DNV·GL

Certificate No:
TAS00000YW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Emergency Towing Arrangement

with type designation(s)
KETPB-40A

Issued to
Tanktech Co., Ltd.
Busan, Republic of Korea

is found to comply with
DNV GL rules for classification – Ships
IMO Resolution MSC 35 (63) of 20 May 1994
OCIMF Mooring Equipment Guidelines, Third Edition 2008

Application :

Emergency Towing System combined with Escort & Pull Back System as stated on page 2 of this certificate for tankers of 50 000 tonnes deadweight and above - Safe Working Load 2 000 kN

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

Issued at **Høvik** on **2017-09-11**
This Certificate is valid until **2022-09-10**.
DNV GL local station: **Busan**

Approval Engineer: **Chi Wan Bang**

for **DNV GL**

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.

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Product description

Aft Emergency Towing System with Escorting Pull Back KETPB-40A in accordance with drawing No.: KETPB-4AR100 (on deck type) & KETPB-4AR100-1(under deck type):

- Safe Working load (SWL): 2 000kN (equivalent to 204t)

The detailed information of the strong point, fairlead, towing pennant, pick-up gear and storage box is described in the drawing no.: KETPB-4AR100 (on deck type) rev.0 dated 17.02.15 and KETPB-4AR100-1 (under deck type) rev.0 dated 17.02.15 as well as the detailed drawings from Type Approval documentation.

Application/Limitation

- The connection and support of the above components to the ship's structure are to be covered by separate approvals.
- If installed on DNVGL vessels, a DNVGL product certificate is to be issued for each product and the following will apply:
  - The manufacturer is required to have a DNVGL surveyor witness all important production and tests as required.
  - Non-destructive testing is to be carried out to the attending surveyor's satisfaction.
  - All welding is to be carried out by approved welders and according to approved welding procedures.
  - Materials for load carrying parts are to be delivered with required material certificates in accordance with Pt.5 Ch.5 Sec.1 [4.2] from the mentioned Rules.
  - Material of welded parts used in the strong point shall be Charpy V-notch tested and impact energy is to be minimum 27J at 0 deg C.
  - Towing pennant and pick-up gear may be delivered with maker's certificate.

Type Approval documentation

Tests carried out

Deployment Test Report (Ref.No.XHM170522-01, Rev.0) for KETPB-40A is carried out 2017-July-12, witnessed by DNVGL Busan Station.

Marking of product

The strongpoint and fairlead are to be marked with the SWL, manufacturers name or trademark and type number identification.

Periodical assessment

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

END OF CERTIFICATE