Certificate no.:
TAM00001DD

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Reduction Gear for Auxiliary Purpose

with type designation(s)
MK3 SGT 400 Auxiliary Gearbox, Spec No: E1B100438013

issued to
Howden Turbo UK
Peterborough, **United Kingdom**

is found to comply with
DNV rules for classification – Ships Pt.4 Ch.4 Rotating machinery – power transmission

Application:

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

Issued at **Høvik** on **2024-08-23**
This Certificate is valid until **2029-08-22**.
DNV local unit: **UK & Ireland CMC & VMC**

for **DNV**

Approval Engineer: **Terje Ingvar Arvidsen**

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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
Auxiliary gearbox for starting and lube oil pump

Application/Limitation
The gearbox has been type approved for:

Starting:

Power:	250 kW
Input speed:	4500 rpm
Ratio starter step:	49/21
Application factor:	1.2

Lube oil pump:

Power:	29 kW
Input speed:	14100 rpm
Ratio lube oil pump step:	21/164
Application factor:	1.2

The type approval does not cover connection to external shafts.

Alarm and monitoring of the gearbox is not covered by this type approval and must be submitted for approval in each case.

Type Approval documentation

Marking of product

Identification: Manufacturers name or trademark
Type number identification

Periodical assessment

For retention of the type approval, a DNV surveyor shall perform an assessment after 2 years and after 3.5 years, 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.

END OF CERTIFICATE