

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 "A" Class divisions, fire integrity

with type designation(s)

Fire Stacking Barrier A-60 for closure of Class A-60 bulkhead (unrestricted use)

Issued to

**KAEFER Schiffsausbau GmbH
Bremen, Germany**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2017/306,**

item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP Code and IMO MSC/Circ.1120.

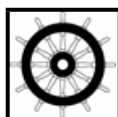
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-04-05**.

Issued at **Hamburg** on **2017-04-06**

DNV GL local station:
Essen

Approval Engineer:
John Alan Walton



Notified Body
No.: **0098**

for **DNV GL SE**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Product description

The "Fire Stacking Barrier A-60" is composed of a structural support frame mounted around the top and sides of the bulkhead opening, supporting a movable barrier consisting of eight segments forming the movable barrier which can be pulled upwards and stacked together above the bulkhead opening; its drive unit and folding mechanics and the side frames which contain the guide rails for the movable barrier.

The structural support frame is constructed of steel rectangular hollow sections clad with Promatect-L fire board. The structure forming the guide rails is constructed of 3 mm thick flanged steel plate clad with Promatect-L fire board.

Each of the eight movable barrier segments (overall thickness 55 mm) consists of two layers of LOLAMAT fire board panel within peripheral steel U-profile (t=2mm) frame. The segments are connected to each other with bolted link plates. The vertical sides of each segment are fitted with support rollers and with guide rollers which run in the guide rails. Intumescent gaskets of type ROKU Strip 17 x 1.5mm and Promaseal 15 x 2 mm seal the movable barrier at the interfaces with the guide rails.

The LOLAMAT fire board lintel closing plate at the top of the barrier is normally upright. When the movable barrier is in the closed position and when the glass filament/ wire fixing, holding the lintel, melts at high temperature thus permitting the horizontal gap between the top of the movable barrier and the structural support frame to be closed by the lintel which is now in the horizontal position. An intumescent gasket of type Promaseal 15 x 2 mm forms the seal.

The movable barrier's bottom seal to the deck is formed by a steel C-profile with glass fibre gasket.

Insulation Materials:

Promatect-L calcium silicate fire board of nominal density 500 kg/m³.

LOLAMAT fire board (nominal density 1440 kg/m³) composed of inorganic mineral material

Adhesive was Cosmopur K1-1664E. Other adhesives which fulfil the requirements of the IMO 2010 FTP Code Annex 1, Part 5 may be used.

Application/Limitation

The "Fire Stacking Barrier A-60" fire resisting barrier may be mounted on either side of a Class A-60 bulkhead (unrestricted use). The materials used and the construction and installation of this stacking fire resisting barrier unit are to be as specified in the technical assessment reports and supporting test reports listed under "Type Examination documentation".

The tested specimen had a clear opening size of 5600mm wide and 3950mm high. A stacking fire resisting barrier unit with this clear opening size has an overall size of 5980mm in width and 4680mm in height.

On the basis of IMO MSC/Circ.1273 and MSC/Circ.1319 Section 2 the "Fire Stacking Barrier A-60" may have marginally larger dimensions as follows:

Up to a maximum clear width of 6400mm when the clear height does not exceed 3778mm.

Up to a maximum clear height of 4543mm when the clear width does not exceed 5355mm.

The surface area of the fire barrier (over clear opening) shall not exceed 24.33 sq.m.

The "Fire Stacking Barrier A-60" is not to be used in escape routes.

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics (IMO FTP Code Annex 1, Parts 2 and 5).

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

Type Examination documentation



Job Id: **344.1-006767-1**
Certificate No: **MEDB00002EW**

Tests carried out

IMO Res.MSC.61(67), Annex 1, Part 3, IMO Res.A.754(18) and in compliance with 2010 FTP Code Ch.8.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, Mark of Conformity and USCG marking.