



CERTIFICATE NO. T.C.292.J1.040
CERTIFICAT N°

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DE

TRANSPORT CANADA
BOARD OF STEAMSHIP INSPECTION
CERTIFICATE OF APPROVAL

TRANSPORTS CANADA
BUREAU D'INSPECTION DES NAVIRES À VAPEUR
CERTIFICAT D'APPROBATION

THIS CERTIFIES THAT THE ITEM SPECIFIED HEREIN HAS BEEN APPROVED BY THE BOARD OF STEAMSHIP INSPECTION, IN ACCORDANCE WITH THE PROVISIONS OF THE CANADA SHIPPING ACT AND REGULATIONS MADE THEREUNDER AND SUBJECT TO CONDITIONS SET FORTH ON THE REVERSE SIDE.

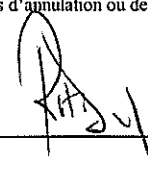
LES PRÉSENTES FONT FOI QUE L'ARTICLE MENTIONNÉ DANS LE PRÉSENT CERTIFICAT A ÉTÉ APPROUVÉ PAR LE BUREAU D'INSPECTION DES NAVIRES À VAPEUR, CONFORMÉMENT AUX DISPOSITIONS DE LA LOI SUR LA MARINE MARCHANDE DU CANADA ET DE SES RÈGLEMENTS D'EXÉCUTION ET SOUS RÉSERVE DES CONDITIONS FIGURANT AU VERSO.

ISSUED TO – TITULAIRE AIK Flammadur Brandschutz GmbH Otto-Hahn-Strasse 5 D- 34123 Kassel Germany
ITEM - L'ARTICLE CABLE TRANSIT DEVICES FOR "A-CLASS" DIVISIONS – WATERTIGHT/GASTIGHT
DESCRIPTION "GEAQUELLO – Sealing Compound System E950" for bulkhead and deck , to be manufactured and installed in accordance with the conditions described in the attached schedule.
REMARKS – REMARQUES 1. This approval is based on tests by SINTEF Civil and Environmental Engineering – Norwegian Fire Research Laboratory and Det Norske Veritas as described in the attached schedule. 2. Complies with SOLAS Chapter II-2/9.1.3, 9.3.1 as amended, and IMO FTP Code Res. MSC.61 (67) Annex 1, Part 3 and IMO Res. A.754 (18) adopted on November 4, 1993. 3. Conditions of approval are specified on reverse side of this certificate. 4. Schedule attached forms part of this certificate. 5. The validity of this Certificate is contingent upon Lloyd's Register Type Approval Certificate remaining in force.

This approval supersedes approval number J1-40 dated June 24, 1997
La présente approbation remplace l'approbation n°

This certificate is not transferable and is effective until May 29, 2009 unless cancelled or suspended by proper authority.
Le présent certificat ne peut pas être cédé et il est valable jusqu'au à moins d'annulation ou de suspension par l'autorité compétente.

May 17, 2004
Date


Deputy Chairman Board of Steamship Inspection
Vice-président du Bureau d'Inspection des navires à vapeur



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A 8706-22-3 

CONDITIONS OF APPROVAL

In the case of materials or devices, as set forth on the face of this certificate, that are covered by approval based on inspection by a Steamship Inspector and acceptance by the Board of Steamship Inspection (Board), the Divisional Supervisor, Steamship Inspection Service, of the Region in which the factory is located, shall be notified in sufficient time to assign an Inspector to the plant to make the necessary arrangements for inspection, testing and approval-stamping. The Certificate of Approval Number assigned for such cases is for the Board of Steamship Inspection (Board) record and product identification.

In the case of materials or devices, as set forth on the face of this certificate, the production of which is based on the issue of the Board of Steamship Inspection group approval number, the manufacturer shall place thereon a stamp or label of approval, indicating the Board of Steamship Inspection approval number, lot number, date of manufacture and description of material or device, and this stamp will be accepted by the Board as evidence of satisfactory manufacture in accordance with approved design and specification.

The approval of the article covered by this certificate is valid only as long as the article is manufactured in accordance with the details of the approved drawing specification or other data referred to; no modification of the approved design, construction or material shall be adopted until the proposed modification has been presented for consideration of the Board, and confirmation has been received that it is acceptable.

This certificate may be suspended or cancelled if the manufacturer deviates from the standards prescribed for the equipment herein specified.

CONDITIONS D'APPROBATION

Dans le cas des matériaux ou des appareils, mentionnés au recto du présent certificat, qui font l'objet d'une approbation fondée sur l'inspection par un inspecteur de navires à vapeur et l'acceptation par le Bureau d'inspection des navires à vapeur (le Bureau), le surveillant divisionnaire du Service d'inspection des navires à vapeur de la région dans lequel l'usine est située sera averti assez tôt pour pouvoir envoyer à l'usine un inspecteur qui prendra les mesures nécessaires en vue de l'inspection, des épreuves et d'apposition des marques d'approbation. Le numéro de certificat d'approbation assigné en pareil cas sert au classement au Bureau d'inspection des navires à vapeur (le Bureau) et comme identification du produit.

Dans le cas des matériaux ou des appareils, mentionnés au recto, dont la production est assujettie à l'homologation par un numéro d'approbation de groupe du Bureau d'inspection des navires à vapeur, le fabricant y apposera une estampille qui une étiquette d'approbation portant le numéro d'approbation du Bureau d'inspection des navires à vapeur, le numéro du lot, la date de fabrication et la description du matériau ou de l'appareil, et cette estampille sera acceptée par le Bureau comme preuve de fabrication satisfaisante, conforme aux plans et devis approuvés.

L'approbation de l'article visé par le présent certificat n'est valable que dans la mesure où la fabrication de cet article satisfait aux dessins, devis ou autres données approuvées; aucune modification du dessin, de la construction ou du matériau approuvé ne sera adoptée avant que la modification envisagée n'ait été présentée pour étude au Bureau, et que confirmation de son acceptabilité n'ait été reçue.

Le présent certificat pourra être suspendu ou annulé si le fabricant s'écarte des normes prescrites pour l'équipement mentionné aux présentes.



SCHEDULE OF APPROVAL (Cont'd)

SCHEDULE OF APPROVAL

APPLICATION / LIMITATION:

1. Approved for use as a cable transits penetration system in class A-0, A-15, A-30 and A-60 steel bulkheads and decks for approved ship cables.
2. Deck and bulkhead penetration transit devices are to be insulated with approved insulation.
3. No more than 40% of the inside cross-sectional area of each transit should be occupied by approved cables.
4. Maximum cable outside diameter shall be no more than 49 mm.
5. To be used only in the tested configuration as follow: Swell Strips R312, R380; Impregnation Fluid: E824; Sealing Compound: E795/E950. Maximum aperture size of the penetration: 500 mm (both side rounded) x 250 mm (111800 mm²). Spacing between ducted cables: minimum 6 mm.
6. Flame spread; smoke characteristics and caloric value of the lining to be as per Hull Construction Regulation.

APPROVAL DOCUMENTATION:

1. Bauqualität TÜV Nord – Fire Research Station Hamburg, test report GV95.47.1 dated February 28, 1997;
2. Drawings N° 271.149 498.GZ (4 pages) dated April 30, 1997 for A-60 Bulkhead Penetration – Prüfkörper für Brandtest nach IMO Resolution A754 (18) - Cable reservation for fire-test A-60;
7. Bauqualität TÜV Nord – Fire Research Station Hamburg, test report GV95.27.1 dated February 28, 1997;
8. Drawings N° 271.142 891.GZ (4 pages) dated October 16, 1996 for A-60 Deck Penetration – Prüfkörper für Brandtest nach IMO Resolution A754 (18);
9. Drawings N° P3-312 (1 pages) – Druckversuch E 950 – Compression test;
10. Lloyd's Register of Shipping Certificate HNO 600752 dated September 18, 1986;
11. Det Norske Veritas Survey report for watertightness Form N° 40.91a BSG 1 - 1922 dated September 17, 1986;
12. Lloyd's Register of Shipping Certificate HNO 000258/1A12 dated August 17, 1990;
13. ABS Certificate of Design Assessment N° 02-HG308515-PDA dated July 11, 2002;
14. Bureau Veritas Type Approval Certificate N° 01865/E1 BC, file number ACI 4000/014/003 Product Code 5302H valid until November 7, 2006;
15. Det Norske Veritas Type Approval Certificate N° F-16727 valid until December 31, 2005;
16. Germanischer Lloyd Type Approval Certificate N° 33 245 – 84 HH valid until May 22, 2007;
17. Lloyd's Register Certificate of Fire Approval N° SAS F020409 valid until October 9, 2007;
18. Nippon Kaiji Kyokai Certificate of approval N° 01EQ277FPA ;
19. Russian Maritime Register of Shipping Typa Approval Certificate N° 6.8.3 valid until May 20, 2007.

CONSTRUCTION / INSTALLATION / INSULATION

The construction, installation, and insulation of the "GEAQUELLO – Sealing Compound System E950" cable transits shall be in accordance with the drawings and prototype units tested by Bauqualität TÜV Nord listed above and no departure will be permitted without the consent of the Board of Steamship Inspection.

Bulkhead transits are composed of a steel frame (max. 250 x 500 mm / min. 90 x 90 mm (width x height), 230 mm long welded in the middle to the bulkhead and filled with 180 mm E795 or E950 bulkhead/deck coaming welded to the division and filled with E795, E950. Sealed on both sides with 25mm front wall consisting of swell modules R312 plus R380 and impregnation liquid E824. The sleeve is to be insulated on the unexposed side with 90 mm ISOVER Schiffbaumatte MD/S, density 90kg/ m³. The cables are also to be insulated with 90 mm insulation on a length of 90 mm from the sleeve.





SCHEDULE OF APPROVAL (Cont'd)

Deck transits are of the same construction as for the bulkhead, except the steel frame to be 180 mm over and 25 mm under the deck, and instead of the 25 mm front wall on the topside 10 mm sealing component E292 as a top seal compound has to be used.

MARKING:

1. Manual (or instruction) for installation, use and maintenance must be provided in both official languages French and English.
2. The container in which the material is packed must be identified with respect to its trade name, assigned fire rating and manufacturing date.

RESPONSIBILITY:

The manufacturer is responsible to inform Transport Canada Headquarter of the continuing validity of the certificate on which this approval is base and/or any change or modification made to the approved product herein, as to update the certificate to reflect those changes.

CONDITIONS:

1. This approval is granted on the understanding that the Board of Steamship Inspection reserves the right to require check tests to be carried out on "GEAQUELLO – Sealing Compound System E950" at any time and that AIK Flammadur Brandschutz GmbH, will accept the responsibility for informing ship owners, naval architects, shipbuilders and their sub-contractors of the conditions of this approval.
2. The "GEAQUELLO – Sealing Compound System E950" are to prove satisfactory in service.
3. This certificate may be suspended or cancelled if the manufacturer deviates from any of the conditions described herein without the prior consent of the Board of Steamship Inspection.
4. The manufacturer is required to be wholly responsible for carrying out inspection and tests at their plant, to comply with the follow-up Procedures and Services from the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity, only when module D in the same directive is fully complied with.
5. AIK Flammadur Brandschutz GmbH or their representative shall inform Transport Canada Marine safety on any modification made to their approved product described herein.
6. Under no circumstances are cables to be removed from, or additional cables to be passed through, completed transit frames without the prior consultation with a Marine Safety Inspector.

END OF CERTIFICATE

