



Certificate no.:
TAM00001AA

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Gas Engine

with type designation(s)
GS6R2-MPTK-GS

issued to

Mitsubishi Heavy Industries Engine & Turbocharger, Ltd.
Sagamihara, Kanagawa, Japan

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.3 Sec.1 Reciprocating internal combustion engines

Application:

Multi engine plant: Auxiliary and electrical propulsion

The engine type is approved for use in both inherently gas safe and emergency shutdown protected machinery spaces.

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Rating 500kW @ 1500rpm

Issued at **Høvik** on **2024-12-09**

This Certificate is valid until **2029-12-08**.

for **DNV**

DNV local unit: **Japan CMC**

Approval Engineer: **Tage Olav Alexander Strøm**

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 USD 300 000.



Form code: TA 251

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Product description

Four stroke, in-line engine, non-reversible, trunk-piston, with supercharging, with charge air cooling, pulsating pressure charging system, indirect injection, injection operation electronically controlled, valve operation by cams, spark ignited, gaseous fuel

Cylinder bore [mm]	170
Piston stroke [mm]	220
No. of cylinders	6

Place of production

Mitsubishi Heavy Industries Engine & Turbocharger, Ltd., Sagamihara-City, Japan

Application/Limitation

Rated power [kW]	500
Rated speed [rpm]	1500
Mean effective pressure [bar]	14
Max. firing pressure [bar]	110

Type Approval documentation

Tests carried out

Documentation: Type approval test
Test report title: Test program for TAT [GS6R2-MPTK Gas Safe(K48) at MHIET Test Bench]
Place of test: Mitsubishi engine and Turbocharger, Sagamihara, Japan
Date of test: 15-17 May 2024

Test engine: GS6R2-MPTK-GS
No. of cylinders 6
Power [kW] 500
Speed [rpm] 1500

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Initial and periodical assessment

The Society shall perform an initial assessment at the production facility for each new place of production. Periodical Assessments are to be performed after 2 and 3.5 years, and a renewal assessment will be conducted when the certificate is renewed (CP-0338 Sec.4 [1]).

If 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 and verify their supply chain (CP-0338 Sec.3 [1] and Sec.4 [2], [3]). Furthermore, the Periodical Assessment shall be carried out randomly at these companies.

Other Conditions

Integration testing shall be performed and to be witnessed by the Society at the first engine delivery.

Engine safety, control and monitoring systems, including sensors and actuators are not covered by this type approval certificate. Documentation for engine safety, control including speed governing and monitoring systems shall be submitted for approval according to the Rules Pt.4 Ch.9 Sec.1 Table 5 and/or as listed in relevant type approval certificates.

Electric cables and installation of this is not covered by this approval and must be verified to comply with the requirement of the Rules Pt.4 Ch.8 - Electrical Installation.

Flexible hoses to be Type Approved by DNV.

END OF CERTIFICATE