



Certificate no.:
TAF00001EF

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Jet Fire Protection**

with type designation(s)
PITT-CHAR NX - Jet fire

issued to

PPG Coatings Europe B.V.
Amsterdam, Netherlands

is found to comply with
DNV offshore standards

Application:

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

Issued at **Høvik** on **2024-05-02**

This Certificate is valid until **2029-05-01**.

for **DNV**

DNV local unit: **Netherlands CMC**

Approval Engineer: **Helge Bjørnara**

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.



Form code: TA 251

Revision: 2023-09

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Product description

"PITT-CHAR NX" – Jet fire

The system is composed by a two-pack epoxy based primer covered by a two-component intumescent epoxy "PITT-CHAR NX" reinforced with carbon fibre mesh "PITT-CHAR CF Mesh".

The materials are manufactured at the following locations:

- PPG Protective and Marine Coatings. Alexander. USA.
- PPG Coatings Indonesia, Jakarta, Indonesia.
- PPG SSC Co., Ltd., Ulsan, Korea.
- PPG Deco Polska Sp. Z o.o., Ostrow Wielkopolski, Poland.
- PPG Coatings (Kunshan) Co., Ltd., Jiangsu, China.

Application/Limitation

The "PITT-CHAR NX" 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 "PITT-CHAR NX" 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 (TAF00001EB. Rev.1 and TAF00001EC as relevant). structural I sections (TAF00001EE) or structural hollow sections (TAF00001ED).

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

H-class	Jet fire erosion factor [mm] *)							
	15 minute	30 minute	45 minute	60 minute	75 minute	90 minute	105 minute	120 minute
Deck								
Bulkhead								

*) Total minimum thickness shall not be less than 3.9 mm.

Table 2: Additional thickness of "PITT-CHAR NX" system to be applied to account for jet fire erosion for I sections:

Core temp. [°C]	Jet fire erosion factor [mm] *)											
	15 minute	30 minute	45 minute	60 minute	75 minute	90 minute	105 minute	120 minute	150 minute	180 minute	210 minute	240 minute
200												
250												
275												
300												
350												
400												
427												
450												
500												
538												
550												
600												

*) Total minimum thickness shall not be less than 3.9 mm.

Table 3: Additional thickness of "PITT-CHAR NX" system to be applied to account for jet fire erosion for hollow sections:

Core temp. [°C]	Jet fire erosion factor [mm] *)								
	15 minute	30 minute	45 minute	60 minute	75 minute	90 minute	105 minute	120 minute	150 minute
200									
250									
275									
300									
350									
400									
427									
450									

500									
538									
550									
600									

*) Total minimum thickness shall not be less than 3.8 mm.

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

Mass density of "PITT-CHAR NX" 1.1 g/cm³ (spray and trowel).

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

All tests have been performed with nominal dry film thickness (DFT). Workmanship is subject for acceptance by the relevant authority of the project.

The application (spray and/or trowel) 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 Class Programme DNV-CP-0338. September 2021.

PPG PITT-CHAR NX PFP SYSTEM APPLICATION GUIDELINES dated 15 March 2019 from maker.

Divisions and I section:

Test report No. 114LQLXV-4 Rev. 1 dated 18 July 2017 from DNV GL. Brampton. UK.
 Test report No. 116FT19L-3 Rev. 0 dated 16 October 2017 from DNV GL. Brampton. UK.
 Test report No. 116FT19L-4 Rev. 1 dated 31 October 2017 from DNV GL. Brampton. UK.
 Test report No. 11993NAI-2 Rev. 1 dated 9 June 2018 from DNV GL. Brampton. UK.
 Test report No. 11G3890S-1 Rev. 1 dated 26 June 2019 from DNV GL. Brampton. UK.

Hollow section:

Test report No. 114LQLXV-5 Rev. 1 dated 18 July 2017 from DNV GL. Brampton. UK.
 Test report No. 114LQLXV-6 Rev. 1 dated 18 July 2017 from DNV GL. Brampton. UK.
 Test report No. 116FT19L-5 Rev. 1 dated 16 February 2018 from DNV GL. Brampton. UK.
 Test report No. 11G3890S-2 Rev. 1 dated 28 July 2019 from DNV GL. Brampton. UK.

Assessment Report No. PFPS-PAR-2002 Issue 3 dated 28 April 2020 from PFP. Suffolk, UK.

Tests carried out

Tested according to ISO 22899-1.

Marking of product

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

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 Class Programme DNV-CP-0338. Section 4.