DNV·GL

Certificate No:
TAF000002K

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Jet Fire Protection

with type designation(s)
Jotachar JF750 - Jet fire

Issued to
Jotun A/S
SANDEFJORD, Norway

is found to comply with
Det Norske Veritas' Offshore Standards

Application :

Approved for use as a jet fire protection of structural I and hollow sections and H-class divisions.

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2015-08-26**

for **DNV GL**

DNV GL local station: **Sandefjord**

Approval Engineer: **Helge Bjørnarå**

Petter Langnes
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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Job Id: **262.1-016341-7**
Certificate No: **TAF000002K**

Product description

"Jotachar JF750" - Jet fire
The system is composed by a two-pack epoxy based primer covered by a two component epoxy thick-film intumescent coating (Jotachar JF750).

The materials are manufactured at Jotun Paints (Europe) Ltd., Scunthorpe, North Lincolnshire, United Kingdom.

Application/Limitation

The "Jotachar JF750" system is approved for use as jet fire protection of H-class divisions and structural I and hollow sections.

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.

Thickness of "Jotachar JF750" for jet fire exposure may be determined by adding a "Jet fire erosion factor" as shown in Table 1-3 to the thickness required for hydrocarbon pool fire as given in the DNV Type approval certificates for H-class divisions (DNV TAC F-20691 or F-20692 as relevant), structural I sections (TAF000002J) or structural hollow sections (F-20694).

Table 1: Additional thickness of "Jotachar JF750" system to be applied to account for jet fire erosion for H-class divisions:

H-class	Jet fire erosion factor [mm] *)				
	0-30 minutes	31-60 minutes	61-90 minutes	91-120 minutes	121-150 minutes
Deck	0,0	0,0	0,1	1,1	-
Bulkhead	0,0	0,0	0,0	1,4	-

*) Total minimum thickness shall not be less than 3,0 mm.

Table 2: Additional thickness of "Jotachar JF750" system to be applied to account for jet fire erosion for I sections:

Core temp. [°C]	Jet fire erosion factor [mm] *)					
	0-30 minutes	31-60 minutes	61-90 minutes	91-120 minutes	121-150 minutes	151-180 minutes
200	2,0	3,7	3,7	3,7	3,7	3,7
250	1,4	3,6	3,6	3,6	3,6	3,6
300	2,0	2,8	2,9	2,9	2,9	2,9
350	1,3	2,2	2,2	2,2	2,2	2,2
400	1,4	2,0	2,0	2,0	2,0	2,0

*) Total minimum thickness shall not be less than 3,0 mm

Table 3: Additional thickness of "Jotachar JF750" system to be applied to account for jet fire erosion for hollow sections:

Core temp. [°C]	Jet fire erosion factor [mm] *)					
	0-30 minutes	31-60 minutes	61-90 minutes	91-120 minutes	121-150 minutes	151-180 minutes
200	1,2	1,2	1,2	1,2	-	-
250	2,2	2,2	2,2	2,2	2,2	-
300	3,0	3,0	3,0	3,0	3,0	-
350	2,6	2,6	2,6	2,6	2,6	2,6
400	1,5	1,5	1,5	1,5	1,5	1,5

*) Total minimum thickness shall not be less than 2,9 mm

Relative density of "Jotachar JF750" is 1.0 g/cm^3.

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

The approval refers only to the 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 application and maintenance.

Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.

Application Guide: Jotachar JF750, Rev.01-2, dated 22 November 2013 from Jotun A/S, Sandefjord, Norway.

Divisions and I section:
Test report No. 12621 dated 2012-05-27 from GL Noble Denton, Brampton, UK
Test report No. 12622 dated 2012-05-27 from GL Noble Denton, Brampton, UK
Test report No. 13412 dated 2012-12-23 from GL Noble Denton, Brampton, UK
Test report No. 15812 dated 2014-10-28 from DNV GL, Brampton, UK
Test report No. 15685 dated 2014-10-02 from DNV GL, Brampton, UK

Hollow section:
Test report No. 13898 dated 2013-05-18 from GL Noble Denton, Brampton, UK
Test report No. 14424 dated 2013-09-17 from GL Noble Denton, Brampton, UK
Test report No. 15808 dated 2014-10-28 from DNV GL, Brampton, UK
Test report No. 15849 dated 2014-10-14 from DNV GL, Brampton, UK

Test report No. 13-04716 dated 2013-04-22 from Al Futtaim Exova LLC, Dubai, UAE

Tests carried out

Tested according to ISO 22899-1:2007

Marking of product

The product is to be marked with name of manufacturer and type designation.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Certification Retention Surveys at any time during the validity period of this certificate and at least every year. The arrangement is to be in accordance with procedure described in Standard of Certification Note No. 1.2 item 4.