DNV·GL

Certificate No:
TAF00000SH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
BUSBAR PENETRATION SYSTEM FOR CLASS A60 BULKHEADS AND DECKS
GK MC FC ROUND 127/140/168/219/244

Issued to
Roxtec GmbH
Hamburg, Germany

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards

Application :

Approved for use as a busbar penetration system for Schneider Electric Industries S.A.S. type KSA 250 to KSA 1000 and KNA 63 to KNA 160 in class A-60 steel bulkheads and decks.

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

Issued at **Hamburg** on **2017-09-07**
This Certificate is valid until **2022-09-06**.
DNV GL local station: **Hamburg**

Approval Engineer: **Carsten Hunsalz**

for **DNV GL**

Duy Nam Le
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.

Product description

A-60 steel bulkhead and deck penetration for "Schneider Electric Industries S.A.S." busbar system type KSA 250 to KSA 1000 and KNA 63 to KNA 160.

"GK MC FC Busbar Penetration System (steel)" Consisting of circular sleeve(s) with or without flange, one side circumferentially welded to a steel division. Sizes GK MC FC ROUND 127 to 244. The GK MC FC busbar penetration system is filled with intumescent material and a glass fiber tissue hose, folded back on each side of the sleeves. The glass fiber tissue hose (with or without zipper) and the busbar system is secured with a plastic covered metal strap on each side. On both sides of the transit, the busbar is secured with a cold smoke stop.

The coaming is welded symmetrically of the deck/bulkhead.

Insulation details according drawing Roxtec No. S1523165

Application/Limitation

Only the penetration system is covered by this type approval certificate. The busbars itself shall hold a valid Type Approval Certificate.

Approved for Schneider busbar system KSA 250 to KSA 1000 and KNA 63 to KNA 160
in class A-60 steel bulkheads and decks. Other applications are subject to case-by-case approval. Approved for use in class A-0, A-15 and A-30 when the penetration system is insulated as A-60. In addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. Each product is to be supplied with its actual manual for installation and use.

Only one busbar system per GK MC FC sleeve is approved, the busbar system shall be arranged in the center of the sleeve.

The systems must not be installed in bulkheads and decks if water- and gas- tightness is required.

The KSA busbar system shall include an inner fire stop as tested.

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

Type Approval documentation

Test Reports A60 Fire Class:
No. DMT-DO-53-056, date 2016-08-01; No. DMT-DO-53-060, date 2016-11-17; No, DMT-DO-53-064, date 2016-11-21; No. DMT-DO-53-065, date 2017-01-19; No. DMT-DO-53-068, date 2017-05-10

Test Reports Cold Smoke:
Roxtec No. 29092016-01, dated 2016-09-29; No. 22032017-01, dated 2017-03-22; No. 25042017-01, dated 2017-04-25

Insulation Drawing:
Roxtec No. S1523165, dated 2017-05-29;

General Arrangement Drawing:
Roxtec No. S1523163, dated 2017-05-30

Sleeve Drawing:
Roxtec No. S1523137, dated 2017-05-31

Tests carried out

Fire Test acc. 2010 FTP Code, Annex 1: Part 3, IMO Resolution MSC.307(88)

Marking of product

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

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 DNVGL-CP-0338 Section 4.