DNV·GL

Certificate No:
MEDB000016V

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Fire dampers

with type designation(s)
SRFD A-60 (bulkhead, without seal bar and inflate bar)

Issued to
Taicang Paien Ocean Equipment Sci-tech Co., Ltd.
Taicang 100, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2015/559,**
Annex A.1, item No. A.1/3.22 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/9 and IMO 2010 FTP Code

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

This Certificate is valid until **2021-12-21**.

Issued at **Hamburg** on **2016-12-22**

DNV GL local station:
Shanghai CMC

Approval Engineer:
Marius Mørner

Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
Head of Notified Body

A 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 European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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Job Id:
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Product description

"SRFD A-60 (bulkhead, without seal bar and inflate bar)"
is an electric operated, rectangular fire damper with automatic (70+/-3 °C) and manual closing, bolted to the spigot and padded with 10 mm ceramic wool. The spigot is welded to the steel bulkhead.

Damper blades are 24 mm thick: 1.0 mm steel plate + 20 mm ABM-SR rock wool + 1.0 mm steel plate.

ABM-SR rock wool: nominal density of 150 kg/m^3, manufactured by Shanghai ABM Rockwool Co. Ltd.

For further details, see the drawings listed under Type Examination documentation below.

Application/Limitation

The fire dampers are approved for installation in class A-60 steel bulkheads. Other applications are subject to case-by-case approval.

The damper shall be capable of being closed from both sides of the bulkhead.

Maximum Fire Damper size:	1000x1000 mm (W x H)
Minimum Fire Damper casing thickness:	3-5 mm*
Minimum spigot thickness:	4-6 mm*
Maximum number of blades:	5
Maximum blade size:	198 x 1000 mm (W x H)
Minimum length of spigot on unexposed side:	545 mm
Minimum distance, fire damper centre ←→ bulkhead structural core:	310 mm

**depending on damper size, see drawings for further details.*

Insulation:
- 2 x 20 mm rock wool (type: TG, nominal density 170 kg/m^3), manufactured by Zhejiang Province Deqing County Pusen Fireproof Material Co., Ltd.
- exposed side: covering spigot and actuator
- unexposed side: 495 mm length of the spigot

The insulation used during testing is to be regarded as minimum insulation for all fire ratings, and is not to be removed if the fire damper is to be used in in divisions with lower fire ratings

The fire damper is to be fitted with open/close indication and shall be easily accessible (ex. inspection hatch).

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

Type Examination documentation

Test report no FT15388, dated 24th November 2015, from Far East Fire Testing Centre.

Drawings in document "Drawing for approval (Rec. fire damper part) bulkhead type (SRFD1000x1000)" (10 pages) dated 2016.03.30, from the Manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

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