EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00008BU

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)
Automatic fail-safe round (max FDA-315-EL230) and Gastight Automatic fail-safe round (max FDA-G-315-EL230)

Issued to
Przedsiebiorstwo ALWO Sp. z o.o.
Toruń, **Poland**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2022/1157,**
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 **2028-04-24**.

Issued at **Hamburg** on **2023-04-25**

DNV local unit:
Gdansk CMC

Approval Engineer:
Roland Priebe

Notified Body
No.: **0098**

for **DNV GL 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

The **Automatic fail-safe round (max FDA-315-EL230) and Gastight Automatic fail-safe round (max FDA-G-315-EL230)** are fire dampers for use in A60 class decks or bulkheads. Actuation is done manually or automatically by thermal triggering device combined with an electric spring return actuator.

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
max FDA-315-EL230	5	450	3	M8 x 30 mm steel bolts	Electric / BF 230	Belimo Actuators Ltd.
max FDA-G-315-EL230	5	450	3	M8 x 30 mm steel bolts	Electric / BF 230	Belimo Actuators Ltd.

The housing is insulated from the outside with 60 mm and 25 mm thick Paroc Marine Fire Slab 100 mineral wool (density: 100 kg/m³) produced by Paroc Group Oy.

Inside the housing are two half rings, limiting rings as a stop for the blades (8 x 16 x 457 mm). The gastight fire damper has here an additional silicon profile LAR 11706 produced by LARKIS.

The damper blade consists of 3 mm steel sheet + insulation + 1 mm steel sheet fixed together with steel rivets. The insulation used is Paroc Marine Fire Slab 150 mineral wool (density: 150 kg/m³) produced by Paroc Group Oy. Promaseal expanding seal (17 mm x 2 mm) produced by Promat is placed on the perimeter of the blade.

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

Application/Limitation

Approved for installation in A-60 class steel decks or bulkheads. 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
max FDA-315-EL230	Ø405	Ø315	1	Ø306 x 20	3 mm steel sheet + 16 mm mineral wool + 1 mm steel sheet
max FDA-G-315-EL230	Ø405	Ø315	1	Ø306 x 20	3 mm steel sheet + 16 mm mineral wool + 1 mm steel sheet

Actuator to be used: Belimo BF 230 electric actuator and thermal release TSF-073 (73°) produced by MS Electronic. 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 deck/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. RS-22/B-145/E rev.2 dated 2022-09-21 from CTO, Gdansk, Poland.
Test report No. RS-22/B-297/E rev.3 dated 2022-09-27 from CTO, Gdansk, Poland.
Test report No. RS-22/B-298/E rev.3 dated 2022-09-27 from CTO, Gdansk, Poland.

Tests carried out

Tested according to IMO 2010 FTP Code 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 if applicable (see page 1).