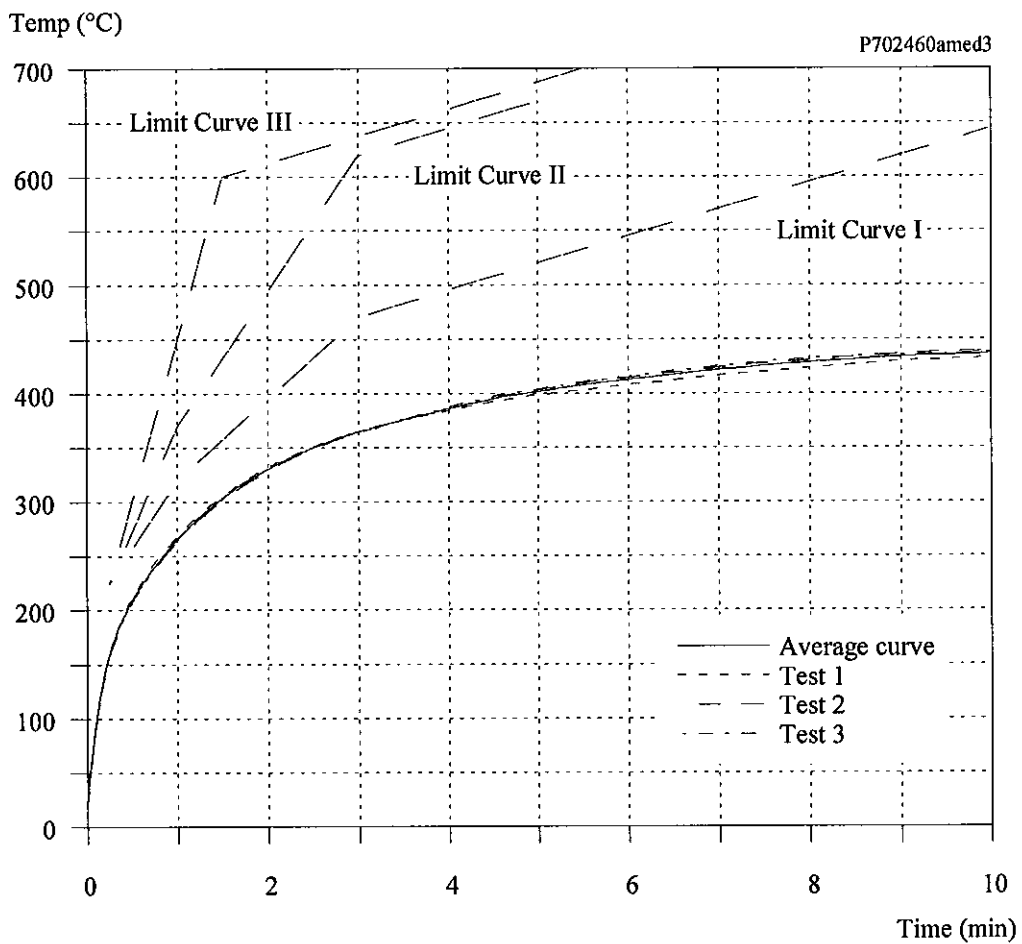
**Product**

Ceiling board named "Träullit-Akustik 25 mm"

**Application**

The specimen was thinned to a thickness of 12 mm approximately.

**Heat release**



The average curve does not exceed limit curve I.

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Appendix 2

**Smoke generation**

Maximum light absorption <0.5 %.

**Measured data**

Thickness 25.5 – 25.6 mm.

Area weight 14 kg/m<sup>2</sup>.

Density 532 kg/m<sup>3</sup>.

**Conditioning**

Temperature (23 ± 2) °C.

Relative humidity (50 ± 5) %.

**Date of test**

March 19, 2008.

## Appendix 3

**FPC - checklist**

<b>Company:</b>	Träullit AB	<b>Plant / site:</b>	Österbymo in Sweden
<b>Date of visit:</b>	2008-02-18	<b>Reference no.:</b>	P702460
<b>Standard:</b>	SS-EN 13168	<b>Products</b>	Thermal insulation WW for use in construction works
<b>AoC system:</b>	System 1	<b>Initial / surveillance inspection:</b>	Surveillance
<b>Certificate no.:</b>	0402-CPD-41 26 03	<b>Product auditor:</b>	Mats Eklund
Products: Träullit-Akustik normal 25 mm			

**General information about the manufacturer:** Producing thermal insulation boards made by wood wool and cement.

**Short description of the production process:** The blend of wood wool and cement are placed in a formwork for curing, after that the product are cut in to the right dimensions.

Section no. // ISO 9001	Section	Notes
	<b>General</b> (This information is in the report heading.)	
	Has production and/or the technical specification been changed since the previous visit? If Yes, has the producer amended documentation as necessary, and informed the certification body?	No.
<b>ZA // 7.2.1</b>	<b>CE-marking information</b>	
	Is this in accordance with Annex ZA?	Yes.
	Is the CE-marking information dated, or marked with its edition? Has it changed?	The CE- marking is ok.

Appendix 3

Section no. // ISO 9001	Section	Notes
<b>ZA // 7.2.1?</b>	<b>Declaration of conformity</b>	
	Does this comply with the requirements of Annex ZA, has it been signed, and does it refer to CE-marked products and plants?	Yes.
<b>0 // 4.1</b>	<b>Quality management system, general</b>	
	Does the manufacturer have a quality management system that includes the requirements of the product standard? If YES, is there a valid certificate, and who has issued it? Is manufacturing inspection of the certified products included in the quality management system?	No they have no certified ISO 9001 system. The manufacturer has an own more simpler quality system, the system is not complete.  Yes.
	Does the manufacturer have direct control of the production equipment and production process for the certified products, or are parts of the production process that are important in relation to the product requirements carried out by subcontractors, either within or outside the company group?	The scales are calibrated by subcontractor. The other measuring instruments are calibrated by manufacturer.
<b>1 // 6.2</b>	<b>Organisation / training</b>	
	Does the company have a formal organisational structure diagram?	Yes.
	Are the production personnel sufficiently qualified and trained for using and operating the production equipment?	No formal qualifying but the personnel have long experience and they are rotating between different kind of work.
	Has the mix of production personnel changed since the initial inspection?	No.
<b>1.1 // 5.5.1</b>	<b>Responsibilities and authority</b>	
	Are the responsibilities and authorities of personnel in the production system properly defined?	Yes, see QA manual.
	Is there someone with responsibility for approving the release of products?	VD.
<b>1.2 // 5.5.2</b>	<b>Management representative for FPC</b>	
	Is there a person responsible for the production inspection system?	According to QA manual.
	Is there a person responsible for updating the production inspection system?	No special person, it is included in the normal work.



## Appendix 3

<b>3 // 4.2</b>	<b>Steering of documents</b>	
	Are relevant, correct and up-to-date versions of documents available at the place of manufacture (e.g. production instructions, quality manual, standards etc.)?	Yes
	Are the latest versions of product standards and requirements available?	Yes
	Are there procedures for managing records and process protocols? For how long are protocols kept, and is there a list of which protocols are to be kept? Are details such as date of production, product composition, batch size, batch number, details of raw materials and supply references etc. documented and kept?	Yes, the protocols are kept in 10 year. There are no list over which protocols that are kept for 10 years or less.
<b>4 // 8.2.4</b>	<b>Testing and inspection</b>	
	Does the manufacturer have a documentation system for the certified products, covering the production process from purchasing/delivery of raw materials through storage and production to final delivery of the finished product?	You can trace a final production batch to production start.
	Is there a procedure for sampling? Are samples that are taken properly representative?	There is an agreement between Träullit and SP. When SP visits (3 times a year) the manufacturer, SP pick out samples for testing.
<b>4.1 // 8.2.4</b>	<b>Receiving inspection</b>	
	Are there documented procedures for receiving inspection and specification of requirements for raw materials, additives and other purchased components? Is inspection carried out in accordance with the tolerances/frequencies specified in the standard?	Cement is bought according to certificate. Wood according to "virkesmättningsnorm" and certificate.
<b>4.2 // 8.2.4</b>	<b>Manufacturing and production inspection</b>	
	What product properties/characteristics are tested and recorded as part of the manufacturing process, or are documented in some other way?	Fire, according to methods "loss on ignition", SS 02 48 23 (NT FIRE 004), EN 13823. Squareness, length, width, thickness flatness and thermal conductivity.

Appendix 3

Section no. // ISO 9001	Section	Notes
	<p>Is manufacturing inspection performed in accordance with the company's quality management system and in accordance with the requirements of the standard?</p> <ul style="list-style-type: none"> <li>- Frequency</li> <li>- Tolerances</li> <li>- Extent</li> <li>- Results</li> </ul>	<p>Yes. According to an agreement with SP see mail dated 2007-10-12.</p>
	<p>Are there documented procedures that define regular inspections and requirements during production?</p>	<p>No.</p>
<b>4.3 // 8.2.4</b>	<b>Inspection of finished product</b>	
	<p>Is there a specification (statement) available for assessing results?</p>	<p>Yes.</p>
	<p>Do the FPC inspection results agree with the requirements in the product standard and with declared values, and with the results obtained during type testing?</p>	<p>Thermal conductivity every third month Chloride content once a year Compressiv strength once a year. Euroclass B-s1,d0 every two year.</p>
	<p>Are there procedures defining the necessary actions if a finished product is found to be outside the specification requirements?</p>	<p>Yes .</p>
<b>4.5 // 7.6</b>	<b>Equipment</b>	
	<p>What test methods and equipment are used?</p>	<p>At the factory there are an oven used for loss on ignition and scales for weighing and vernier calliper, measuring tape, folding rule for dimensions.</p>
	<p>Are the test methods and equipment that are used those that are prescribed in the product standard, or are other, indirect methods used?</p>	<p>Yes.</p>
	<p>If indirect methods are used, is there a documented procedure that describes the relationship between test methods, equipment and product standards? How is this relationship shown?</p>	<p>Not documented. For fire, the indirect methods are old well known methods.</p>
	<p>Are there documented procedures that define regular inspection and requirements/tolerances for production equipment?</p>	<p>See agreement.</p>

Appendix 3

<b>5 // 8.3</b>	<b>Treatment of non-conforming products</b>	
	Does the manufacturer have a documented procedure for detecting non-conforming products quickly enough, so that they are removed prior to delivery?	There are no documented procedure for detecting non-conforming products. At the final work station there is a check.
	How are non-conforming products marked?	They are marked with an X and are placed at a special place for reworking.
<b>6 // 8.5.2</b>	<b>Corrective actions</b>	
	Are there systems for investigation of non-conforming products, in order to investigate the causes and to apply corrective actions?	No documented system.
<b>7 // 7.5.3</b>	<b>Marking</b>	
Se etikett	Are the products correctly CE-marked in accordance with Annex ZA in the standard? (See also the Guidance Papers.) Are non-CE-marked products stored separately?	The marking for CE is correct but marking for SITAC is not correct, shall be corrected.  No.
<b>8 // 7.5</b>	<b>Handling of finished products</b>	
	Are there procedures for handling/storage of finished products?	No documented procedure. The products are stored outside under roof.
	Is there regular inspection (at a documented frequency) of stores, to ensure that products have not been damaged?	Yes, inventory 3 – 4 times a year.
<b>9 // 7.5.3</b>	<b>Traceability</b>	
	Are there procedures that describe the traceability of raw materials and finished products? Is there traceability between products and production batches?	No documented procedure. You can trace the finish product to production start.
<b>10 // 8.3</b>	<b>Complaints</b>	
	Is there a documented procedure for certified products for dealing with complaints or claims, and feeding the information back to the manufacturing inspection process? Is this procedure sufficient to avoid or correct the production of non-conforming products?	Yes , the complaints are filed.  Yes.  Maybe.
	How many complaints have been recorded since the previous inspection visit?	Four. The failure have been from transport and from painting. The manufacturer has not any documented "assessment of supplier".
	Does the manufacturer have a documented procedure for notifying the certification body of any complaints/claims, e.g. in connection with recall of products?	No documented procedure. VD Bengt Rääf is responsible for all communication with certification bodies.