



Certificate No:
TAF00001N0

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Waterbased Fixed Fire Extinguishing System

with type designation(s)
HyFEx-System

Issued to
ENGIE Axima Germany GmbH
Hamburg, Germany

is found to comply with
DNV GL rules for classification – Naval vessels

Application :

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

Issued at **Hamburg** on **2022-01-17**

This Certificate is valid until **2027-01-16**.

for **DNV**

DNV local station: **Hamburg – CMC North/East**

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.



Form code: TA 251

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Page 1 of 2

Product description

HyFEx-System is low-pressure foam/water drencher system (FDS). It consists of HyFEx spraying nozzles, release stations and HyFex stations, which incorporate HyFEx proportioners.

Application/Limitation

HyFEx-System is type approved for fire-fighting in operating spaces of naval surface ships. Its applicability to space types shall be as per DNVGL-RU-NAVAL Pt.3 Ch.5 Sec.9 §4.1.2.

Maximum installation height is 5 m. Additional nozzle levels are required for higher installation height.

Refer to certificate No. TAF00001MY for Type Approval of HyFEx spraying nozzles and to certificate No. TAF00001MY for Type Approval of HyFEx proportioners.

Actual ship installation shall be as per DNVGL-RU-NAVAL Pt.3 Ch.5 Sec.9 §10.1.3.

Application and limitation stated in the test reports, which are listed in Type Approval documentation below, shall be observed.

Type Approval documentation

1. Systembeschreibung DSA-Anlage No. 530-DSA dated 2021-08-20;
2. WIS Type Approval Certificate No. 3/2002 dated 2002;
3. Supplement to WIS Type Approval Certificate No. 3/2002 dated 2008-06-19;
4. Trial extinguishing test report No. X 0213-2-A\068\Y dated 1997-08-04 from WIS in Munster, Germany;
5. Final extinguishing test report No. E91-100/009/99 from WTD91;
6. Telefax dated 1999-06-10 for Approval No. 613299 from WIS in Munster, Germany;
7. Clogging test reports dated 1999-06-28.

Tests carried out

1. Fire testing scope commensurate with MSC.1 Circ.1165 Appendix B;
2. Sulphur dioxide corrosion test;
3. Salt spray corrosion test;
4. Clogging test.

Marking of product

The components shall be marked for traceability to the Type Approval.

Periodical assessment

For retention of the Type Approval, a periodical assessment as per DNV-CP-0338 Sec.4 shall be performed by a DNV Surveyor in order to verify that the conditions for the Type Approval are complied with.

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