



Certificate No:
TAF00001KM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Water and Foam Monitor

with type designation(s)
VWM-JET

Issued to
VTI Fire Products(Shanghai) Co., Ltd.
Shanghai, China

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards
DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021

Application :

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

Issued at **Hamburg** on **2022-03-22**

for **DNV**

This Certificate is valid until **2027-03-21**.

DNV local station: **Shanghai**

Approval Engineer: **Andrii Pishchanskyi**

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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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

VWM-JET series is water monitors. They consist of branchpipe and turret made of stainless steel grade 316L. Branchpipes projects water in form of a jet. The monitor turret has two rotating ball bearings: one for elevation and one for rotation.

Types VMW-150M/4200 and VMW-150M/6000 are operated manually, whereas types VMW-150E/4200 and VMW-150E/6000 are fitted with electrical motors for operation and can be controlled remotely. The control system itself is out of scope of this Type Approval Certificate.

Manufactured by VTI Fire Products(Shanghai) Co., Ltd. in Shanghai, China.

Application/Limitation

Water monitors are approved for installation on ships and offshore vessels within the following parameters:

Parameter	Value			
	VMW-150M/4200	VWM-150E/4200	VWM-150M/6000	VWM-150E/6000
Working pressure range [bar]	7 – 14	7 – 14	7 – 14	7 – 14
Flow rate [lpm]	3748 - 5314	3747 – 5315	5320 – 7584	5320 – 7585
K-factor $\left[\frac{lpm}{\sqrt{bar}} \right]$	1418	1418	2020	2020
Throw range [m]	90 – 110	90 – 110	95 – 125	95 – 125
Rated pressure [bar]	25	25	25	25
Elevation range [°]	-45 up to 90	-45 up to 90	-45 up to 90	-45 up to 90
Rotation range [°]	360	-170 up to 170	360	-170 up to 170

The specific arrangement of water monitors, piping and control equipment is subject to approval for each project.

If monitor is to be installed in hazardous area, then electrical motors, switches and other electrical equipment shall be suitable for the hazardous area classification.

Each monitor is subject to pressure test at a pressure of 1,5 times rated pressure and delivered with corresponding test report.

Each product is to be supplied with its manual for installation, use and maintenance.

Type Approval documentation

Certification in accordance with Class Program DNVGL-CP-0338 (September 2021).

1. Design, installation, operation and maintenance manual No. AME14-D0200M ver. V.01 dated 2022-01;
2. Assembly drawings:
 - a. No. 14312 of types VMW-150M/4200 and VWM-150M/6000;
 - b. No. 14311 of types VMW-150E/4200 and VWM-150E/6000;
3. Nameplate for VWM monitor – Datasheet No. AME14-13311;
4. Test report No. AME14-TP02 ver. V.02 dated 2022-01-19.

Tests carried out

Tested as per EN 13565-1:2019 for branchpipes:

1. Visual examination;
2. Functional test of manual and electrical controls;
3. Discharge coefficient / characteristic;
4. Range test;
5. Leak test;
6. Mechanical test.

Marking of product

The product is to be marked as per datasheet No. AME14-13311.

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. Refer to DNV-CP-0338 Sec.4 for further information.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>.