Certificate No:
TAF00001FG

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Water and Foam Monitor

with type designation(s)
RCM-80 EL EON-70
RCM-80 EL EON-110

Issued to
Incendium AB
Kungälv, **Sweden**

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

Application :

Water monitors approved for installation on ships and offshore vessels.

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

Issued at **Høvik** on **2021-12-08**
This Certificate is valid until **2026-12-07**.
DNV local station: **Sweden CMC**

Approval Engineer: **Helge Bjørnarå**

for **DNV**

Helene David-Andersen
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

'RCM-80 EL EON-70 and RCM-80 EL EON-110',
The 'RCM-80 EL' is a remoted controlled water monitor (RCM) consisting of a body made of stainless steel (AISI 316L). The monitor can be fitted with a remote-controlled adjustable fog/jet nozzle of type 'EON-70' or 'EON-110'. The nozzles are made of stainless steel (AISI316). The jet nozzles are of constant flow type.

The certificate covers the following water monitor and nozzle types:

Type	Rotation	Elevation	Max. working pressure [bar]	Weight [kg]
RCM-80 EL EON-70	350º	-90º - +70º	16	48
RCM-80 EL EON-110	350º	-90º - +70º	16	51

For further details, see drawings listed under Type Approval documentation below.

The water monitors are manufactured by Incendium AB, Kungälv, Sweden.

Application/Limitation

The water monitors are approved for installation on ships and offshore vessels.

Table 1

Type	Flow rate [lpm]	Throw length [1)] [m]	Inlet pressure [bar]	k-factor [lpm/√bar]
RCM-80 EL EON-70	567 - 1783	28 - 41	4	283 - 892
	612 - 2008	28 - 51	5	274 - 898
	703 - 2225	32 - 56	6	287 - 908
	738 -2425	34 - 58	7	279 - 917
	812 - 2523	38 - 66	8	287 - 915
RCM-80 EL EON-110	1240 - 3200	37 - 49	4	620 - 1879
	1400 - 3738	40 - 55	5	626 - 1892
	1542 - 4283	49 - 65	6	629 - 1916
	1667 - 4517	54 - 67	7	630 - 1926
	1805 - 4683	58 - 68	8	638 - 1912

1) Throw length measured at 32º angle

Maximum working pressure at 16 bar.

Hydraulic test to 1.5 times working pressure to be documented before delivery.

Work certificate indicating mechanical properties of materials in the monitor and pressure test report is to accompany each product.

Materials are to be in accordance with the DNV-RU-SHIP Pt.4, Ch.6, Sec.1 (Pipe of class III).

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

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

Type Approval documentation

Certification in accordance with Class Program DNV-CP-0338, September 2021.

Operational and maintenance, Document No. OM-0003-RCM-EN Rev. 20F23.

Test Reports for RCM models (see table 1 above) dated 2021-11-24 witnessed by DNV surveyor

Drawing No. 100725 Rev.0, RCM-80 Monitor overview drawing, dated 2020-11-12
Drawing No. 102002 Rev.3, RCM-80 EL DIN POS EON 70 General Assembly, dated 2021-02-18

Datasheet RCM (Remote Controlled Monitor), Rev. 21E25.

Tests carried out

Tested in accordance with EN 13565-1:2019(E) as branchpipe (discharge coefficient/characteristics (flow) test, range test, leak test and mechanical test).

Marking of product

The product is to be marked according to EN 13565-1:2019, Section 7.

Periodical assessment

DNV's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in DNV-CP-0338 Section 4.