DNV·GL

Certificate No:
TAF00000JD

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Structural Fire Protection

with type designation(s)
Chartek 8E - Hollow sections

Issued to
International Paint Limited
GATESHEAD TYNE AND WEAR, United Kingdom

is found to comply with
DNV GL offshore standards

Application :

Approved for use as a system for fire protection of structural steel hollow sections.

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

Issued at **Høvik** on **2017-02-21**
DNV GL local station: **Newcastle-upon-Tyne** for **DNV GL**

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.

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Product description

Chartek 8E - Hollow sections
composed of a system for fire protection of structural steel elements, hollow sections, consisting of an epoxy based intumescent coating system reinforced with HK-1 carbon composite mesh.

The materials are manufactured at the following locations:

- Akzo Nobel Coatings BV, Wapenveld, The Netherlands
- International Paint LLC, Houston, Texas, USA
- International Paint (Korea) Ltd., Haman, Korea
- AkzoNobel Saudi Arabia Ltd., Dammam, Saudi Arabia

Application/Limitation

The thickness of Chartek 8E system to be applied to avoid temperatures to rise on the steel substrate less than 400 °C for hollow sections, are given in appendix table 1.

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 Class Programme DNVGL-CP-0338, October 2015.

Test report No. 14443 dated 14 February 2005 from Warrington Fire Research Ltd., Warrington, UK
Test report No. 137200 dated 20 March 2005 from Warrington Fire Research Ltd., Warrington, UK
Test report No. 142592 dated 26 April 2005 from Warrington Fire Research Ltd., Warrington, UK

Tests carried out

Tested according to BS 476: Part 20 and 21: 1987 with HC-curve according to ISO 834-3.

Marking of product

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

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.

Appendix to certificate TAF00000JD

Table 1: Thickness of Chartek 8E system for fire protection of hollow sections for a critical temperature rise of **400 °C:**

Hp/A [m^{-1}]	Fire resistance time in minutes, Thickness in mm			
	30	**60**	**90**	**120**

The maximum thickness of protection material up to the required Hp/A [m^{-1}] shall be used.

Hp/A = Ratio between Heat perimeter and cross sectional Area of the section, [m^{-1}]