

DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. F-16727

This Certificate consists of 2 pages

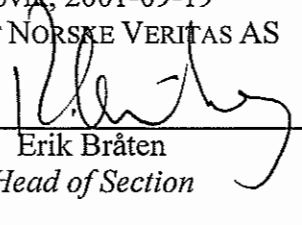
This is to certify that the
Class A and B Penetration
with type designation(s)
CABLE PENETRATION COMPOSITION TYPE
GEAQUELLO E795/E950

Manufactured by
STN ATLAS Marine Electronics GmbH
Hamburg, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships and Mobile Offshore Units
Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended

Application
Approved for use as a cable penetration system in class A-60 bulkheads and decks for approved ship cables.

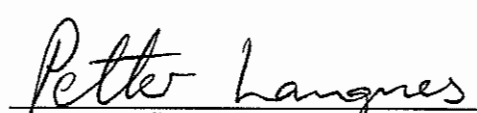
Place and date
Høvik, 2001-09-19
for DET NORSKE VERITAS AS


Erik Bråten
Head of Section



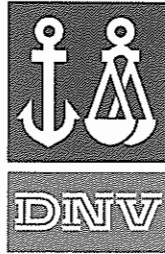
Local Office
DNV Hamburg

This Certificate is valid until
2005-12-31


Petter Langnes
Surveyor

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: F-16727
File No.: 471.19

Product description

“Cable Penetration Composition Type Geaquello E795/E950”

BULKHEAD

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. Sealed on both sides with 25 mm frontwall 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 90 kg/m³. The cables are also to be insulated with 90 mm insulation on a length of 90 mm from the sleeve.

DECK

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 frontwall on the topside 10 mm sealing component E292 has to be used. The exposed end of the sleeve is to be insulated as described above.

Type Approval documentation

Certification in accordance with Certification Note No. 1.2, Type Approval, December 1996.

Test reports No. GH95.27.1, GV96.44.1 and GV95.47.1 dated 28 February 1997 from Bauqualität TÜV Nord BRANDVERSUCHSHAUS HAMBURG, Hamburg, Germany. Drawings No. 271.142 891.GZ, dated 16 October 1996, No. 271.142 890.GZ and 271.149 498.GZ both dated 30 April 1997 from STN ATLAS ELEKTRONIK, Hamburg, Germany. Tested according to IMO Res. A.754(18).

Marking of product

The product or packing is to be marked with name of manufacturer and type designation.

Certificate retention survey

Det Norske Veritas' surveyor is to be given permission to perform Certification Retention Surveys at any time during the validity period of this certificate. The arrangement is to be in accordance with procedure described in item 4.3, certification Note No. 1.2.

END OF CERTIFICATE

