

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 (deck)

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

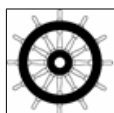
Further details of the equipment and conditions for certification are given overleaf.

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**

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Sven Dudzsus
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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

Product description

"SRFD A-60 (deck)"

is a pneumatic operated, rectangular fire damper with automatic (70+/-3 °C) and manual closing, bolted to the coaming and padded with 20 mm ceramic wool. The coaming is welded to the steel deck.

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 120kg/m³, manufactured by Shanghai ABM Rock Wool 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 deck. Other applications are subject to case-by-case approval.

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

Maximum Fire Damper size:	1800x1800 mm (W x H)
Minimum Fire Damper casing thickness:	3-5 mm*
Minimum coaming thickness:	3-5 mm*
Maximum number of blades:	10
Maximum blade size:	173 x 880 mm (W x H)
Minimum length of coaming on unexposed side:	550 mm
Minimum distance, fire damper centre ↔ deck structural core:	325 mm
<i>*depending on damper size, see drawings for further details.</i>	

Insulation:

- 2 x 20 mm rock wool, type: TG, nominal density 170 kg/m³, manufactured by Deqing County Pusen Fireproof Material Co., Ltd.
- exposed side: covering coaming and actuator
- unexposed side: 500 mm length of the coaming

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 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 FT16251, dated 21st June 2016, from Far East Fire Testing Centre.

Drawings in document "Drawing for approval, deck type, 100x100-1800x1800" (22 pages) dated 2016.07.13 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).