

TYPE APPROVAL CERTIFICATE

Certificate No:
TAM0000115**This is to certify:****That the Diesel Engine**

with type designations

mitsubishi S6R-M(P)TA/M(P)TK/T2MPTK, S6R-Z3MPTAW, S6R-MPTAW

Issued to

**Mitsubishi Turbocharger and Engine Europe B.V.
Almere, Netherlands**

is found to comply with

**DNV GL Rules for classification, Ships - DNVGL-RU-SHIP-Pt4 Ch3 Sec1,
Reciprocating Internal Combustion Engines****Application :**

Mechanical & electrical propulsion, auxiliary and emergency

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

This Certificate is valid until **31st December, 2023**.Issued at **Høvik** on **20th December, 2018**DNV GL local station: **Rotterdam**for **DNV GL**Approval Engineer: **Tage Olav Alexander Strøm**

**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.

Job Id: **262.1-001009-10**
Certificate No: **TAM0000115**

Product description

Four stroke, in-line engine, non-reversible, trunk-piston, with supercharging

Cylinder bore [mm] 170
Piston stroke [mm] 180
No. of cylinders 6

Place of production

Mitsubishi Heavy Industries Engine & Turbocharger, Ltd., Sagamihara-City, Japan
MHI MEA, Mulhouse, France

Responsibility

The Holder of Certificate takes responsibility that both design and production are in compliance with the Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.

Application/Limitation

Engine model: S6R-M(P)TK, S6R-Z3MPTAW, S6R-MPTAW, S6R-T2MPTK:

		Propulsion			Auxiliary/Emergency	
Rated power [kW]	470*	520**	605***	440	570	665
Rated speed [rpm]	1600	1650	1800	1200	1500	1800
Mean effective pressure [bar]	14.39	15.44	16.46	17.94	18.6	18.08
Max. firing pressure [bar]	108	118	126	142.2	142.2	142.2

Ratings for engine model M(P)TA which is lower than the above given rating for the M(P)TK version is also covered by this approval.

Rating definitions according to makers instructions : *Heavy duty, ** Medium duty, *** Light duty

Tests carried out

Tests carried out at M.H.I. Equipment Europe B.V. 96-11-06, engine type S6R MPTK, serial no. 13549

Marking of product

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

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

In case 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

Flexible hoses with couplings to be type approved by DNV GL.

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 - Documentation requirements.

Electric cables and cabling are not covered by this approval and must be verified to comply to the rules Pt.4 Ch.8 - Electrical Installation.

Engines for emergency duty shall have "Breather kit for emergency gen.set application" according to document xxxx-MEE (EB 182) dated 2009-11-30.

END OF CERTIFICATE