

## 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.

<b>Manufacturer</b>	MCL Unitex Ltd.
<b>Address</b>	MCL House Adams Close Heanor Gate Industrial Estate Heanor Derbyshire, DE75 7SW United Kingdom (UK)
<b>Type</b>	<b>H-120 PIPE PENETRATION (HYDROCARBON FIRE TEST)</b>
<b>Equipment Description</b>	Single Pipe Bulkhead Penetration – Type: "FIRETEX Multi-Layer Fabric Seal" Fitted to Both Sides of the Bulkhead
<b>Specified Standard</b>	IMO Resolution A.517(13) and UK Department of Energy Hydrocarbon Time/Temperature Relationship

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	22 March 2010	Expiry date	21 March 2015
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Certificate No.	SAS F100054
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Signed	
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Sheet No	1 of 3
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Name	S. Abraham
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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.

\*Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.\*

**DESIGN APPRAISAL DOCUMENT**

Date 22 March 2010	Quote this reference on all future communications LDSS/TA/SFS/MF/
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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F100054**

This Design Appraisal Document forms part of the Certificate.

**APPROVAL DOCUMENTATION**

Loss Prevention Council (LPC), Borehamwood, United Kingdom, Test Report No. TE 84737, dated 5 October 1994.

**CONDITIONS OF CERTIFICATION**

1. When used in conjunction with an H-120 Class steel bulkhead, insulated on one side with an approved insulation system.
2. For use on single steel pipes from 60mm to 1067mm outside diameter, with a seal fitted on both sides of the bulkhead.
3. Pipe penetration consists of: a steel sleeve welded into bulkhead with the pipe fitted centrally; the sleeve and pipe insulated with 1 layer 50mm thick + 2 layers 38mm thick 'Firemaster X-607' or equivalent insulation (128kg/m<sup>3</sup> density) for the lengths given below, with suitable retention arrangements. The annular gap between sleeve and pipe is also filled with the same insulation. Both seals are retained to the sleeve and pipe with 'Hi-Torq' worm drive stainless steel banding, one fitted to the pipe and two on the sleeve; the worm drive banding on the pipe is covered with 50mm thick x 140mm wide insulation of the same type.
4. Insulation as described above, to be fitted on the pipe for a total length of 500mm for 60mm OD and 2000mm for 1067mm OD, on one side. The insulated length may be interpolated for intermediate sizes of pipes.
5. Seal constructed from: outer layer of woven ceramic cloth reinforced with stainless steel wire, layers of ceramic felt, nickel foil, aluminium foil and an inner layer of glass cloth. Overlap joints of the seal to be bonded with DR200 synthetic rubber adhesive
6. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.

**DESIGN APPRAISAL DOCUMENT**

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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F100054**

**PLACE OF PRODUCTION**

MCL Unitex Ltd.  
MCL House  
Adams Close  
Heanor Gate Industrial Estate  
Heanor  
Derbyshire, DE75 7SW  
United Kingdom (UK)

**Supplementary Type Approval Terms and Conditions**

*This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).*

M. Farrier  
Lead Specialist  
Statutory Fire & Safety  
London Design Support Services  
Lloyd's Register EMEA

