DNV·GL

Certificate No:
TAA00001J1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Position Transmitter

with type designation(s)
LBSG Hull Stress Monitoring

Issued to
Sea Structure Technology co., Ltd.
Daejeon, Korea

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.

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**D**

Issued at **Busan** on **2017-12-26**
This Certificate is valid until **2021-06-30**.
DNV GL local station: **Seoul**

Approval Engineer: **Baeg Soon Choi**

for **DNV GL**

Michael Jost Auf der Stroth
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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Job Id: **262.1-011891-3**
Certificate No: **TAA00001J1**

Product description

Type : LBSG(Long Base Strain Gauge) of Hull Stress Monitoring System

1. Model : SST-HSMS 100A
2. Electrical Characteristics
   a) Power supply:
   -Input Voltage,VCC: +13.5 V to +40V
   -Quiescent Current: 4.5 mA
   b) Electrical Stroke: 20 Mm(F.S)
   c) Power Rating: 0.6 Watts at 70 °C
   d) Deelectric Strength: 500 Vrms
3. Mechanical Stroke: 22 mm(F.S)
4. Friction (Spring Force): 300gf Max. (3 N Max)

Appoval conditions

The Type Approval covers hardware listed under product Description. When the hardware is used in applications to be classed by DNVGL, documentation for the actual application is to be submitted for approved by the manufacturer of the application system in each case by inclusion in an instrument list. Reference is made to DNVGL Rules for ships Pt.4 Ch.9 Control and Monitoring Systems and Pt.6 Ch.9 Sec.4[2.1] Hull Monitoring Systems (Sensors).

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guidance DNVGL-CG-0339, Nov 2016

Periodical assessment

The scope of the retention/renewal survey is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's 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