




CERTIFICATE OF FIRE APPROVAL

This is to certify that

The product(s) detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations for use on offshore installations classed with Lloyd's Register, and for use on offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	3M Center
Address	Building 230-BS-37 Saint Paul, MN 55144 United States of America
Type	STRUCTURAL STEEL HYDROCARBON AND JET FIRE PROTECTION SYSTEM
Equipment Description	Structural Steel "I" or "W" Sections protected against Hydrocarbon and Jet Fire exposures and Structural Steel Divisions protected against Jet fire exposures using "3M™ Interam™ E-5A-4 Endothermic Mat [Thickness 10.16mm (0.4"), Weight 8.93 kg/m ² (1.83 lbs/ft ²)"]".
Specified Standard	UL1709, "Rapid Rise Fire Tests of Protection Materials for Structural Steel," Third Edition, dated March 23, 2005, revised April 6, 2007 and ISO 22899-1:2007(E): Determination of the Resistance to Jet Fires of Passive Fire Protection Materials.

The attached Design Appraisal Document forms part of this certificate. This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue	31 July 2017	Expiry date	26 July 2022
Certificate No.	SAS F170168/M1	Signed	 <small>Lloyd's Register EMEA</small>
Sheet No	1 of 10	Name	S. Abraham Surveyor to Lloyd's Register EMEA A Member of the Lloyd's Register Group

Note:

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.

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