



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This is to certify that, pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 14/MAR/2010. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 12/AUG/2013 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid 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.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

TRELLEBORG IZARRA SAU Model Name(s): Type P and Type HP

Presented to:

TRELLEBORG IZARRA SAU
C/ SAN VICENTE, 23
IZARRA (ALAVA)
Spain

Intended Service:

Type P (Yellow): Fresh/Sea water, lubricating oil, fuel oil, alkaline, compressed air, sanitary; Type P (White): Drinking Water; Type P (Red): Fresh/Sea water, alkaline, sanitary; Type P (Green): Acids except concentrated Nitric/Sulfuric acids; Type HP: Hot water, steam, air

Description:

Type P (Yellow): Inner Tube: Epichlorohydrin (ECO) Rubber; Reinforcement: Nylon Cord; Outer Tube: Neoprene; Flanges: Zinc Plated Steel; Maximum Operating Temperature: 90#C; Minimum Operating Temperature: -40#C; Type P (White): Inner Tube: Nitrile; Reinforcement: Nylon Cord; Outer Tube: Neoprene; Flanges: Zinc Plated Steel; Maximum Operating Temperature: 90#C; Type P (Red): Inner Tube: EPDM; Reinforcement: Nylon Cord; Outer Tube: EPDM; Flanges: Zinc Plated Steel; Maximum Operating Temperature: 100#C; Type P (Green): Inner Tube: Hypalon; Reinforcement: Nylon Cord; Outer Tube: Neoprene; Flanges: Zinc Plated Steel; Maximum Operating Temperature: 90#C; Type HP: Inner Tube: EPDM; Reinforcement: Textile Cord; Outer Tube: EPDM; Flanges: Zinc Plated Steel; Maximum Operating Temperature: 130#C

Ratings:

Sizes (mm): 32, 40, 50, 65, 80, 100, 125, 150, 200, 250 and 300

Service Restrictions:

1) Maximum Working Pressure: 10 BAR (1.0 MPa) - Accordingly, the subject expansion joints should be appropriately stamped by the manufacturer to reflect this. 2) The suitability of the subject expansion joints for use in piping systems conveying chemicals will be carried out on a case by case basis for application on ABS Classed Vessels. 3) Where the expansion joints are used in oil piping systems (fuel, lubricating or hydraulic oil), the expansion joints are to be used together with duly tested flame guards. 4) 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.

Comments: Type HP resistant to hydrolysis

Notes / Documentation: 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.

Term of Validity: This Design Assessment Certificate number 03-LD349564/1-PDA, dated 13/Aug/2008 will expire on 12/Aug/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.

ABS Rules: 2008 Steel Vessel Rules 1-1-4/7.7 & 4-6-2/5.8

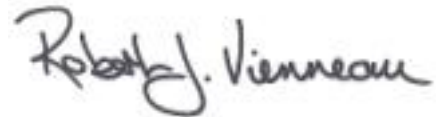
National Standards:

International Standards:

Government Authority:

EUMED:

Others:



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.