DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No:
TAM000011C

This is to certify:

That the Diesel Engine

with type designation(s)
WP12, WD12

Issued to
Weichai Power Co., Ltd.
Shandong Province 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, multi engine plant / 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 **2nd January, 2024**.

Issued at **Hamburg** on **3rd January, 2019**
DNV GL local station: **Dalian** 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.

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

Cylinder bore [mm]	126
Piston stroke [mm]	155
No. of cylinders	6

Additional place of production
not applicable

Application/Limitation

Rated power [kW/cyl.]	55	48.3
Rated speed [rpm]	2100	1500
Mean effective pressure [bar]	16.26	20
Max. firing pressure [bar]	145	145

Type Approval documentation

Tests carried out
Documentation:

Test report titel	Test Report of Type Test Certification for WP12C450-21 & WP12CD290-15 Diesel Engine
Place of test	B02# & D12# test cell at the lab of Weichai Power
Date of test	2013-10-14 until 2013-10-18

Test engine:

Model	WP12C450-21 & WP12CD290-15
Serial no.	141S050746 & 1413S051445
No. of cylinders	6
Power [kW/cyl.]	330
Speed [rpm]	2100

Further tests:
2012-01-20, test report no. 618-XB-0125
2014, May, test report no. P12-YG-0143, model WP12CD317E200
2014, May, test report no. D12-YG-0143, model WD12C400-21.5

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.

Electric cables and installation are not covered by this Type Approval and must be verified to comply with the requirement of DNVGL RU-SHIP Pt.4 Ch.8.

END OF CERTIFICATE