



MATERIAL VERIFICATION/DATA SHEET STENCA PENETRATION SEAL

Application:

Stenca Penetration Seal (also called Firetex Penetration Seal) is developed to accommodate fire and blast conditions, and provide protection against hazard environments such as those experienced offshore. The Stenca Penetration Seal systems are designed to address relative movements between pipe and sleeve, hydrocarbon and cellulosic fires, blast overpressure and the most onerous hazard of all, jet fire.

Facing:

The Stenca Penetration Seal consist of an inner layer Standard Firetex Seal Layer covered with a layer of ceramic fibre blanket. Each Penetration Seal Kit will comprise the Penetration Seal, 316 SS worm drive clips and sealant.

Available Fire Rates:

from A0 up to J120.

Density:

Density depends of fire rates.

Blast overpressure:

Stenca Penetration Seal has been proven to withstand blast overpressures up to 1.36 bar g.

Sizes:

Stenca Penetration Seals are manufactured to suit and supplied in straight lengths with ends prepared for jointing. The products are made after customer specification and can be delivered in almost all sizes.

Certification and quality control:

The Stenca Penetration Seal is manufactures with strict quality control procedures and practices in accordance to requirements of ISO 9001-2000. All products have been tested and achieved necessary certification.

Stenca Trading A/S

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www.stenca.com

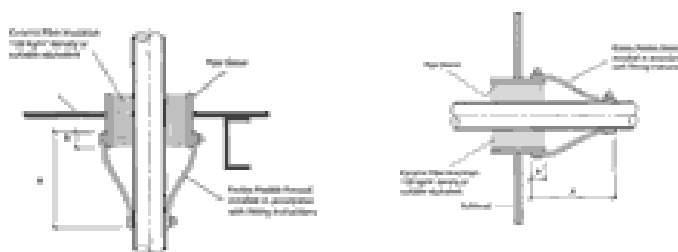
Lloyds Register	
CERTIFICATE OF FIRE APPROVAL	
This is to certify that The product(s) detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations for use on offshore installations classed with Lloyd's Register, and for use on offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.	
Manufacturer	MCL Unites Ltd.
Address	MCL House Adams Close Heaner Gate Industrial Estate Heaner Derbyshire, DE29 7SU United Kingdom (UK)
Type	PIPE PENETRATION (HYDROCARBON FIRE TEST)
Equipment Description	Single Pipe Penetration - Type: "FIRETEX Multi-Layer Fabric Seal"
Specified Standard	IMO Resolution A.517(13) and UK Department of Energy Hydrocarbon Time/Temperature Relationship
The attached Design Approval Document forms part of this certificate. This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Approval Document are complied with and the equipment remains satisfactory in service.	
Date of issue	30 November 2004
Expiry date	29 November 2009
Certificate No.	SAS F06M43
Signed	
Sheet No.	1 of 2
Name	B. McDonald 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 modifications or changes to the equipment in order to obtain a valid Certificate.	
THIS DOCUMENT IS SUBJECT TO THE PROVISIONS ON THE REVERSE	



MATERIAL TECHNICAL DATA STENCA PENETRATION SEAL

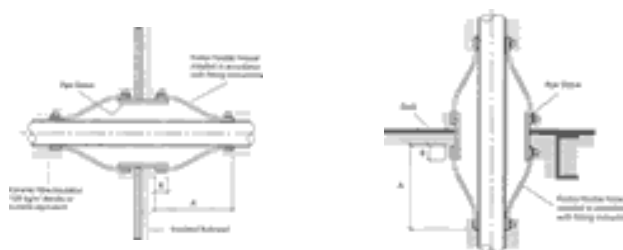
Single Sided Penetration Pipe Seal

Internal and External Protection for A0 & H0 fire and blast rated decks
Internal and External Protection for A0 & H0 fire and blast rated bulkheads.
Includes Lloyd's Cert. SAS F040443 & Blast Cert. LWT 401087/1



Double Sided Penetration Pipe Seal

Internal and External Protection for A60, H60 & H120 fire and blast rated bulkheads Internal and External Protection for A60, H60 & H120 fire and blast rated decks.
Includes Lloyd's Cert. SAS F040444 & Blast Cert. LWT 401087/1



Special H120 Penetration Pipe Seal

Internal and External Protection for A60, H60 & H120 fire and blast rated barriers.
Includes SAS F040442, Blast Cert. LWT 401087/1 and DNV Cert. F-



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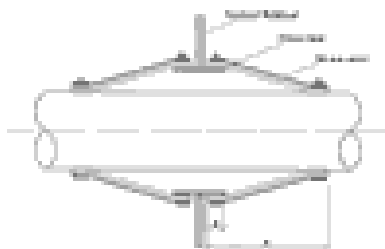


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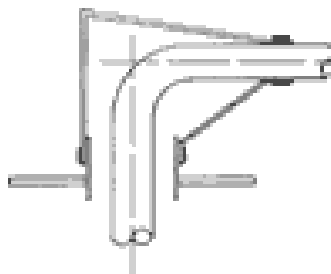
Jet Rated Pipe Penetration Seal

H120 Fire and blasted rated decks and bulkhead with Jet fire protection up to 120 minutes.

Includes Lloyd Cert. (SAS F050036, SAS F050037, SAS F000329) & Blast Cert. LWT 401087/1



Non-standard Penetration Seals



90° Elbow Seal

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Technical Data:

Pipe diameter		Standard seal length A
Up to 100mm	(4" NB)	150mm
125mm to 250mm	(5" NB to 10" NB)	200mm
300mm and above	(12" NB and above)	250mm
Sleeve diameter		Standard clipping length B
Up to 300mm	(12" NB)	25mm
350mm and above	(14" and above)	45mm