

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)

Roller shutter for closure of Class A-60 bulkhead - A-60 Roller Shutter SlimLine

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, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434

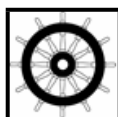
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-07-26**.

Issued at **Hamburg** on **2018-05-15**

DNV GL local station:
Bremerhaven

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Trade name: A-60 Roller Shutter SlimLine

The main components of the roller shutter assembly are:

Steel tubular roller and its bearings mounted above the bulkhead opening enclosed with a steel sheet housing. The roller shutter is wound around the tubular roller. The housing and bearing brackets are bolted to the steel bulkhead.

Each of two side guides consists of a U and an L shaped profile (2mm thick steel plate) bolted together to form a box type construction each serving as the side guides for the roller shutter. The guides are bolted to the bulkhead and are flared at the top thus directing the roller shutter from the tubular roller down into the side guides.

The roller shutter itself is a high temperature resistant glass fibre textile (Ignischield SC fabric) curtain with embedded intumescent strips (Palusol).

The lintel sealing arrangement is a flanged 2mm thick steel sheet construction, bolted to the bulkhead just above the bulkhead opening below the curtain roller, incorporating an intumescent sealing arrangement which will close any gap between the curtain and housing. The lintel sealing arrangement may be constructed in two variants:

Variant 1: The horizontal face of the lintel is insulated on both sides with Promatect H board and the construction incorporates two intumescent sealing arrangements (combination of Palusol and Roku intumescent strips). See drawing No. 258545 Rev.B "Sturzabdichtung" (Fig. 2.1 of Test Report No. 20160697) listed under Type Examination documentation below.

Variant 2: The horizontal face of the lintel is insulated on the inside with Lolamat W25 board and the construction has a single intumescent sealing arrangement using Palusol intumescent strips). See drawing No.2X262524-3-4 "Sturzabdichtung" (Test report No.20180132, Fig. 5.1) listed under Type Examination documentation below.

The contact and closure of the roller shutter on the deck is provided by a glass fabric gasket clamped between steel sheet and a steel flat bar.

Application/Limitation

The A-60 roller shutter SlimLine assembly for closure of a steel Class A-60 bulkhead may be mounted on either side of a Class A-60 bulkhead.

Clear opening size: 4360mm in width and 4150mm in height.

Overall size: 4982mm width (maximum is at the lintel cover above the bulkhead opening) and 4635mm in height.

Any surface materials used on the roller shutter assembly are to be approved for smoke and toxicity and low flame spread characteristics (2010 FTP Code Annex 1, Parts 2 & 5).

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

Type Examination documentation

Test Report No. 20160697 dated 03.November 2016 issued by MPA Dresden

Test Report No. 15-001940-PR01 dated 06. July 2015 issued by IFT Rosenheim



Job Id: **344.1-007174-1**
Certificate No: **MEDB00002YA**

Drawing No.258545 Rev.B (9 sheets) dated 14. November 2016 as attached to Test Report No. 20160697.
Orientation Test Report No.20180132 dated 4th May 2018 and Assessment Report No.20171170 dated 24th April 2018 issued by MPA Dresden
Drawing No.2X26254-3-1 to 7 Rev.A dated 15th May 2018.

Tests carried out

Tested according to IMO Res. MSC.307(88) – (2010 FTP Code) Annex 1, Part 3

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.