DNV·GL

Certificate No:
TAS0000001

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Emergency Towing Arrangement

with type designation(s)
Smit Bracket

Issued to
China National Shipbuilding Equipment & Materials (East China) Co., Ltd.
SHANGHAI SHANGHAI, China

is found to comply with
Det Norske Veritas' Rules for Classification of Ships

Application :

Smit Bracket for Emergency Towing System with product description as stated on page 2 of this certificate for vessels of 50,000 Tonnes Deadweight and above - Safe Working Load 2000 kN

This Certificate is valid until **2019-06-16**.

Issued at **Høvik** on **2015-06-17**

for **DNV GL**

DNV GL local station: **Shanghai**

Approval Engineer: **Chi Wan Bang**

Aldo Matteucci
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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

Smit bracket for Emergency Towing System:

- Safe Working load (SWL): 2,000kN
- Minimum breaking load (MBL): 4,000kN

Application/Limitation

- The connection and support of the above components to the ship's structure are to be covered by separate approvals.
- Equipment Product Certificate: if installed on DNVGL vessels, DNVGL product certificate is to be issued for each single product and the following will apply:
  - Material Certificate: all main load bearing components shall be delivered with work certificate.
  - All welding is to be carried out by approved welders and according to approved welding procedures.
  - Non-destructive testing is to be carried out to the attending surveyor's satisfaction.
  - The manufacturer is required to have DNVGL surveyor witness all important production and tests as required.

Type Approval documentation

Tests carried out

Prototype test is not found relevant.

Marking of product

When a DNVGL product certificate is issued, the Smit bracket is to be marked with the manufacturer's name or trademark, type number identification, stamped with NV mark and reference to type approval certificate number.

Periodical assessment

For retention of the Type Approval, DNVGL surveyor shall perform a survey every second year and before expire date of this certificate to verify that the conditions of the type approval are complied with.

END OF CERTIFICATE