



TYPE APPROVAL CERTIFICATE

Certificate No:
TAS00000YK
Revision No:
1

This is to certify:

That the Hook

with type designation(s)
HH000158 HTH 2,5

Issued to

H. Henriksen AS
TØNSBERG, Norway

is found to comply with

DNV standard DNV-ST-0378 – Offshore and platform lifting appliances, July 2019 (Amended October 2021)

Application :

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

Issued at **Høvik** on **2022-04-22**

for **DNV**

This Certificate is valid until **2027-04-21**.

DNV local station: **Sandefjord**

Approval Engineer: **Mats Asvald Innstø**

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Per Esvall
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Equipment type: HH000158 HTH 2,5 Henriksen Towing Hook with quick release
 Categorization: offshore
 Design dynamic factor (DAF): 1,3
 Maximum Safe working load (SWL): 2,5 tonnes
 Design temperature: -20 degrees Celsius
 Operating condition: 0-45 degree upwards relative to the horizontal plane

Application/Limitation

- The towing hook is approved as loose gear according to the aforementioned standard.
- Support and connection to the deck structure are not covered by this approval.
- All materials for load-carrying parts are to be delivered with 3.1 certificates (EN 10204:2004), documenting mechanical properties and chemical composition in accordance with the type approval documentation, and shall comply with Sec.3 from the aforementioned standard.

Type Approval documentation

<u>Drawing No.</u>	<u>Rev.</u>	<u>Title</u>
D000891	15	Engineering Note: Design criteria - Henriksen Painter and Towing Hooks (HPH and HTH series)
D001191	3	System Segment Design Description: 15-4476 Henriksen Tow Hook
D001347		Datasheet - Nastran material bilinear data (ID 4183)
D001509	8	Engineering Report: HTH 2,5T FEM Analysis
D000876	4	First Article Acceptance Test: 15-4476 HTH - Henriksen Towing Hook
HH000158	1	HTH 2,5 Henriksen Towing Hook
HH000158	-6	HTH 2,5 Henriksen Towing Hook
HH010022	-3	Main Hook Element HTH 2,5
HH020080	A2	Sideplate HTH 2,5
HH020081	A1	Sideplate HTH 2,5
HH040148	-3	Main bolt HTH 2,5 Ø25Ø20
HH040151	-2	Release bolt HTH 2,5
HH110445	--	Main hook stem HTH 2,5
M000308	A	User Manual - HTH (ID 3836)

Tests carried out

First Article Acceptance Test (document number: D000876, Version:4) was carried out on 2016-10-17 and witnessed by DNVGL Sandefjord station with Verification Statement No.: N141BBVY.

In order to obtain a DNV Product Certificate, testing is to be carried out according to Sec.14 from the aforementioned standard.

Marking of product

Each towing hook shall be marked according to Sec.14 from the aforementioned standard.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

END OF CERTIFICATE