DNV·GL

Certificate No:
TAP00001FV

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fuel Oil Homogeniser

with type designation(s)
HG100, HG130, HG150, HG220

Issued to
Aquametro Oil & Marine GmbH
Rostock, Mecklenburg-Vorpommern, Germany

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV GL rules for classification – Ships Pt.4 Ch.9 Control and monitoring systems

Application :

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

Type:	Max. flow:	Max. fluid temperature:	Max. operating pressure:
HG100	3 m³/h	150 °C	15 bar
HG130	8 m³/h	150 °C	15 bar
HG150	12 m³/h	150 °C	15 bar
HG220	25 m³/h	150 °C	15 bar

Issued at **Hamburg** on **2018-08-31**
This Certificate is valid until **2023-08-30**.
DNV GL local station: **Rostock**

Approval Engineer: **Andrii Pishchanskyi**

for **DNV GL**

Olaf Drews
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: **262.1-024858-1**
Certificate No: **TAP00001FV**

Product description

The homogenizer is a dynamic milling machine and it mainly consists of a specially constructed stator/rotor-milling gear. The main components and their materials are as follows:

Component	Material / Type	Remarks
Housing and flanges	S355J2 (1.0577)	
Stator	16MnCr5 (1.7131)	
Rotor	16MnCr5 (1.7131)	
Sleeve bearing	Synthetic silicon carbide (SSIC)	
Magnetic coupling drive	Sm_2Co_{17}	
Electrical motor		Shall be according to DNVGL-RU-SHIP Pt.4 Ch.8 Electrical installations
Control cabinet[1]	Projekt No.: 14-024	Wiring: vpl 200.zng
Pressure sensor[2] or temperature sensor[2]	KPS 35 or KPS 37 KPS 83	GL TAC No. 91481-76 HH DNVGL TAC No. 91 483 - 88 HH

Footnotes
[1] Control cabinet is not included into standard delivery of the homogeniser. If the control cabinet is not delivered by Aquametro Oil & Marine, then automation shall be approval and tested for each project.
[2] Sensors shall be of approved type.

Application/Limitation

The homogeniser is type approved installation fuel oil class II and III piping system for:

- Pre-treatment of heavy fuel oil or blend fuel;
- Sludge oil treatment.

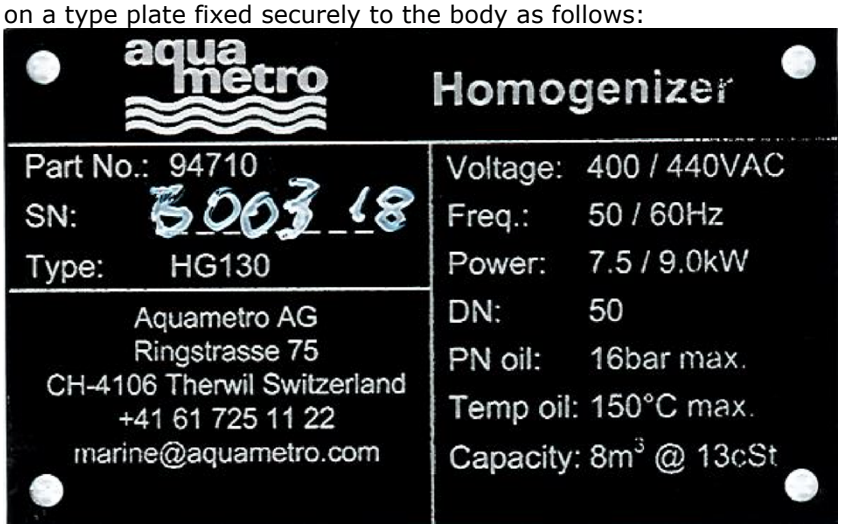
The homogeniser shall be installed and operated as per manufacturer's instructions.

Type Approval documentation

Tests carried out

Marking of product

For traceability to this Type Approval each homogeniser shall bear at least legible and durable marking on a type plate fixed securely to the body as follows:



Periodical assessment

A condition for retention of the TA certificate in its validity period is that periodical assessments are successfully carried out. The objective of the periodical assessment is to verify that the conditions for the TA have not been altered.
Main scope of the assessment:

- verification of the production and quality control system;
- review of quality control documentation of recent deliveries;
- review of drawings in production to verify any design changes which may have an impact on data specified in the type approval certificate, performance and range of application;
- verification of the product marking.

Refer to DNVGL Class Programme CP-0338 for the scope of the periodical assessment.