DNV·GL

Certificate No:
TAA000013Y

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pressure Transmitter

with type designation(s)
TST 16.0, TST-SMH 16.0

Issued to
J.P. Sauer & Sohn Maschinenbau GmbH
Kiel, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Type	Temperature	Humidity	Vibration	EMC	Enclosure
TST 16.0	**D**	**B**	**B**	**A**	**C(D)**
TST-SMH 16.0	**D**	**B**	**B**	**A**	**C(D)**

Issued at **Hamburg** on **2017-05-19**
This Certificate is valid until **2022-05-18**.
DNV GL local station: **Hamburg**

for **DNV GL**

Approval Engineer: **Marco Rinkel**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

Stainless steel membrane, no internal transmission media (fully welded, "dry" measuring cell)

Pressure range: up to 2000 bar *)
Output signals: 4-20 mA
Response time [10-90%]: =1 ms
Accuracy: 0.5% F.S.
Working temperature range (media): -40 ... 125°C / -40 ... 257°F
Working temperature range (ambient): -40 ... 105°C / -40 ... 221°F
Material of parts in contact with media: stainless steel 1.4301/1.4542
Material of housing: stainless steel 1.4301
Protection class IP67 (special version up to IP69K)

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Pressure testing is required for samples of new types with nominal pressure above 20 bar.

Type Approval documentation

IPB-000141-A, dated, 2013-07-19
1153-13-EE-13-PB001, dated 2013-07-09
6029-13-GG-PP001, dated 2013-07-17
120314.A.1.1, dated 2012-03-29, 120408.A.1.1, dated 2012-05-23

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

The products to be marked with:
- manufacturer name
- model name
- serial number

Periodical assessment

This is a Multiple Listing. Of a LGL Certificate.
The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design, components and/or materials. The main elements of the assessment are:

- Ensure that basis certificate (60974-13HH) is valid
- Inspection of samples
- Review of inspection routines, including test records from product sample tests and control routines
- Review of possible changes in design and make sure that such changes do not affect the type approval given
- Ensuring traceability between product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE