



DET NORSKE VERITAS

EC TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2011/75/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. **MED-B-8650**

This is to certify that the
Penetrations through "A" class divisions: pipe, duct, trunk, etc penetrations

with type designation(s)
PSI Marine Sealing System

Manufacturer
Pipeline Seal and Insulator Inc.
Houston TX, United States

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/3.26b and Annex B, Module B in the Directive, SOLAS 74 as amended, Regulation II-2/9, IMO MSC/Circ.1276 and IMO FTP Code

Further details of the equipment and conditions for certification are given overleaf.

Høvik, 2013-11-15
 for Det Norske Veritas AS



This Certificate is valid until
2018-10-10

Notified Body No.: **0575**

DNV local office:
Houston

M Gjelstad
Martin Gjelstad
Surveyor

Marianne Strand Valberhaug
 for **Marianne Strand Valberhaug**
Head of Department



The Certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this Certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended. The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.

Certificate No.: MED-B-8650
Item No.: A1/3.26b
Job Id.: 344.1-000107-4



Product description

"PSI Marine Sealing System"

Composed of a symmetrically fitted steel sleeve, sealant materials and steel pipe. The sleeve is completely insulated with 120 mm thick "Rockwool fire barrier 159", with density of 159 kg/m³ or equivalent. Additional 120 mm thick "Rockwool fire barrier 159" insulation is fitted on the unexposed (unex.) / exposed (ex.) side of the sleeve ends and pipe as described in the table below.

The sleeve is dammed in both ends by PSI Link Seal LS-500 or PSI Link Seal LS-200 for the largest or smallest penetration respectively, 12.7 mm air gap, 25.4 mm Fire Sealing Putty (manufactured by Specified Technologies, Inc) and 50.8 mm Fire Resistant Expanding Tape (manufactured by Artech Rubber B.V).

For further details see approved drawings listed under type approval documentation.

Application/Limitation

Approved for use as penetration system in Class A-0 to A-60 in steel bulkheads/decks. For A-0, A-15 and A-30 the penetration is to be insulated as A-60, and in addition the division is to be insulated at least 200 mm around the penetration. Other applications are subject to case-by-case approval.

The following limitation applies:

PSI Link Seal LS:	Sleeve [mm]			Pipe [mm]			
	Length	Diameter	Thickness	Fixed to division	Type	Diameter	Insulation length (unex./ex.)
Minimum size	506	76.1	5	welded	steel	42.4	260 mm
Maximum size	606	560	14	welded	steel	406.4	175 mm

Dimension between maximum and minimum sizes to be determined by interpretation of actual applications (see LSM-01-08 PSI Marine Sealing System Manual).

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

Each product to be supplied with its manual for installation and maintenance.

Type Examination documentation

Test report No. 2004-CVB-F0189 and No. 2004-CVB-F0190 both dated June 2004 from TNO Centre for Fire Research, Delft, Netherlands.

Letter from Efectis Nederland BV, Centre for Fire Safety dated 3. August 2007.

Drawings nos:

TNO-DK-1-005-LS-500 Rev. 1 dated 12 May 2008 (LS-500 deck)
TNO-DK-1-004-LS-200 Rev. 1 dated 12 May 2008 (LS-200 deck)
TNO-BH-1-005-LS-500 Rev. 1 dated 12 May 2008 (LS-500 bulkhead)
TNO-BH-1-004-LS-200 Rev. 1 dated 12 May 2008 (LS-200 bulkhead)
PSI-SS-1-004-LS-REV.1 dated 12 May 2008 (Sealing system)
All drawings from Pipeline Seal and Insulator, Inc.

Manual:

LSM-01-08 PSI Marine Sealing System Manual

Tests carried out

Tested in accordance with IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8.



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Marking of product

The product or packing is to be marked with name of manufacturer, type designation, fire-technical rating, Mark of Conformity and USCG approval number if applicable (see below).

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

USCG Approval

An U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of certificates of conformity for marine equipment" signed 17 October 2005.

