

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Jet Fire Protection**

with type designation(s)

Brand JET Black PFP JF120

Issued to

**Isolatiebedrijf C.J. Van Waas B.V.
Barendrecht, Netherlands**

is found to comply with

DNV GL offshore standards**Application :****Approved for use as a jet fire protection of steel pipe.**Issued at **Høvik** on **2017-06-28**This Certificate is valid until **2022-06-27**.for **DNV GL**DNV GL local station: **Rotterdam, Product
Certification /Verification**Approval Engineer: **Helge Bjørnarå**

**Mårten Schei-Nilsson
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

"Brand JET Black PFP JF120"

Steel pipe with outer diameter 219,1 mm and wall thickness 8,2 mm ($H_p/A = 130 \text{ m}^{-1}$) insulated with a multi layers of ceramic blanket separated by foil, covered in an intumescent impregnated fabric.

The system is composed of the following layers:

- Supersafe fabric (outer layer)
- Aluminium foil
- Supersafe S blanket
- 2 layers of miroporous blanket
- Supersafe S blanket
- Aluminium foil
- Supersafe fabric (inner fabric)

Total thickness of the insulation system is approximately 60 mm. For details, see dwg. "PFP Lijntekening" from manufacturer.

The blanket is fastened to the steel pipe with alternating stainless steel bands and fabric straps 165 mm apart. The outer layer has a 100 mm overlap.

The product is manufactured at the premises of Isolatiebedrijf C.J. Van Waas B.V., Barendrecht, The Netherlands.

Application/Limitation

Approved for use as a jet fire protection of rating (Type of fire/Type of application/Critical temperature rise ($^{\circ}\text{C}$)/Period of resistance (minutes)):

JF/pipes/80/45
JF/pipes/120/60
JF/pipes/170/75
JF/pipes/215/90
JF/pipes/260/105
JF/pipes/305/120

Any project specific design solutions arrived at on basis of this certificate are to be further validated by project specific approvals carried out by the appointed verifying authority for each project in each case at the detail engineering stage.

The approval refers only to the fire resistance properties of the system.

The protective insulation system is not defined as non-combustible, and should not be used in accommodation or in enclosed areas.

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test Report No. 1ZADTKQ-3, Rev.1 dated 2016-04-07 from DNV GL, Spadeadam, UK.

Drawing "PFP Lijntekening" from manufacturer.

Drawing "PFP producttekening" from manufacturer.

Tests carried out

Tested according to ISO 22899-1:2007.



Job Id: **262.1-025275-1**
Certificate No: **TAF00000KR**

Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire technical rating.

Periodical assessment

DNV GL'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 DNVGL-CP-0338 Section 4.