DNV·GL

Certificate No:
TAF00000WW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fire Damper

with type designation(s)
NFR1-LW

Issued to
A.C. Smith & Co AS
Oslo, Norway

is found to comply with
DNV GL rules for classification – Ships
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations
DNV GL offshore standards

Application :

Approved for use in ducts penetrating class A bulkheads and decks.

This certificate is recognized by Transport Canada.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2018-06-13**
This Certificate is valid until **2023-06-12**.
DNV GL local station: **Oslo Maritime and CAP**

Approval Engineer: **Synnøve Bolstad Eri**

for **DNV GL**

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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

"NFR1-LW"
multi-bladed rectangular fire damper with automatic (70ºC) and manual/pneumatic/electric release
Damper blades are made from 4 mm thick stainless steel.

The fire damper casing is 300 mm long with 80 mm flanges and made from 3 mm thick stainless steel (*see application/ limitation below).

The fire damper is flanged to a steel coaming by means of nuts and bolts (size M12) at a maximum spacing of 150 mm apart and is fully welded to the bulkhead or deck plate.

For further details, see the below Application/Limitation and Type Approval documentation.

Application/Limitation

Approved for use in ventilation ducts penetrating steel bulkheads and decks of class A-0. The arrangement of the fire damper and necessary insulation of damper frame and ducting in the vicinity of the partition is subject to approval in each case.

Min. size of damper:	100 mm x 100 mm (W x H)
Max. size of damper:	1200 mm x 1200 mm (W x H)
Max. blade height:	240 mm
Max. blade width:	1200 mm
Max. number of blades:	5

*Steel thickness of damper casing to be equal to or greater than thickness of duct/sleeve required by the rules if the damper casing is part of the duct/sleeve.

Actuator that may be used(*):
Electrical actuators
- Schischeck In/Red/Ex Max-15/100/-SF/BF
- Edelweiss Ex
- Belimo BF230/24/NF24A

Pneumatic
- ELOMATIC FS100
- AIR TORQUE AT-201U/251U
- PRISMA PI10S/PI20S
- ROTORK GTS
- ACT-REG 130

(*) 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 bulkhead or deck.

The fire damper is to be operated automatically and manually according to SOLAS II-2, Reg. 9.7.

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2017.

Test reports No. 150080-80A dated 10 January 2018 from RISE Fire Research, Trondhaim, Norway.
Test reports No. 150080-80B dated 10 January 2018 from RISE Fire Research, Trondhaim, Norway.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

The product is to be marked with name of manufacturer, type designation and 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 products listed in this certificate are in accordance with Transport Canada's requirements.

Periodical assessment

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.