

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Fire Doors

with type designation(s)
A-60 SINGLE LEAF HINGED DOOR

Issued to
PARMARINE LTD.
LEPPÄVIRTA, Finland

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2015/559**,
Annex A.1, item No. A.1/3.16 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/and IMO 2010 FTP Code

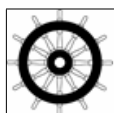
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2019-02-28**.

Issued at **Høvik** on **2016-12-13**

DNV GL local station:
Turku

Approval Engineer:
Tessa Biever



Notified Body
No.: **0575**

for **DNV GL AS**

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Vidar Dolonen
Head of Notified Body

Product description

"A-60 SINGLE LEAF HINGED DOOR"

consisting of single leaf hinged door with door blade composed of 0.75 or 1.0 mm steel sheet and an insulating core of 60 mm "PV-150 LO", density 150 kg/m³. Total door leaf thickness is approx. 62 mm. The door leaf is fixed to a 3 or 4 mm steel profile frame with 3 hinges. The door leafs may be installed in T frame and U frame. When T-frame is used, door leaf is equipped with three point lock. For further details with regards to T-frame, see the test report no. VTT-S-01130-11 and for U frame see the statement No. VTT-S-04557-11 both listed under Type Examination documentation below.

The door may be fitted with hose port.

The door may be fitted with gasket according to drawings (see Type Examination documentation).

The door may be fitted with a Ving Card type lock.

The frame may be welded or screw-fixed to the bulkhead.

The frame may also be fixed with M12 bulkhead stud welded screws with c/c distance 200 mm at upper corners, and c/c distance 300 mm elsewhere. The Z-frame may alternatively be fixed to the bulkhead with M10 bolts with max. c/c distance 200 mm. Gap between frame and bulkhead uses distance blocks and Pyropol-mastic sealing (alternatively; Ottoseal S 94, Sika Firesil Marine N, Sika Firestop Marine). If this gap is more than 8 mm, this requires that one of the below additional measures are taken:

1. For gaps between 8 and 25 mm: a 4 mm thick flat bar shall be seal welded around the perimeter of the door frame on the side of the distance blocks/support pieces. (To be welded against both bulkhead and frame, ref. detail (Section C-C) in drawing SA60S-08-5-0001 B, SA60D-01-5-0004 E FIG.1.1 (rev. A) referred to under Type Examination documentation below), or
2. For gaps between 8 and 15 mm: additional A-60 insulation shall be used. The side of the distance blocks/support pieces shall have a 60 mm thick and 60 mm wide rock wool insulation layer, covered with a 1 mm thick steel sheet attached to the stud bolts. (For more details, see drawing SA60S-08-5-0001 B, SA60D-01-5-0004 E FIG.1.2 referred to under Type Examination documentation below), or
3. For gaps between 8 and 15 mm: 2 pcs. additional stud bolts with distance blocks are to be added to the mid height of each vertical side of the door frame. In this way, the door frame at mid height on each vertical side will have 5 bolts with c/c distance 150 mm for M12 bolts (instead of 300 mm), or 5 bolts with c/c distance 100 mm for M10 bolts (instead of 200 mm). In addition, the edge along the periphery of the bulkhead opening (at stud bolt side, behind the door frame) is fitted with a 2.5 x 30 mm IntumexL fire seal. (For more details, see drawing SA60S-08-5-0001 C.1, SA60S-08-5-0001 C.2 FIG.1.3 referred to under Type Examination documentation below).
4. For gaps between 8 and 15 mm (U-frame): M12 stud welded screws are substituted with M10 stud welded screws. The c/c distance between bolts is 200 mm all over (i.e the above described "c/c distance 300 mm elsewhere" is not valid for this option). Gap between frame and bulkhead uses steel bushings Ø19.5/10.5 (L=5.5) in addition to distance blocks and Pyropol-mastic sealing material (or one of the above mentioned alternatives) and a 2.5x30 mm Intumex L fire seal is fitted behind the frame flange. (For more details, see drawing SA60D-13-5-0001A referred to under Type Examination documentation below).

The steel bulkhead, including edge of cut-out bulkhead opening, shall be insulated as required by the bulkhead fire rating.

Application/Limitation

The door is approved for installation in steel bulkheads of class A-60. Installation of the door in bulkheads made of other materials (aluminium, FRP, etc.) are subject to case-by-case approval.

Max size of clear opening: 1250 x 2100 mm (W x H).

The insulation materials and adhesives and gaskets used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

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

Type Examination documentation

Test Report Nos:

- RTE1854/00 dated 30 June 2000 (welded),
- RTE2388/03 dated 12 September 2003 (bolted),
- RTE2689/05 dated 23 September 2005,
- VTT-S-2565-08 dated 12 March 2008 (stud welded screws),
- VTT-S-01130-11 dated 25 February 2011 (installation in T frame).

All from VTT, Espoo, Finland.

Reference Test Report No:

- VTT-S-06879-13 dated 26 November 2013 (based on a double door of same type as the single door of this certificate, U-frame, used as test evidence in below Statement No. VTT-S-07940-13),
- VTT-S-02255-14 dated 28 May 2014 (new U-frame reference test).
- VTT-S-03613-16 dated 2 September 2016 (Ottoseal S 94, Sika Firesil Marine N, Sika Firestop Marine. Valid until 2019-02-28).
- VTT-S-05412-16 dated 12 December 2016 (sealant alternatives for U frame for gaps between 8-15 mm. Valid until 2021-12-12)

All from VTT, Espoo, Finland.

Statement Nos:

- RTE2448/02 dated 31 July 2002 (clearance),
- RTE2755/02 dated 23 August 2002 (steel thickness),
- RTE4343/03 dated 11 December 2003 (countersunk screws),
- RTE3337/04 dated 15 October 2004 (P-gasket),
- VTT-S-10855-06 dated 16 November 2006 (3 mm frame),
- VTT-S-04557-11 dated 14 June 2011 (U frame),
- VTT-S-03155-12 dated 25 April 2012 (Z-frame, additional stud bolts and intumex fire seal),
- VTT-S-07940-13 dated 20 November 2013 (U-frame fastening to bulkhead).
- VTT-S-03600-16 dated 1 September 2016 (Z-frame with M10 bolt size. Valid until 2019-02-28)

All from VTT, Espoo, Finland.

Drawings:

- No. SA60 DG_02_1_000
- No. SA60 DW_02_1_0001
- No. 78002
- No. 78003.

All from Parma Metals OY, Finland.

Drawings:

- No. app.1-4 dated 28 January 2004
- No. SA60S-08-5-0001 B, SA60D-01-5-0004 E FIG.1.1 (rev. A) dated 13 November 2008 (welded flat bar)
- No. SA60S-08-5-0001 B, SA60D-01-5-0004 E FIG.1.2 dated 04 September 2008 (additional insulation),
- No. SA60S-08-5-0001 C.1, SA60S-08-5-0001 C.2 FIG.1.3 dated 14 August 2012 (additional stud bolts and intumex fire seal)
- No. SA60D-13-5-0001A dated 23 May 2014 (U-frame fastening to bulkhead).

All from Parmarine Oy Ltd., Finland.



Job Id:
Certificate No: **MEDB00001EM**

Tests carried out

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

Marking of product

The product is to be marked with name and address of the manufacturer, type designation, fire-technical rating, the MED Mark of Conformity and USCG approval if applicable (see page 1).