

(SECTIONAL VIEW)

Notes:

CERTIFICATION: H0 Lloyds Register of Shipping, Certificate No. SAS F000315. Blast over-pressure to 0.47 barG.
MOVEMENT: Multi-leaf construction designed to suit significant movement particularly in the axial direction.
CLIPPING: Each seal is supplied with fitting instructions, adhesive and stainless steel worm drive clips to suit pipe and sleeve diameters.

Drawing Title:

SPECIAL FIRETEX PIPE PENETRATION SEAL SYSTEM - MULTI-LEAF CONDUCTOR TYPE

0	23/09/05	Drawing created		J.D.	N.R.T. I.C.K.
Rev	Date	Revision detail	Drn	Chkd	App'd
Drawing Number			PPS-0230		REV 0



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	MCL Unitex Ltd.
Address	MCL House Adams Close Heanor Gate Industrial Estate Heanor Derbyshire, DE75 7SW United Kingdom
Equipment Description	Singe Pipe Penetration - Type: "FIRETEX MC 230" Multi-Layer Flexible Seal
Type	PIPE PENETRATION (HYDROCARBON FIRE TEST)
Specified Standard	UK Department of Energy Time/Temperature Relationship and IMO Resolution A.754(18) Performance Criteria

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	24 May 2000	Issued by	Lloyd's Register of Shipping, London
Expiry date	23 May 2005		
Certificate No.	SAS F000315	Signed	
Sheet No	1 of 3	Name	S. James 

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.



NOTICE - This certificate is subject to the terms and conditions overleaf, which form part of this certificate.



Lloyd's Register of Shipping
71 Fenchurch Street, London, EC3M 4BS
Telephone 020 7709 9166 Fax 020 7488 4796
Telex 28636

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Document number	SAS F000315
Issue number	1

DESIGN APPRAISAL DOCUMENT

Date 24 May 2000	Quote this reference on all future communications TGG/STAT/FITA/MF/13067
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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL NO SAS F000315

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Loss Prevention Council, Borehamwood, United Kingdom, Test Report No. TE 85568, dated 27 February 1995.

CONDITIONS OF CERTIFICATION

1. When used in conjunction with an H-0 Class steel deck.
2. For use on single steel pipes between 150mm and 508mm outside diameter.
3. Seal material consisting of: inner glass cloth, aluminium foil, ceramic felt (6mm thick, 96kg/m³ density), nickel foil, ceramic felt (6mm thick, 96kg/m³ density) and outer ceramic cloth reinforced with stainless steel wire (1300g/m²).
4. Annular opening at deck, between pipe and deck coaming to be packed with (96kg/m³ density) "Durablanket X607" ceramic fibre insulation for the depth of the coaming 100mm and for a nominal gap of 34mm.
5. Maximum length of seal along pipe: 700mm.

NOTE

1. The panel was subjected to a blast overpressure with a peak value of 0.48 barG, an average value of 0.47 barG, for a duration of 90ms prior to the fire testing. The Fire Research Station, (BRE), Cardington, UK, Test Report Number TCR/3/95 refers.



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PLACE OF PRODUCTION

MCL Unitex Ltd
Adams Close
Heanor Gate Industrial Estate
Heanor
Derbyshire, DE75 7SW
United Kingdom


S. James
Senior Statutory Examiner
Statutory
Oil, Chemical & Gas Tanker Group
London Classification and Regional Support





Project: Blast Testing of Pipe Penetration
and Module Skirt Seals

Certificate No.: LWT 401087/1

Client: Firetex Systems

Office: Lowestoft

Client's Order No.: Unknown

Date: 01/08/94

Inspection dates

First: 26.07.94

Order Status: Complete

Final: 26.07.94

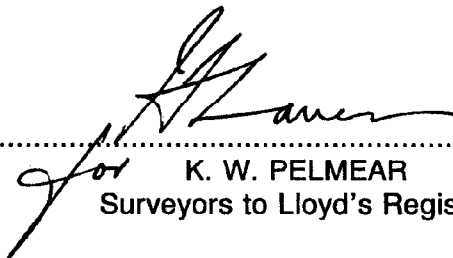
This certificate is issued to Firetex Systems to certify that the undersigned surveyor to Lloyd's Register did attend at The Building Research Establishment, Cardington Laboratories, Hanger No.2, Shortown, Cardington, Bedford for the purpose of witnessing blast testing of pipe penetration and module skirt seals.

60 MM O/D AND 1067 MM O/D PIPE SEALS AND 1000 MM X 800 MM PANEL

A preliminary blast test on the pipe seals was carried out at 0.5 bar with a subsequent blast test of 1.35 bar and no detrimental defect of the seals was observed. Movement of the seals along the pipe on the exposed side was noted with a maximum movement of 135 mm on the 1067 mm pipe and 100 mm on the 60 mm pipe.

A preliminary blast test on the panel was carried out at 0.58 bar with a subsequent blast test at 1.1 bar with no detrimental defect noted on the panel.

A laboratory report is being prepared and will be forwarded on completion.


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for **K. W. PELMEAR**
Surveyors to Lloyd's Register

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NOTICE – This certificate is subject to the terms and conditions overleaf, which form part of this certificate.