DNV·GL

Certificate No:
MEDB00004AH

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)
Round deck fire damper HLCF-S(D&Q)/DM

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) 2019/1397,**
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 **2024-11-04**.
Issued at **Hamburg** on **2019-11-05**

DNV GL local station:
Jiangyin

Approval Engineer:
Karolina Kusmider

Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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Product description

"HLCF-S(D&Q)/DM"
is a multi-bladed circular fire damper for decks with pneumatic driven actuator. The following fire damper construction were tested:

Fire Damper	Spigot thickness [mm]	Spigot length on unexposed side [mm]	Damper body wall thickness [mm]	Blade max. size W x H x t [mm]
HLCF-S(D&Q)/DM	10	780	10	Ø1600 x 35

The fire dampers are fixed to the coaming usingM16x45bolting. The damper body and coaming are insulated.

Insulation of the damper body and spigot:
Three layers of TG type ceramic wool produced by Deqing Country Pusen Fireproof Material Co., Ltd with 20 mm nominal thick and density of 170 kg/m^3.

For further details, see 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.

Fire Damper	Max. size	Max. number of blades	Actuator type	Application
HLCF-S(D&Q)/DM	Ø1600	6	Pneumatic	A60

Actuator to be used (*):
-Pneumatic 10-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

Test report no. FT18149 dated 23 July 2017, issued by Far East Fire Testing Centre, Shanghai, China.
Drawings No.:

- HLCF-S(D&Q)-05-SA1 dated 25 April 2018,
- HLCF-S(D&Q)-05-SA2 dated 25 April 2018,
- HLCF-S(D&Q)-05-SA3 dated 25 April 2018,
- HLCF-Q/BMS-DN1600-BL00 (1 sheet) dated 25 April 2018,
- HLCF-Q/BMS-DN1600-M00 (2 sheets) dated 25 April 2018,
  all above from manufacturer.

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 of manufacturer, type designation, MED Mark of Conformity and USCG approval number (if applicable).