

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Fire Doors

with type designation(s)
COSMO A-60WET

Issued to

COSMO Co., Ltd.
Busan, Republic of Korea

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/3.16. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/Circ.1511

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2020-06-10**.

Issued at **Høvik** on **2018-07-09**

DNV GL local station:
Gimhae Station

Approval Engineer:
Krzysztof Kolakowski



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Product description

"COSMO A-60WET"

is a single leaf hinged door. The door leaf consists of a 4 mm thick steel sheets on both sides and 72 mm thick core of mineral wool (50 mm + 22 mm), nominal density 240 kg/m³ and type "Mineral wool" (manufactured by KCC CORPORATION). The door can be made in two variants: A and B.

Total door leaf thickness is 80 mm.

The door leaf is connected to the frame with 3 reinforced hinges, and closed to the door frame at 8 fastening points with interconnected rods and transmission which is connected to handle on both sides of the door.

Variant A:

The door leaf incorporates three horizontal 4 mm thick steel angle stiffeners and the upper part of the door leaf, 100 mm space, is internally reinforced with 4 mm thick steel plate. The insulation is bonded to steel sheets on both sides with adhesive. The door leaf is fitted with rubber seal 20x35 and weathertight seal 5x20.

The door frame is made from 5 mm thick steel sheets, and may be bolted by M8 x 25L bolts distributed max. every 300 mm or welded to the bulkhead. The door frame is fitted with ceramic seals (Ø23) along the edges of the door leaf.

The door may be fitted with:

- Window in the upper part of the doors, type designation "Contraflam A60" (manufactured by Saint-Gobain). Thickness: 27 mm.

Variant B:

The door leaf incorporates two vertical 3 mm thick steel double c-shaped profile reinforcing channels. The door leaf is fitted with rubber seal 20x20 and weathertight seal 5x20.

The door frame is made from 5 mm thick steel sheets, and may be bolted by M8 x 25L bolts distributed max. every 300 mm or welded to the bulkhead. The door frame is fitted with ceramic seals (Ø23) along the edges of the door leaf.

For further details Type Examination documentation below.

Application/Limitation

The door is approved for installation in steel bulkheads of class A-60. Installation of the door in bulkheads made of other materials (aluminium, FRP, etc.) are subject to case-by-case approval.

Max. clear opening window:	400 mm x 400 mm	(W x H)
Max. clear opening door:	1100 mm x 2200 mm	(W x H)
Max. size of door leaf:	1137 mm x 2237 mm	(W x H)

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

Note that this is a fire safety certificate which only covers fire technical properties (i.e. not to cover strength evaluations related to watertightness, weathertightness, etc.).

Variant A fire door of marginally larger dimensions than a fire-tested fire door may be individually assessed and accepted by Flag Administration (or Recognized Organization acting on its behalf) for a specific project with the same classification, provided documented compliance with IMO MSC.1/Circ.1319.

Job Id: **344.1-004530-2**
Certificate No: **MEDB00003SW**

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

Type Examination documentation

For Variant A:

Test report no. KOMERI-0402-14T2945 dated 17 April 2015 from Korea Marine Equipment Research Institute (KOMERI), Busan, Rep. of Korea.

Drawing no. CD-FA60WETD-2 (10 pages) dated 5 December 2014 from Cosmo Co., Ltd.

For Variant B:

Test report no. KOMERI-0402-18T0766-1 dated 12 April 2018 from Korea Marine Equipment Research Institute (KOMERI), Busan, Rep. of Korea.

Drawing no. CD-FA60WETD-0V (9 pages) dated 10 March 2018 from Cosmo Co., Ltd.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

The Variant A door has been successfully tested with extended test period of 68 minutes in compliance with IMO MSC.1/Circ. 1319.

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).