TYPE APPROVAL CERTIFICATE

Certificate No:
TAM00000KZ

This is to certify:

That the Diesel Engine

with type designation(s)
L066, AD066

Issued to
Doosan Infracore Co., Ltd.
Incheon, Republic of Korea

is found to comply with
DNV GL Rules for classification – Ships Pt4 Ch3 Sec1, Reciprocating internal combustion engines
DNV GL Rules for classification – High speed and light craft Pt4 Ch3 Sec1 Reciprocating internal combustion engines

Application :

Mechanical propulsion / auxiliary / emergency

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

This Certificate is valid until **30th June, 2022**.

Issued at **Høvik** on **12th July, 2017**
DNV GL local station: **Seoul** for **DNV GL**

Approval Engineer: **Dag Harald Williksen**

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: **262.1-003557-8**
Certificate No: **TAM00000KZ**

Product description
four stroke, in-line 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 : 102
Piston stroke : 118
No. of cylinders : 6

Additional place of production
not applicable

Application/Limitation
The approval is valid for propulsion, auxiliary and emergency duty and is based on the following main data:

Engine type	AD066TIF	AD066TIS	L066TIH
Mean effective press, [bar]:	13,3	12,7	12,5
Max. cyl. press, [bar]:	125	130	135
Rated cont, output,[kW]:	96	110	132
Engine speed, [rpm]:	1500	1800	2200

The approval is valid for engines with watercooled exhaust manifold.

Type Approval documentation

Tests carried out
Documentation:

Test report titel	Test report
Place of test	Inchon
Date of test	2008-04-01 until 2008-04-01

Test engine:

Model	L066TIH
Serial no.	EAOKN 803240
No. of cylinders	6
Power [kW/cyl.]	22
Speed [rpm]	2200

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
Foundation arrangement to be submitted for each installation according to the Rules, Pt. 4 Ch.3 Sec.1 [1.4] - Documentation of arrangement.

Torsional vibration calculations to be submitted for each installation according to the Rules Pt.4 Ch.2 Sec.2 - Torsional Vibrations.

Signboards according to the Rules Pt.4 Ch.3 Sec.1 [2.3.6] - Warning Notice.
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.

A copy of this Type Approval Certificate shall follow the engine as verification of compliance with Rules and SOLAS requirements.

END OF CERTIFICATE