

Certificate Of Fire Approval

This is to certify that the product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	Witt & Sohn Aktiengesellschaft
Address	Ziegeleiweg 38, 25421 Pinneberg, Germany
Type	Fire Damper (Standard Fire Test)
Description	Single Blade Circular Fire Damper
Trade Name	"IGW Fire Dampers, BK250, BK315 up to BK1800" for applications in A-Class Steel Decks
Specified Standard	IMO Res. MSC.307(88) – (2010 FTP Code) Annex 1 Part 3

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form part of this Certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

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A member of the Lloyd's Register group

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DESIGN APPRAISAL DOCUMENT

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR22100240SF

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

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This Certificate is a Renewal of Certificate Number SAS F160337

APPROVAL DOCUMENTATION

TEST REPORTS

MPA Dresden GmbH, Fuchsmühlenweg 6F, 09599 Freiberg, Germany, Fire Test Report No: 20151619, dated 24th February 2016.

CONDITIONS OF CERTIFICATION

- For applications in A-60 steel decks only, the Fire Ratings achieved are shown in Table 1 below, with the ducting and fire dampers insulated by an A-60 approved insulation system suitable for A-60 decks, for a minimum insulated duct length of 650mm in addition to the length of the insulated fire damper. All sizes of fire dampers between 319mm (BK315) and 1821mm (BK1800) internal diameters may be used in A-60 deck applications.
- For applications in A-0, A-15 and A-30 steel decks only, the ducting shall be insulated with an approved insulation system suitable for the rating of the division for a minimum insulated duct length of 650mm (no duct insulation is required for A-0 rating). The fire damper must be fully insulated with an approved A-60 insulation system as tested for all fire ratings (including A-0 rating). All sizes of fire dampers between 254mm (BK250) and 1821mm (BK1800) internal diameters may be used in A-0, A-15 and A-30 deck applications.

Table 1

Type	Maximum Fire Rating achieved in Deck	Closing Mechanisms	Blade construction
BK250 254mm I.D., 315mm long.	A-30	Pneumatic closer with spring return and thermal switch	5mm thick steel blade + 38mm "PAROC Marine Fire Slab 100" + 2mm steel cladding (total thickness 45mm)
BK315 319mm I.D., 450mm long.	A-60	*Belimo BF 230-T electric spring return, and thermal switch	5mm thick steel blade + 38mm "PAROC Marine Fire Slab 100" + 2mm steel cladding (total thickness 45mm)
BK1800 21 I.D., 450mm long.	A-60	*Schischek InMax 50BF electric spring return, and thermal switch	4mm thick steel blade + 50mm "PAROC Marine Fire Slab 100" + 4mm steel cladding (total thickness 58mm)

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- The Belimo BF 230-T and Schischek InMax 50BF actuators may be used in all sizes of fire dampers BK315 to BK1800 for A-60 applications in steel decks.
- 3. Actuators and corresponding thermal triggers/fusible links are restricted for use with up to the maximum size of each type fire damper tested, in the tested orientation only (i.e., in decks only in this case). The following variations of fire tested actuators described in this certificate may be accepted on a case-by-case basis, subject to final approval from the project authority:
 - a) Derivations of fire tested actuators, such as in different voltage supplies, different electric connection specifications (European/American etc.) and with higher performance ratings such as IP ratings, Explosive ratings etc. may be accepted on a case-by-case basis, subject to formal confirmation from the actuator manufacturer provided to the final project authorities that such changes do not adversely affect their functionality and performance or reduce damper closure times. Tested actuators in alternative material options cannot be accepted under this certificate.
- 4. The fire dampers are bolted to the ventilation ducting and are to be fully insulated externally with a separately approved A-60 deck insulation system for all fire ratings in steel decks only.
- 5. Damper and coaming installation arrangements to be as-tested. Any additional requirements specified by the project surveyors (for example weld requirements for installations in high stress locations etc.) must also be complied with.
- 6. Composition, application and installation of sub components, including any adhesives, seals and any fire retardants, to be maintained in production and use in accordance with originally tested composition formula and method of application and installation, and manufacturer's instructions.
- 7. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.
- 8. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products, whether manufactured by themselves or their licensee manufacturers, if agreed by Lloyd's Register, are fully compliant with the relevant statutory regulations and Lloyd's Register Class rules as applicable and designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties.

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PLACE OF PRODUCTION

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25421 Pinneberg
Germany



J. M. Evans
Senior Specialist
Statutory Fire & Safety
Marine Technology and Engineering Services
Global Technology Centre
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).