



Approval Certificate

Germanischer Lloyd

This is to certify, that the undernoted procedures have been approved in accordance with the relevant requirements of the GL Approval System.

Certificate No. 42 289 - 01 HH

Company ITW Philadelphia Resins
130 Commerce Drive
Montgomeryville, PA 18936, USA

Procedure FITTED BOLTS OF CAST-IN RESIN TYPE

Type/Equipment/System Cast Resin type: PR610TCF (Chockfast orange)

Technical Data/
Application

- 1.- Fitted Bolts of this type are to be installed into oversized holes of engine bed plate and ship's top plate. They must be provided exclusively for fixing and securing the plant components and must not be taken into account in the transmission of propeller thrust.
- 2.- Radial clearance in the range of 5 to 10 mm around each Fitted Bolt of this type is to be provided for pouring.
- 3.- For installation, processing and pouring around each Fitted Bolt of this type, the relevant guidelines of ITW PHILADELPHIA RESINS, "Installation Procedure For The Use Of Chockfast Orange With Fitted Bolts", November 1998, approved by GL Ref.-No. 08818P/98 dated 1998-12-01, are to be observed.
- 4.- Drawings and calculations for seating of propulsion plants designed for installation of these Fitted Bolts are subject to approval by GL Head Office in any case. Relevant drawings must reflect the design to be realized aboard the vessel.
- 5.- Schematic drawings (Figs. 1 to 4) of these Fitted Bolts approved by GL Ref.-No. 08818P/98 dated 1998-12-01 and Ref.-No. 03-111017 dated 2003-12-05 form part of this Certificate.

Approval Standard GL Regulations for the Performance of Type Tests, Part 0, Procedure, Febr. 1997

Documents Test Report "COMPRESSIVE TESTS" of ITW PHILADELPHIA RESINS, October 1998, approved by GL Ref.-No. 98165/98 dated 1998-11-10.

Remarks Of overriding importance the conditions given by the current issue of GL Type Approval Certificate for the above-mentioned Cast Resin type are to be observed.

Valid until 2006-12-04

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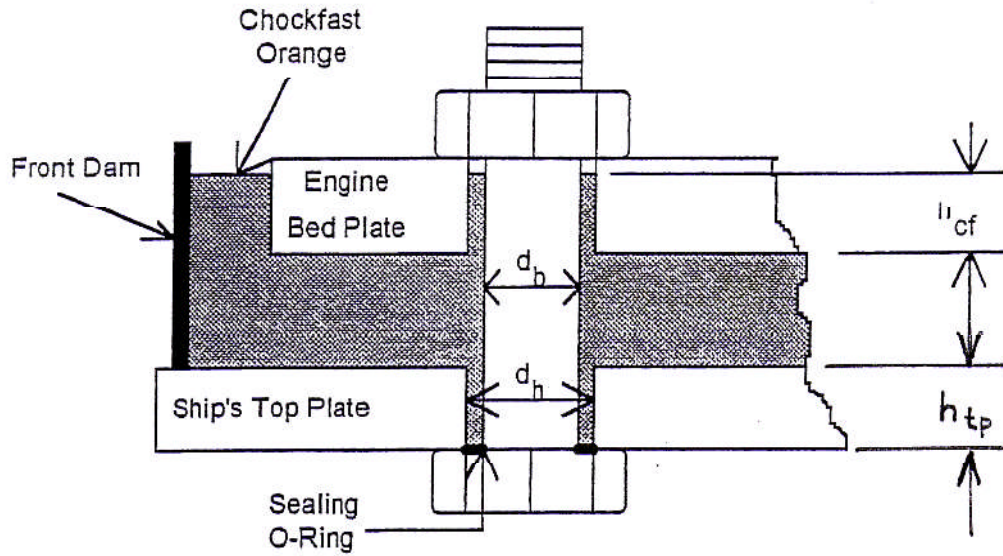
File No. XII.E.03

Hamburg, 2003-12-05

Germanischer Lloyd

i.v.
C. Hadler

i.A.
G. Ondrej



$d_h = d_b + 10 \text{ mm minimum}$
 $d_h = d_b + 20 \text{ mm maximum}$
 $h_{tp} / h_{cf} > d_b$

Figure 3

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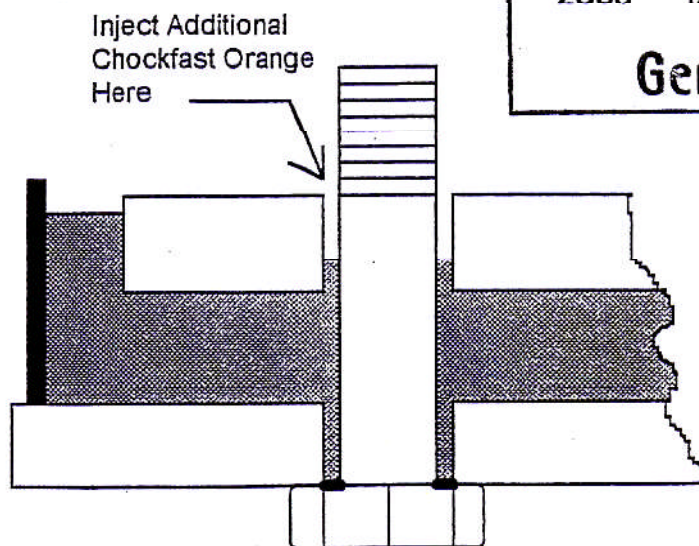
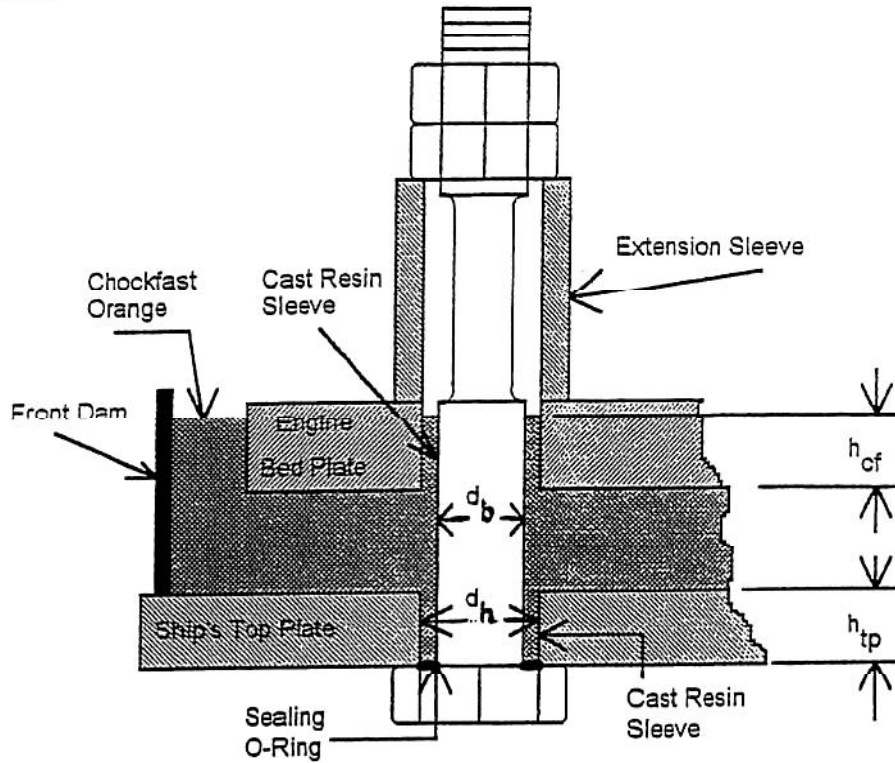


Figure 4



$d_h = d_b + 10 \text{ mm minimum}$
 $d_h = d_b + 20 \text{ mm maximum}$
 $h_{cf}, h_{tp} > d_b$

Figure 1

Genehmigt
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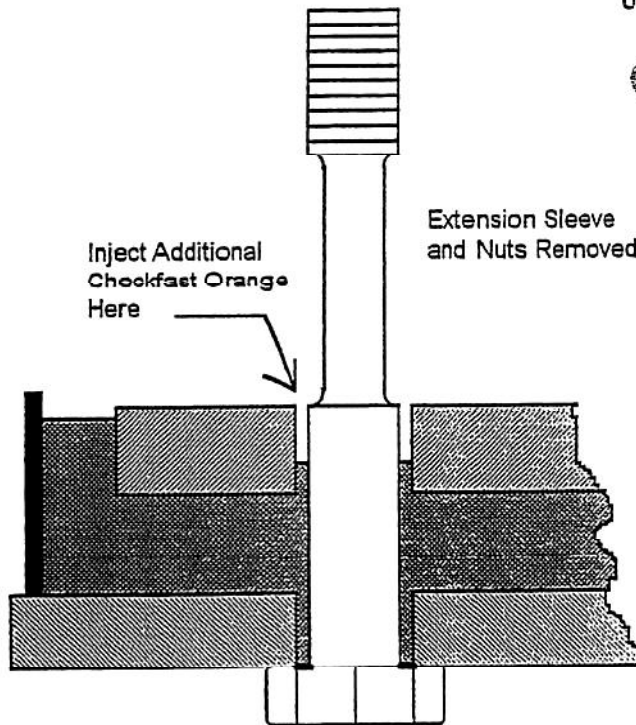


Figure 2