

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Flame Screen Unit**

with type designation(s)
EPV IIA, EPV IIB

Issued to

PRES-VAC Engineering A/S
ALLERØD, Denmark

is found to comply with

DNV GL rules for classification – Ships Pt.5 Ch.5 Oil tankers
DNV GL rules for classification – Ships Pt.5 Ch.6 Chemical tankers

Application :

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

Type: Sizes:
EPV IIA DN50 to DN300
EPV IIB DN50 to DN300

Issued at **Høvik** on **2017-05-23**

This Certificate is valid until **2022-05-22**.

DNV GL local station: **Copenhagen**

for **DNV GL**

Approval Engineer: **Mehdi Rowshan**

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Marianne Spæren Marveng
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.



Product description

Flanged type with weather hood and deflector.

Housing: Cast Iron / Stainless Steel
Flame Screen: Stainless Steel
Net Ring: Bronze / Stainless Steel

Materials:

Cast iron GG20 acc. to DIN 1691
Bronze RG5 acc. to DIN 1705
Stainless Steel AISI 316.

The product design has full compliance with IMO MSC/Circ.677 (as amended by MSC/Circ.1324) and EN ISO 16852:2010

Application/Limitation

The flame arrestors are subject to inspection at regular intervals to check for corrosion or other damage or contamination and if necessary they have to be cleaned.

- EPV IIA for Apparatus Group IIA (MESG $\geq$ 0.90)
- EPV IIB for Apparatus Group IIB (MESG $\geq$ 0.65)
- The product range of the flame screen unit type EPV IIA has been extended to include an apparatus group IIB configuration by using conversion kit

Products covered by this certificate shall only be used on tankers protected by inert gas system (Reference is made to IMO MSC/Circ.677 [1.2.2]).

A copy of the instruction manual shall be kept on board. It shall at least contain the following information:

- Installation instructions
- Operating instructions
- Maintenance requirements including cleaning
- A copy of the laboratory report
- Flow test data, incl. flow rates under positive and negative pressures, operating pressures, operating sensitivity, flow resistance and velocity

DNV GL product certificate is not required with reference to DNV GL Ship rules Part 5 Chapter 5 Section 1, Table 7 and DNV GL ship rules Pt.5 ch.6 Sec.1 Table 6.

Type Approval documentation

Tests carried out

Corrosion test, hydraulic test, flow test, flash-back test

Marking of product

For traceability to this type approval each product is to be marked with:

- Manufacturer's name or trade mark
- Type designation
- Additional marking acc. IMO MSC/Circ. 677 sec. 4.1

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform a survey – every second year before the expiry date of this certificate - to verify that the conditions for the type approval are complied with.