



CERTIFICATE NUMBER

02-HG321427/2-PDA

ABS TECHNICAL OFFICE

DATE

22 July 2008

# CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of  
**Straub Werke AG**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Pipe Coupling, Axial Restraint Flexible

MODEL: STRAUB-METAL-GRIP and STRAUB-METAL-GRIP-FIRE-FENCE

ABS RULE: 2008 Steel Vessel Rules, 1-1-4/7.7, 4-6-2/5.9 (fire endurance test only for STRAUB-METAL-GRIP-FIRE-FENCE)

OTHER STANDARD: N.A.;

AMERICAN BUREAU OF SHIPPING

  
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<b>Product</b>	Pipe Coupling, Axial Restraint Flexible
<b>Model</b>	STRAUB-METAL-GRIP and STRAUB-METAL-GRIP-FIRE-FENCE
<b>Intended Service</b>	Pipe couplings for approved applications, as per 4-6-2/Tables 10 and 11 of the Rules, in shipboard piping systems. Approved fire resistant type, only model STRAUB-METAL-GRIP-FIRE-FENCE.
<b>Description</b>	Sizes: 33.7 mm through 406.4 mm pipe outer diameter. Sealing sleeve with tension-spring, with rubber support-bead, with lip-spring or with lip-spring and additional support-spring. Sealing sleeve materials: EPDM (ethylene-propylene) for water, air, chemicals. NBR (nitrile-butadiene) for gas, lube oil, and other hydrocarbons. For use of chemicals refer to manufacturer's list of applicable chemicals.
<b>Ratings</b>	Outer Diameter 33.7 mm to 219.1 mm, Nominal Pressure 16 bar. Outer Diameter 244.5 mm, Nominal Pressure 14 bar. Outer Diameters 267 mm and 273 mm, Nominal Pressure 12 bar. Outer Diameter: 323.9 mm, Nominal Pressure 10 bar. Outer Diameters: 355.6 mm and 406.4 mm, Nominal Pressure 8 bar. Service Temperature Range: -30° C to 100° C for outside diameters 33.7 mm to 219.1 mm (EPDM), -20° C to 80° C for outside diameters 244.5 mm to 406.4 mm (EPDM), -20° C to 80° C for outside diameters 33.7 mm to 406.4 mm (NBR).
<b>Service Restrictions</b>	Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. Model STRAUB-METAL-GRIP is not to be used in applications where approved fire resistant types are required by 4-6-2/Tables 10 and 11 of the Rules. Note: Some Administrations may have more restrictions than those applied from the ABS Rules and each application must be to the satisfaction of the Flag State.
<b>Comments</b>	The maximum piping misalignment and maximum allowable axial movement per coupling is to be limited and the installation of the couplings is to be carried out according to manufacturer's specification.
<b>Notes and Documentation</b>	This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.
<b>Term of Validity</b>	This Design Assessment Certificate number 02-HG321427/2-PDA, dated 22/Jul/2008 will expire on 21/Jul/2013 or at an earlier date should there be alterations to the product's design or changes to the referenced ABS Rules and other specifications, which affect the product. Product use on or after 1 January 2009, will be subject to compliance with the ABS Rules or specifications in effect when the vessel, MODU or facility is contracted. The product's acceptability on board ABS-classed vessels or facilities is defined in the service restrictions of this certificate.
<b>ABS Rules</b>	2008 Steel Vessel Rules, 1-1-4/7.7, 4-6-2/5.9 (fire endurance test only for STRAUB-METAL-GRIP-FIRE-FENCE)
<b>International Standards</b>	N.A.