

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Fire Damper**with type designation(s)
CF(E)(P)D-DN

Issued to

Jiangsu Fengyuan Shipping Engineering Co., Ltd
Taixing, Jiangsu, China

is found to comply with

DNV GL offshore standards**DNV GL rules for classification – Ships****DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****The fire damper is approved for installation in steel bulkheads.****Application/Limitations see overleaf.****This certificate is recognized by Transport Canada.**Issued at **Høvik** on **2020-04-15**This Certificate is valid until **2025-04-14**.for **DNV GL**DNV GL local station: **Jiangyin CMC**Approval Engineer: **Karolina Kusmider**

Mårten Schei-Nilsson
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

"Bulkhead Fire Damper CF(E)(P)(D)-DN"

is a circular fire damper for bulkheads with a manually, electrically or pneumatically driven actuator. The following fire damper construction was tested:

Fire Damper	Spigot thickness [mm]	Spigot length on the unexposed side [mm]	Damper body wall thickness [mm]	Blade	Blade max. size Ø x t [mm]	Fixation to the coaming
CF(E)(P)(D) - DN200	3	500	4	single	194 x 30	eight M8 mm diameter steel bolts
CF(E)(P)(D) - DN400	5	500	5	multi	391 x 30	twelve M8 mm diameter steel bolts
CF(E)(P)(D) - DN450	5	500	6	single	444 x 30	twelve M8 mm diameter steel bolts
CF(E)(P)(D) - DN400	5	500	5	single	394 x 30	twelve M8 mm diameter steel bolts
CF(E)(P)(D) - DN600	5	600	8	multi	592 x 30	sixteen M8 mm diameter steel bolts
CF(E)(P)(D) - DN800	5	600	8	multi	792 x 30	twenty-four M8 mm diameter steel bolts

The damper body and coaming are insulated with three layers of LYKR-900T type marine soluble fibre blanket, produced by Luyang Energy-saving Materials Co. Ltd, of 20 mm nominal thick and density of 96 kg/m³.

For further details, see Type Examination documentation below.

Application/Limitation

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

The damper shall be capable of being closed from both sides of the bulkhead.

Fire Damper	Max. size Ø [mm]	Max. number of blades	Actuator type	Application
CF(E)(P)(D)-DN200	200	1	Pneumatic/Electric/Manual	A60
CF(E)(P)(D)-DN400	400	3	Pneumatic/Electric/Manual	A60
CF(E)(P)(D)-DN450	450	1	Pneumatic/Electric/Manual	A60
CF(E)(P)(D)-DN400	400	1	Pneumatic/Electric/Manual	A15
CF(E)(P)(D)-DN600	600	3	Pneumatic/Electric/Manual	A30
CF(E)(P)(D)-DN800	800	5	Pneumatic/Electric/Manual	A60

Actuator to be used (*):

Pneumatic aa45-SR or aa60-SR

Manual DL-CII-4
Electric BFL24

(*) Actuators of the same brand but with a different size as mentioned above may also be used, provided that they have a sufficient torque, a 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 Approval documentation

Test report no. FT19013 dated 25 February 2019, test report no. FT19014 dated 25 February 2019 and test report no. FT19015 dated 12 March 2019, all issued by Far East Fire Testing Centre, Shanghai, China.

Drawings No.:

- CF-DN200 dated 21 January 2019 from the manufacturer
- CF-DN200-00ZT dated 22 January 2019 from the manufacturer
- CF-DN200-01 dated 22 January 2019 from the manufacturer
- CF-DN200-02 dated 22 January 2019 from the manufacturer
- CFP-DN450 dated 21 January 2019 from the manufacturer
- CFP-DN450-00ZT dated 22 January 2019 from the manufacturer
- CFP-DN450-01 dated 22 January 2019 from the manufacturer
- CF-DN450-02 dated 22 January 2019 from the manufacturer
- CFE-DN400 dated 21 January 2019 from the manufacturer
- CFE-DN400-00ZT dated 22 January 2019 from the manufacturer
- CFE-DN400-01 dated 22 January 2019 from the manufacturer
- CF-DN400-02 dated 22 January 2019 from the manufacturer
- CF-DN400-03 dated 22 January 2019 from the manufacturer
- CFED-DN600 dated 21 January 2019 from the manufacturer
- CFED-DN600-00ZT dated 22 January 2019 from the manufacturer
- CFED-DN600-01 dated 22 January 2019 from the manufacturer
- CFD-DN600-02 dated 22 January 2019 from the manufacturer
- CFD-DN800 dated 21 January 2019 from the manufacturer
- CFPD-DN800-00ZT dated 22 January 2019 from the manufacturer
- CFPD-DN800-01 dated 22 January 2019 from the manufacturer
- CFPD-DN800-02 dated 22 January 2019 from the manufacturer

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 of manufacturer, type designation, fire technical rating.

Transport Canada approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment



Job Id: **262.1-030530-1**
Certificate No: **TAF00001CM**

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.