Certificate No:
TAS00003DM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Deck Composition

with type designation(s)
HLS-6

Issued to
Cramm HLS B.V.
Leeuwarden, **Netherlands**

is found to comply with
DNV rules for classification – Ships
DNV rules for classification – Naval vessels

Application :

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

Issued at **Hamburg** on **2023-09-15**
This Certificate is valid until **2028-09-14**.
DNV local station: **Netherlands VMC**

Approval Engineer: **Stefan Heuer**

for **DNV**

Jörg Kallies
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

Helicopter landing grid type HLS-6 according to the NATO-standards for harpoon or deck-lock-system in accordance with STANAG 1276.

Application/Limitation

- Diameter: 2750 mm
- Height (max.): 300 mm
- Weight (appr.): 1.950 kg
- Design temperature: -15°C
- Dynamic tension force Fdyn: max. 65 kN (harpoon)
- Compression force Fd: max. 180 kN (landing gear reaction load)

All materials with 3.1 material certificates acc. to ISO 10474.
Steel grades 1.2316 and 1.4418 with impact energy KV min 27 J at 0°C

The effectiveness of the intended surface coatings for the prevention of pitting, crevice and electrochemical stress corrosion in long-term use in marine atmospheres is not the subject of this type approval.

Potential compensation is not the subject of this type approval. The potential compensation is to be calculated and carried out by the shipyard.

Snow and ice built-up resulting from freezing of precipitation, spray and fog are not part of this type approval.

Type Approval documentation

Tests carried out

Type test witnessed by DNV dated 2023-09-15
- Verification statement N142S58Z

Marking of product

Each unit is to be marked with at least:
- Manufactures name or trademark
- Type designation
- Serial number
- Safe working loads
- Reference to this TA

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