EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007DX

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)
CFHCD-S (510x510-B), CFH-D (500x700-B), CFH-S (120x120-B), CFHD-S (300x400-B), CFHCD-S (300x400-B), CFHCD-Q (1650x1650-B)

Issued to
Jiangsu Sanxian Shipping Equipment Co., Ltd.
Taixing, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170,**
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 **2026-04-27**.

Issued at **Hamburg** on **2021-04-28**

DNV local station:
Jiangyin NB & CMC

Approval Engineer:
Roland Priebe

Notified Body
No.: **0098**

for **DNV SE**

Christine Mydlak-Roeder
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 1/2018 dated February 18th, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 300,000 USD.

Product description

CFHCD-S (510x510-B), CFH-D (500x700-B), CFH-S (120x120-B), CFHD-S (300x400-B), CFHCD-S (300x400-B), CFHCD-Q (1650x1650-B) are class A-60 rectangular fire damper for steel bulkhead mounting.

Construction as tested:

Fire Damper	Coaming thickness [mm]	Coming length on unexposed side [mm]	Damper body wall thickness [mm]	Fixation to the coaming	Closing: Actuator / Type*	Actuator made by
CFHCD-S (510x510-B)	5	500	4	16 x Ø M8 steel bolts	Manual / DL-CII-3	Ningbo East Spirit of Plumbing Air Condition Parts Co., Ltd.
CFH-D (500x700-B)	5	500	5	24 x Ø M8 steel bolts	Electric / BFL230	BELIMO Switzerland
CFH-S (120x120-B)	5	500	3	8 x Ø M8 steel bolts	Manual / DL-CII-4	Ningbo East Spirit of Plumbing Air Condition Parts Co., Ltd.
CFHD-S (300x400-B)	5	500	5	14 x Ø M9 steel bolts	Manual / DL-CII-4	Ningbo East Spirit of Plumbing Air Condition Parts Co., Ltd.
CFHCD-S (300x400-B)	5	500	5	14 x Ø M9 steel bolts	Manual / DL-CII-3	Ningbo East Spirit of Plumbing Air Condition Parts Co., Ltd.
CFHCD-Q (1650x1650-B)	5	500	10	40 x Ø M12 steel bolts	Pneumatic / KNK-105	Kenike Ocean Electrical Equipment Ltd.

Two layers of 20 mm thick insulation material is applied on the external surface of the fire dampers (including actuator) and on the external surface of the coaming/spigot.

The insulation used is TG-2 ceramic wool from Changzhou Thermal Insulation Material Co., Ltd. and has a nominal thickness of 20 mm, a nominal density of 170 kg/m³ and ≤ 2.5 % organic content.

For further details refer to the documentation listed below under “Type Examination documentation”.

Application/Limitation

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

Fire Damper	Max. external size [mm]	Max. ventilation size [mm]	Max. number of blades	Max. blade dimension [mm]	Blade material
CFHCD-S (510x510-B)	570 x 570	510 x 510	2	474 x 258	1.2 mm steel plate + 40 mm ceramic wool + 4 mm steel plate
CFH-D (500x700-B)	560 x 760	500 x 700	1	496 x 677	5 mm steel plate
CFH-S (120x120-B)	180 x 180	120 x 120	1	115 x 115	3 mm steel plate
CFHD-S (300x400-B)	360 x 460	300 x 400	2	247 x 220	5 mm steel plate
CFHCD-S (300x400-B)	360 x 460	300 x 400	2	264 x 182	1.2 mm steel plate + 40 mm ceramic wool + 4 mm steel plate
CFHCD-Q (1650x1650-B)	1770 x 1770	1650 x 1650	6	1610 x 285	1.2 mm steel plate + 40 mm ceramic wool + 5 mm steel plate

(*) Actuators of same brand 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 fire damper is to be fitted with open/close indication and shall be easily accessible.

The insulation used is to be regarded as minimum insulations for all fire rating and is not to be removed if the fire damper is to be used in division with lower fire ratings.

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

Type Examination documentation

Test report no. FT17078 dated 24th April 2017, issued by Far East Fire Testing Centre, Shanghai, China.
Test report no. FT17184 dated 18th August 2017, issued by Far East Fire Testing Centre, Shanghai, China.
Test report no. FT17310 dated 15th December 2017, issued by Far East Fire Testing Centre, Shanghai, China.

Tests carried out

Tested according to IMO Res. MSC.307(88) - 2010 FTP Code, Annex 1, Part 3.

USCG Approval Category (Module B) number

This product has been assigned a U.S. Coast Guard Module B number 164.139/EC0098 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval 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.1/2018 dated February 18th, 2019.

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 (see page 1) and USCG approval number, if applicable.