DNV·GL

Certificate No:
TAM0000041

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Gas Valve Unit

with type designation(s)
GVU-OD, GVU-ED, GVU-OD, GVU-ED

Issued to
Wärtsilä Finland OY, Ship Power
Vaasa, Finland

is found to comply with
DNV GL rules for classification – Ships

Application :

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

Type	Inlet pressure [bar]	Size [Ø mm]	Enclosure [enclosed/open]
GVU-OD	10	50, 80, 100	open
GVU-ED	10	50, 80, 100	enclosed
GVU-OD	16	50, 80, 100	open
GVU-ED	16	50, 80, 100	enclosed

This Certificate is valid until **2021-03-02**.

Issued at **Høvik** on **2016-03-03**

for **DNV GL**

DNV GL local station: **Turku**

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.

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Job Id: **262.1-019412-2**
Certificate No: **TAM0000041**

Product description
Gas pressure control unit containing double block and bleed valves.

Application/Limitation

Type	Connection [mm]		Inlet pressure [BAR]	
	Inlet (DN)	Outlet (DN)	Pressure class 10	Pressure class 16
GVU-XD DN50	50	65	10	16
GVU-XD DN80	80	80	10	16
GVU-XD DN100	100	100	10	16

Requirements for fabrication and testing according to DNV GL rules Pt. 6 Ch. 2 Sec. 5 11.2, 11.3 and 11.4 shall be followed for each unit.

Places of production

Steel Master Finland Ltd
Opintie 30
Fin-23100 Mynämäki

Steel Master Marine Oy
Keskiläntie 1
FIN-20660 Littoinen

Aslemetals Oy
Nummitie 20
FIN-27150 Eurajoki

Tests carried out
Type Approval test for complete unit carried out 16-17th Feb 2016, Document ID : DBAD813707A

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 a survey every second year and before the expiry date of this certificate. This to verify that the conditions of the type approval are complied with and not altered since the Type Approval Certificate was issued.

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
The GVU, control and monitoring systems, including sensors and actuators are covered by a separate approval with certificate number A-14195 and later revisions.

Electric cables and installation of this is not covered by this approval and must be verified to comply with the requirement of DNVGL Rules for Ships/ High, Speed Light Craft and Naval Surface Craft Pt.4 Ch.8 - Electrical Installation.

GVU-ED 16 bar installation shall be equipped with quick closing valve according to leakage scenarios:
GVU-ED DN50-DBAD235982
GVU-ED DN80-DBAD235985a
GVU-ED DN100-DBAD235987

END OF CERTIFICATE