EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB0000988

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)
HLCF-D/DS-DN325, HLCF-S/DS-320x1100, HLCF-Q/DM-1200x2200

issued to
Taixing Hualong Shipping Machinery Co., Ltd.
Taixing City, **China**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2024/1975,**
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 **2029-11-24**.

Issued at **Hamburg** on **2024-11-25**

DNV local unit:
Jiangyin NB & CMC

Approval Engineer:
Meike Grabau

Notified Body
No.: **0098**

for **DNV SE**

Mydlak-Röder, Christine
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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 300,000 USD.

Product description

"HLCF-D/DS-DN325"
"HLCF-S/DS-320x1100"
"HLCF-Q/DM-1200x2200"
are single- or multi-bladed circular or rectangular fire dampers with manual, electrical or pneumatic driven actuators, all with a fusible link. The following fire dampers construction were tested in class A-60 deck

Fire Damper	Coaming thickness [mm]	Coaming length on unexposed side [mm]	Damper body wall thickness [mm]	Damper body length [mm]	Damper fixed to coaming by steel bolts
HLCF-D/DS-DN325	5	765	5	320	8 x M10
HLCF-S/DS-320x1100	5	765	5	320	26 x M8
HLCF-Q/DM-1200x2200	8	765	10	320	32 x M16

The fire dampers are flanged to the coaming and 5 mm thick TG type ceramic wool is padded. The coamings are welded to the deck. The fire dampers and the coamings are insulated by three layers of 20 mm thick TG type ceramic wool. The TG type ceramic wool insulation is produced by Zhejiang Pusen New Material Technology, nominal density of 170 kg/m^3.

For further details, see documents in Type Examination documentation below.

Application/Limitation

Approved for installation in class A-60 steel deck. Other applications are subject to case-by-case approval.

Fire Damper	Max. size of damper [mm]	Max. number of blades	Actuator type	Blade max. size [mm]
HLCF-D/DS-DN325	Ø 325	1	Electrical	315 x 24 (Ø x t)
HLCF-S/DS-320x1100	320 x 1100 (W x H)	1	Manual	312 x 1072 x 24 (W x H x t)
HLCF-Q/DM-1200x2200	1200 x 2200 (W x H)	8	Pneumatic	1168 x 276 x 35 (W x H x t)

Actuators to be used (*):
- Electric BFL-230
- Manual DL-C II-4
- Pneumatic α-SR-125.

(*) 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 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

Tests carried out

Tested according to IMO 2010 FTP Code, Annex 1, Part 3.

Marking of product

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