DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No:
TAM000012A

This is to certify:

That the Diesel Engine

with type designation
H32CV

Issued to
Hyundai Heavy Ind. Co., Ltd. Engine & Machinery Division
- Ulsan, Republic of Korea

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

Application :

Propulsion / auxiliary

Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **14th April, 2024**.

Issued at **Høvik** on **15th April, 2019**
DNV GL local station: **ULSAN** 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.

Product description

Four stroke, in-line engine, v-engine, non-reversible, with supercharging, with charge air cooling, constant-pressure charging system, direct injection, valve operation by cams, liquid fuel.

Cylinder bore [mm]	320	
Piston stroke [mm]	450	
No. of cylinders	in-line: 6, 7, 8, 9	V-engine: 12, 14, 16, 18

Application/Limitation

Rated power [kW/cyl.]	600	600
Rated speed [rpm]	720	750
Mean effective pressure [bar]	27.6	26.5
Max. firing pressure [bar]	260	260

Type Approval documentation

Tests carried out

Documentation:	
Test report titel	TAT Report H32CV - Documents for DNV-GL
Place of test	Ulsan, korea
Date of test	2019-03-12 until 2019-03-14
Test engine:	
Model	12H32CV
Serial no.	KYE000990
No. of cylinders	12
Power [kW/cyl.]	600
Speed [rpm]	720

Marking of product

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

Periodical assessment

For retention of the type approval, a DNV GL 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.

Other Conditions

Flexible hoses 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 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.
END OF CERTIFICATE