

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Jet Fire Protection

with type designation(s)

Jotachar JF750 + GRP cladding (SolarRoll PE55) + Cellular glass (Foamglas) – tubular section

Issued to

Jotun A/S
SANDEFJORD, Norway

is found to comply with

DNV GL offshore standards

Application :

Approved for use as jet fire protection of steel pipes.

Issued at **Høvik** on **2019-09-26**

This Certificate is valid until **2024-09-25**.

DNV GL local station: **Sandefjord**

for **DNV GL**

Approval Engineer: **Thorvald Furuseth**

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

"Jotachar JF750 + GRP cladding (SolarRoll PE55) + Cellular glass (Foamglas) – tubular section"
Steel pipe with outer diameter 219 mm and wall thickness 12.7 mm ($H_p/A = 85 \text{ m}^{-1}$) insulated with a multi-layer insulation system constructed as follows (from inner to outer layer):

1. 30 μm primer
2. 40 mm cellular glass (Foamglas)
3. 1.5-2.5 mm GRP cladding (Solar Roll PE55)
4. 30 μm primer
5. 9.6 mm intumescent insulation (Jotachar JF750)

Total thickness of the system is approximately 75.7 mm.

The materials are manufactured at the following locations:

- Jotun Paints (Europe) Ltd., Scunthorpe, North Lincolnshire, UK
- Chokwang Jotun Ltd., Busan, Korea

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)):

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 materials (insulation, cladding and intumescent) are not defined as non-combustible, and should not be used in accommodation or in enclosed areas.

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

The application of the protective coating is to be performed in accordance with the manufacturer's application manual. Alternative primers and topcoats may be used provided they have been tested and approved by the manufacture.

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, September 2018.

Test Report No. 117BR444-2 Rev. 0, dated 2017-12-20 from DNV GL, Spadeadam Test Site, UK.

Drawing "Typical section view of composite PFP system comprising of Jotachar JF750 over foamglas insulation" from manufacturer.

Tests carried out

Tested according to ISO 22899-1:2007.



Job Id: **262.1-030051-1**
Certificate No: **TAF000014K**

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 Class Programme DNVGL-CP-0338, Section 4.