

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Hook

with type designation(s)
HH000167 HTH 10

Issued to

H. Henriksen AS
TØNSBERG, Norway

is found to comply with
DNV GL standard DNVGL-ST-0378 – Standard for offshore and platform lifting appliances

Application :

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

Issued at **Høvik** on **2017-03-14**

for **DNV GL**

This Certificate is valid until **2022-03-13**.

DNV GL local station: **Sandefjord**

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.



Product description

Equipment type: HH000167 HTH 10, Henriksen Towing Hook with quick release
Categorization: offshore
Design dynamic factor (DAF): 1,3
Maximum Safe working load (SWL): 10 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

| Drawing No. | Rev. | Title | Status |
|--------------------|-------------|---|-----------------|
| D000891 | 15 | Engineering Note: Design criteria - Henriksen Painter and Towing Hooks (HPH and HTH series) | For information |
| D001191 | 3 | System Segment Design Description: 15-4476 Henriksen Tow Hook | For information |
| D001347 | | Datasheet - Nastran material bilinear data (ID 4183) | For information |
| D002055 | 4 | Engineering Report: HTH 10T FEM Analysis | For information |
| D000935 | 5 | First Article Acceptance Test: 15-4476 HTH - Henriksen Towing Hook | For information |
| HH000167 | 1 | HTH 10, Henriksen Towing Hook | For information |
| HH000167 | CD | HTH 10, Henriksen Towing Hook | For information |
| HH010023 | 2 | Main Hook Element HTH 10T | Type approved |
| HH020084 | A1 | Sideplate HTH 10 | Type approved |
| HH020085 | A1 | Sideplate HTH 10 | Type approved |
| HH040159 | 1 | Main bolt HTH 10 Ø50ø40 | Type approved |
| HH040160 | 1 | Release bolt HTH 10 | Type approved |
| HH110460 | -- | Main hook stem HTH 10 | Type approved |
| M000308 | A | User Manual - HTH (ID 3836) | For information |


Tests carried out

First Article Acceptance Test (document number:D000935, Version:5) was carried out on 2016-11-16 and witnessed by DNVGL Sandefjord station with Verification Statement No.:N141BT4S.

In order to obtain a DNVGL 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.12 from the aforementioned standard.



Job Id: **262.1-025153-1**
Certificate No: **TAS00000XY**

Periodical assessment

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

END OF CERTIFICATE