

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:

T-1735

File No:

747.10

Job Id:

263.11-004728-1**This is to certify:****That the Manufacturer****SEAB GmbH****Kleinostheim, Germany**

is approved for the

Manufacture of Welded Pressure Vessels, Class I & II

The approval is granted on condition that

Det Norske Veritas' Rules for Classification of Ships

are complied with in all respect

Høvik, 2015-01-29for **DNV GL**
Marianne Spæren Marveng
Head of SectionDNV GL local office:
Essen Business Support

This Certificate is valid until

2019-06-30
Adel Samiei
Surveyor

This Certificate is subject to terms and conditions overleaf. Any significant change in production facilities and methods may render this Certificate invalid.

If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million.

In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

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Approval basis

Manufacturer of Class I & II pressure vessels

Activity Categories: Design, Fabrication and testing

Types of pressure vessels being produced:

- Design Pressure up to 10 bar
- Diameter up to 219,1mm
- Length up to 2200 mm

The facility for heat treatment is not available. If according to DNV ship rules Pt.4 Ch.7 Sec.8 part C, heat treatment is required, it is to be done by subcontractor. Information about subcontractor and his work procedures are to be submitted. A survey may be required when deemed necessary by the Society.

Subcontractor for Destructive testing: SGS Gottfeld NDT Services GmbH or TÜV Hessen
Subcontractor for Metallography / macro analysis: SGS Gottfeld NDT Services GmbH or TÜV Hessen
Subcontractor for Non-destructive testing: SGS Gottfeld NDT Services GmbH, Applus-RTD or TÜV Hessen

Approval is granted based on

- 1- received documentation from the manufacturer containing:
 - Outline of Organization
 - Quality certificates
 - Outline of Manufacturing Facilities and Equipment
 - Manufacturing flow chart
 - Reference to written procedures
 - List of Equipment used for testing
 - Description of system used for identification and traceability of materials and products
 - Procedure for testing and inspection
- 2- Approval letter TECDE151/OEHL/D32920-J-142
- 3- Survey report ESN-13-34790 dated 15-04-2014

Certificate Retention Survey

To maintain the approved status, the manufacturer must be re-inspected every four years. Application for renewal should be made not later than three months before the expiry date of the certificate.

Any alteration to the approved condition during the period of validity, e.g. method of manufacture, maximum dimensions or conditions of supply, is to be reported to the Society. A re-inspection and / or re-testing may be required when deemed necessary by the Society.

END OF CERTIFICATE

