

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)

Automatic Fail-Safe Marine Fire Damper (Deck): HYSF, HYDF and HYQF

Issued to

Jiangsu Hongyu Marine Equipment Limited Company
Taixing Jiangsu, China

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2017/306,**

item No. MED/3.22. SOLAS 74 as amended, Regulation II-2/9 and IMO 2010 FTP Code

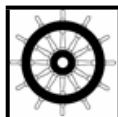
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-07-19**.

Issued at **Hamburg** on **2017-07-20**

DNV GL local station:
Jiangyin Station

Approval Engineer:
Marius Mørner



Notified Body
No.: **0098**

for **DNV GL SE**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"Automatic Fail-Safe Marine Fire Damper (Deck): HYSF, HYDF and HYQF"

circular and rectangular fire dampers with pneumatic, electrical or manual driven actuator, all with a fusible link. The damper is positioned on the stiffened/exposed face of the deck and fixed to the coaming with bolts and 5 mm thick ceramic wool padded at the joints. The coaming is welded to the steel deck.

Damper blades are 26-36 mm thick, covered with 3 mm steel plate and with a core of mineral wool (type TG-II, density 170 kg/m³, manufactured by Yixing Ocean Ship Material Co Ltd).

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

Application/Limitation

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

Insulation: 2 x 20 mm thick TG-II type ceramic wool produced by Yixing Ocean Ship Material Co., Ltd, 20 mm thick and 170 kg/m³ in density on exposed side (including stiffeners, damper, coaming and executive system), attached to the steel structures with steel pins and washers.

Construction - Circular

Maximum Fire Damper size:	DN 1400 mm
Minimum Fire Damper casing thickness:	5-10 mm*
Minimum coaming thickness:	10 mm
Maximum number of blades:	5
Maximum blade size:	1361 x 283 mm (W x H)
Minimum length of coaming on unexposed side:	500 mm
Minimum distance, fire damper centre ↔ deck structural core:	295 mm
<i>*depending on damper size, see drawings for further details.</i>	

Construction - Rectangular

Maximum Fire Damper size:	1400 x 1400 mm
Minimum Fire Damper casing thickness:	5-10 mm*
Minimum coaming thickness:	10 mm
Maximum number of blades:	5
Maximum blade size:	1356 x 283 mm (W x H)
Minimum length of coaming on unexposed side:	500 mm
Minimum distance, fire damper centre ↔ deck structural core:	225 mm
<i>*depending on damper size, see drawings for further details.</i>	

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 damper shall be capable of being closed from both sides of the deck, and shall be fitted with an open/close indicator.

Actuators to be used*:

- Pneumatic: SR105, by HyD.Star Fluid Controls Co., Ltd.
- electric: BLM-24, by Belimo (Shanghai) Trading Co., Ltd, Switzerland.
- manual: DL-I, by Ningbo Dongling Plumb & Air-conditioning Parts and Accessories Co., Ltd.

**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.*

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

Type Examination documentation

Test reports, both dated 20th November 2014 and from Far East Fire Testing Centre, Shanghai, China:



Job Id: **344.1-006353-1**
Certificate No: **MEDB000021C**

- FT14275-A (circular)
- FT14276-A (rectangular)

Drawings: CB/T3557, 22 pages, dated 2014-7-25, issued by the Manufacturer.

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).