DNV·GL

Certificate No:
TAM00000WH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Reduction Gear for Propulsion

with type designation(s)
GXU 420

Issued to
Finnøy Gear & Propeller AS
HARØY, Norway

is found to comply with
DNV GL rules for classification – Ships

Application :

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

Input torque	**See page 2**
Input speed	**See page 2**
Reduction ratio	**See page 2**

Issued at **Høvik** on **2018-06-11**

This Certificate is valid until **2023-06-10**.

for **DNV GL**

DNV GL local station: **Ålesund**

Approval Engineer: **Kristine Prøsch**

Oddvar Deinboll
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
Reduction gear with built in hydraulic operated clutch and servo cylinder for CP mechanism.

Application/Limitation

RATIO	INPUT	Limitations
5,46:1	950kW@1600rpm (5670Nm)	Valid for complete gear
3,05:1	750kW@800rpm (8950,5Nm)	Valid for shafts and connections, not the gear transmission.

Application factor: 1,3
Clutch type: Ortlinghaus 0002-833-63-000000
Max servo pressure: 24 bar
Max temperature for lub.oil: 60°C

The type approcal does not cover:
- The flexible coupling
- Ice class notations
- Electric wiring, instrumentation and automation
- Connection to external shaft components
- Fastening and foundation of the gearbox

Type Approval documentation
Marking of product
Marking og the product shall at least give the following information.
- Manufacturers name of trademark
- Type designation of the product under which it is type approved

Periodical assessment
For retention of the Type Approval, a DNV GL surveyor shall perform an assessment after 2 years and after 3.5 years, both referring to the issue date of the Type Approval Certificate to verify that the conditions of the Type Approval are complied with. A renewal assessment will be performed at renewal of the certificate.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore, periodical Assessment shall be carried out randomly at these companies.

Other conditions
Upper and lower gearmesh contact pattern shall be verified after seatrial.