DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No:
TAM00000MB

This is to certify:

That the Diesel Engine

with type designation(s)
M33

Issued to
Baudouin (Weifang) Power Co., Ltd.
Weifang, China

is found to comply with
DNV GL Rules for classification, Ships - DNVGL-RU-SHIP-Pt4 Ch3 Sec1, Reciprocating Internal Combustion Engines

Application :

propulsion / auxiliary / emergency

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

This Certificate is valid until **14th January, 2023**.

Issued at **Hamburg** on **15th January, 2018**
DNV GL local station: **Qingdao** for **DNV GL**

Approval Engineer: **Sven Neddenien**

Burkhard Lilienthal
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: **262.1-025364-1**
Certificate No: **TAM00000MB**

Product description
four stroke, in-line engine, v-engine, non-reversible, trunk-piston, with supercharging, with charge air cooling, constant-pressure charging system, direct injection, injection operation by cams, valve operation by cams, liquid fuel

Cylinder bore [mm]	150
Piston stroke [mm]	185
No. of cylinders	6L, 12V

Additional place of production
not applicable

Application/Limitation

Rated power [kW/cyl.]	91.7	83.33
Rated speed [rpm]	1800	1500
Mean effective pressure [bar]	18.7	20.4
Max. firing pressure [bar]	170	170

Type Approval documentation

Tests carried out
Documentation:

Test report titel	Test Report of Type Certification
Place of test	Weihai Power Co., Ltd., Weifang, China
Date of test	2017-02-13 until 2017-12-24

Test engine:

Model	6M33, 12M33
Serial no.	3917G000086, 3917G000087, 3717G000084, 3717G000085
No. of cylinders	6L, 12V
Power [kW/cyl.]	91.7
Speed [rpm]	1800

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.
The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval certificate was issued.
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
Engine safety, control and monitoring systems, including sensors and actuators, are not covered by this certificate. Documentation for engine safety, control (including speed governing), and monitoring systems shall be submitted for approval according to DNV GL Rules Ships Pt.4 Ch.9 Sec.1 Table 5 and/or as listed in relevant Type Approval certificates.

END OF CERTIFICATE