ContraFlame® JF120/JF120-200 key facts

Document Ref:	ContraFlame® JF120/JF120-200 key facts
Issue No:	1
Date:	08 02 2012
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Criteria	ContraFlame® JF120	ContraFlame® JF120-200
1. Overview	**Fully bonded** integral thermal insulation & jet fire protection to JF120, Blast overpressure 4.2 bar	**Fully bonded** integral thermal insulation & jet fire protection to JF120.
2. System Thickness	15-90mm Typically 35mm for Jet Fire JF120	96mm
3. Material	A multifunctional composite systems based on unique phenolic syntactic foam and phenolic glass reinforced laminate	A multifunctional composite systems based on unique phenolic syntactic foam and phenolic glass reinforced laminate
4. Typical Applications	• Hot risers • Hot three phase separators • Hot slug catchers • Top deck/ Under decks, insulation/protection • Flare stacks • Steel structures that are subject to thermal shock, e.g. LNG plants • Process pipe work and equipment	• Risers Protection
5. Construction	1. Tie coat applied directly on top of the corrosion protection system 2. Phenolic syntactic foam applied to the required thickness, typical at 31mm (J120) 3. Phenolic glass reinforced laminate applied at 4mm to form outer coating	1. Tie coat applied directly on top of the corrosion protection system 2. Primary layer of C50-400 is applied at a thickness of 75mm. 3. The secondary layer of C50-700 is applied directly over the primary layer at a thickness of 15mm. 4. Phenolic glass reinforced laminate applied at 6mm to form outer coating

	ContraFlame® JF120	ContraFlame® JF120-200
6. Curing	Ambient Cure, no specialised curing procedures or equipment	Ambient Cure, no specialised curing procedures or equipment
7. Field joint	Field joint application can be done on site or offshore	Field joint application can be done on site or offshore
8. Coatback Length / Welding	150mm / 150mm	150mm / 150mm
9. Recommended in-service Temperature	-196°C to +185°C (can be modified to higher temp)	-196°C to +185°C
10. System Thermal Conductivity (at 25°C)	0.05 $Wm^{-1}K^{-1}$	C50-400 0.08 $Wm^{-1}K^{-1}$ C55-700 0.12 $Wm^{-1}K^{-1}$
11. Max. Back face temp. during jet fire	+24.44°C (J15) +97.7°C (J30) +256°C (J60) +309°C (J90) +320°C (J120)	+1.2°C (J30) +7.3°C (J60) +24.9°C (J90) +69.3°C (J120)
12. U Values /Thickness/Weight	**4.55** $Wm^{-2}K^{-1}$/ **14**mm / **8.2** kg/m^2 **1.61** $Wm^{-2}K^{-1}$/ **34**mm / **14.2** kg/m^2 **1.06** $Wm^{-2}K^{-1}$/ **50**mm / **19** kg/m^2 **0.57** $Wm^{-2}K^{-1}$/ **90**mm / **31** kg/m^2	**0.91** $Wm^{-2}K^{-1}$ / **96**mm / **65** kg/m^2
13. Density / Weight sqm	270 – 330 kg/m^3 13.3 -15 kg/m^2 (@34mm)	670 kg/m^3 65kg/m^2

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14. Certification	Lloyds (LR) ABS	Lloyds (LR) ABS
15. Material Cure Time	24-36 hr cure time	24-36 hr cure time
16. Design life	25 years (and above)	25 years (and above)
17. Testing	ISO 22899 -1 OTI 95634 ASTM C177 BS476 part 7 BS EN ISO 4589 NES 711 – smoke NES 713 Toxicity Norsok 501 - 5	ISO 22899 -1