DNV·GL

Certificate No:
MEDB0000528

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 Fire Dampers, Type HXFD Class A60

Issued to
Changshu Haixin Ship Machinery Manufacture Co., Ltd.
CHANGSHU, Jiangsu, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773,**
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 **2024-06-19**.

Issued at **Hamburg** on **2019-06-20**

DNV GL local station:
Shanghai

Approval Engineer:
Roland Priebe

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Round Fire Dampers, Type HXFD

HXFD-Φ1800-CM: Multi blade round fire damper, type HXFD-Φ 1800-CM, tested in vertical and horizontal position clear opening diameter: 1800 mm; Actuation of the fire damper: manual, automatic (low-melting rod - 72°C); acc. to drawings in the test report FT19025: Figures 1 to 4.
Length between coaming flange and steel bulkhead is min. 250 mm on exposed side, and min. 450 mm on unexposed side.
Thickness of coaming: 12mm.
Maximum number of blades: 7

Actuation is done manually see test report FT19025 Fig.3.

Actuator to be used:
Manual actuator Type HXFD-CM-ZC-01 of was installed outside the damper, which was produced and provided by Changshu Haixin Ship Machinery Manufacture Co., Ltd.

When constructed and insulated as described in the test report the fire damper fulfilled the temperature requirements for Class A-60 Bulkhead / Deck.

HXFD-CP-Φ1000-00: Multi blade round Fire Damper, type HXFD-CP-Φ1000-00, tested in horizontal and vertical position clear opening diameter: 1000 mm; Actuation of the fire damper: manual, automatic (low-melting rod - 72°C); acc. to drawings in the test report FT19024 Figures 1, 2, 10-14 and FT19022 Figures 1-7.
Length between coaming flange and steel bulkhead is min. 250 mm on exposed side, and min. 450 mm on unexposed side.
Thicknes of coaming 10 mm
Maximum number of blades: 5

Actuation is done manually or automatically by thermal triggering device (bulb) combined with an pneumatic spring return actuator (see below).

Actuator to be used:
pneumatic actuator of SK-105 cylinder was installed outside the damper, which was produced and provided by WUXJ SHENGKE STAINLESS STEEL PNEUMATIC AUTOMATIC CONTROL VALVE FACTORY.
When constructed and insulated as described in the test report the fire damper fulfilled the temperature requirements for Class A-60 Bulkhead/Deck

HXFD-CE-Φ400-00: Single blade round Fire Damper, type HXFD-CE-Φ400-00, tested in horizontal and vertical position clear opening diameter: 400 mm; Actuation of the fire damper: electric; acc. to drawings in the test report to drawings in the test report FT19024 Figures 1, 2, 15-17 and FT19022 Figures 1, 2, 11-13.
Length between coaming flange and steel bulkhead is min. 250 mm on exposed side, and min. 450 mm on unexposed side.
Thicknes of coaming: 6 mm
Maximum number of blades: 1

Actuation is done manually or automatically by thermal triggering device (bulb) combined with an electrical actuator (see below).

Actuator to be used:
- SFU-S2 type electric actuator produced and provided by Belimo Actuators Shanghai Trading 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.

When constructed and insulated as described in the test report the fire damper fulfilled the temperature requirements for Class A-60 Bulkhead /Deck.

HXFD-CM-Φ600-00: Multi blade round fire damper, type HXFD-CE-Φ600-00, tested in vertical position clear opening diameter: 600 mm; Actuation of the fire damper: manual, automatic (low-melting rod - 72°C); acc. to drawings in the test report FT19022: Figures 1, 2, 8-10.
Length between coaming flange and steel bulkhead is min. 275 mm on exposed side, and min. 450 mm on unexposed side.
Thickness of coaming: 8mm.
Maximum number of blades: 2

Actuation is done manually or automatically by thermal triggering device (bulb) see test report FT19022 Fig.3.

Actuator to be used:
- DL-CII-4 type manual actuator was installed outside the damper, which was produced and provided by Ningbo East Spirit of Plumbing Air Conditioning Parts 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.

When constructed and insulated as described in the test report the fire damper fulfilled the temperature requirements for Class A-60 Bulkheads.

The insulation material used on damper body, external surface of coaming/spigot and in the interior of the damper blades is TG type ceramic wool (measured thickness = 20 mm, density = 170 kg/m³) produced by Zhejiang Deqing Pusen New Material Technology Co., Ltd.

Actuator: Besides the a.m. actuators each damper is also fitted with automatic closing function set to 70° ± 3° C.

For further details please see under Type Examination documentation

Application/Limitation

The fire dampers are may approved for installation in A-class steel bulkhead/deck.

Other applications are subject to case-by-case approval.

The fire damper shall be capable of being closed from both sides of the bulkhead and shall be fitted with open/close indicator.

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.

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 functional properties.

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

Type Examination documentation

Test Report Nos.:
- FT19024 dated on February 25th 2019 and issued by Far East Fire Testing Centre Shanghai, P.R. China

-FT19025 dated on February 26th 2019 and issued by Far East Fire Testing Centre Shanghai, P.R. China
-FT19022 dated on February 25th 2019 and issued by Far East Fire Testing Centre Shanghai, P.R. China

Tests carried out

Tested according to IMO 2010 FTP Code, Annex 1, 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).