

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB0000C27
Revision no.:
0

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV 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)

A-60 Fire Damper Type: SFGD

issued to

Firsquare Energy (Shanghai) Co., Ltd.
Shanghai, China

is found to comply with the Implementing Regulation (EU) 2025/1533 for
Item no. **MED/3.22 (Row 1 of 1)**
according to the following requirements:
SOLAS 74 Reg. II-2/9, IMO MSC.1/Circ.1655

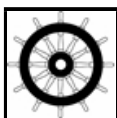
Further details of the equipment and conditions for certification are given overleaf.

Date of issue: **2026-02-06**

Expiry date: **2031-02-05**

DNV local unit:
Shanghai

Approval Engineer:
Timo Linn



Notified Body
no.: **0098**

for **DNV SE**

Christine Mydlak-Röder
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, and amended by Decision No 1/2023 dated May 26th, 2023.
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

A-60 Fire Damper Type: SFGD

are single and multi-bladed, rectangular fire dampers operated by a pneumatic or electric actuator, intended to use in Bulkhead.

Blade construction:

SFGD-P/E-1000 x 1000 (1000 mm x 1000 mm x 250 mm) : The blade is constructed of 1.2 mm steel plate + a steel screen + 1.2 mm steel plate with a total thickness of 25.4 mm.

SFGD-P/E-0100 x 0100 (100 mm x 100 mm x 150) : The blade is constructed of 1.2 mm steel plate + a steel screen + 1.2 mm steel plate with a total thickness of 25.4 mm.

Two layers of rock wool with 25 mm nominal thickness and 120kg/m³ nominal density (produced by Shanghai ABM Rockwool Co., Ltd.) is used in damper body and coaming.

The fire dampers are fixed to the coaming by means of: M10 x 50 mm steel bolts

The outer surfaces of all fire damper samples and the exposed side of the Bulkhead core (including the operation mechanism), as well as the outer surface of coaming, were all covered with 50 mm thick insulation material.

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

Application/Limitation

The fire dampers are approved for installation in class A60 steel Bulkhead. Other applications are subject to case-by-case approval.

For details of fire damper please see Appendix.

Actuators to be used (*):

- pneumatic: type GTEA110 and GTEA075 from Rotork Flow Technology (Suzhou) Co., Ltd
- electric: type INMAX-15-BF and INMAX-50-B3F from Schischek GmbH

(*) Actuators of same make but with different size as mentioned above may also be used, provided that they have sufficient torque, similar installation arrangement and equivalent fire technical and functional properties.

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

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.

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

Please see Appendix: Application/Limitation

Type Examination documentation

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

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

APPENDIX

Application/Limitation

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Max. size of damper [mm]	Coaming thickness [mm]	Damper body wall thickness [mm]	Coaming length on unexposed side [mm]	Coaming length on exposed side [mm]	Size between Damper centre and structural core	Material	Max. number of blades	Max. size of blade W x H x T [mm]	Application
1000 x 1000	5	5	550	500	375	SUS316L	5	999 x 217 x 25.4	A60
100 x 100	3	3	550	450	375	SUS316L	1	99 x 97 x 25.4	A60