Certificate no.:
TAS0000496

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Hook

with type designation(s)
01G.160.T.D.C, 01G.160.T.D.C.2

issued to
Ropeblock B.V.
Oldenzaal, Overijssel, Netherlands

is found to comply with
DNV standard DNV-ST-0377 – Standard for shipboard lifting appliances

Application:

Product(s) approved by this certificate is/are accepted for DNV product certification.

Issued at **Hamburg** on **2024-05-29**
This Certificate is valid until **2029-05-28**.
DNV local unit: **Netherlands VMC**

Approval Engineer: **Stefan Heuer**

for **DNV**

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

Ramshorn hooks no. 160 & 25 “T” designed acc. to EN 13001-3-5

- 01G.160.T.D.C (RGN160 / RG25) – aux. prongs for handling
- 01G.160.T.D.C.2 (RGN160 / RGN25) – aux. prongs for handling and lifting

R = Ramshorn
G = Casted (Guss)
N = Notch

Application/Limitation

1. Working conditions:
- Design temperature: -20°C
- SWL: 500t
- Hoist load coefficient (psi) ≤ 1,3
- Aux. prongs: handling max. 40t each
- Aux. prongs: lifting SWL 80t
- Categorization acc. to FEM 1.001: A2/Q1/U3

2. Material/ workmanship requirements:
Hook design and manufacturing according to EN 13001-3-5 and DNV-ST-0377.
- Customized material with mechanical requirements above EN13001-3-5 category “T” is required:
  Re min. 580MPa, Rm 810 - 1000MPa

The hooks are to be casted by a DNV approved foundry and DNV material certificates 3.2 (ISO 10474) are required. Special casting specifications and testing requirements as per drawings E230143.01 (2/2) and E230560.01 (2/2) are to be observed.

3. Comments:
- The construction shall be protected permanently against corrosion.
- Screws shall be secured against unscrewing (e.g. by tightening torque, liquid thread locker).

4. Product certification:
To obtain DNV Product Certificates, each hook shall be (if not agreed otherwise with local station) subject to:
- DNV manufacturing survey
- Load test with:
  - Main prongs: L_{Pstat} = [(1,22 x SWL) + 20t] x f_d = 744,5t
  - Aux. prongs: L_{Pstat} = [(1,22 x SWL) + 20t] = 117,6t

f_d = psi/psi_{adm} = 1,3 / 1,1

Type Approval documentation

Marking of product

Each lifting gear shall be marked by the manufacturer with at least:
- manufacturer´s name or trademark
- type of loose gear
- serial number
- year of construction
- nominal load(s) “SWL” in t or kg

Periodical assessment

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com

END OF CERTIFICATE