



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

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 24/JUN/2020. 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 14/MAY/2020 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.

Product Name: Pipe Press Fitting System

Model Name(s): SANHA Therm series 24000 and SANHA Therm Industry series 28000 carbon steel fittings in combination with welded tubes: SANHA Therm and SANHA Therm DZ. Sealing ring: Black EPDM/Red FKM.

Presented to:

SANHA GMBH & CO. KG
HAUPTSTRASSE 76
Germany

Intended Service:

For use in Class III Fresh/Seawater, Fire Main, Water Spray, Foam, Sprinkler, Sanitary, Water, Heating, Fuel/Lub/Hydraulic Oil and Compressed Air Piping Systems.

Description:

Pipe fitting system with O-ring seals. Fittings are pressed (crimped) in place by means of specially dedicated pressing tools. Fitting and pipes of unalloyed steel to DIN/EN 10305-3 (E195): 2009, Material No. 1.0034, Seal rings: Black EPDM/Red FKM. SANHA carbon steel system pipe also available with either externally galvanized surface (SANHA Therm) or in the internally and externally galvanized version (SANHA Therm DZ).

Tier:

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Ratings:

M. A. W. P. up to 16 bar, W.T. : -15°C to 120°C for SANHA Therm series 24000 and -15°C to 200°C for SANHA Therm Industry series 28000 with pipe sizes (O.D. x t) [mm]: 12 x 1.2 mm up to 89.9 x 2.0 mm M. A. W. P. up to 12 bar, W. T. -15°C to 120°C for SANHA Therm series 24000 and -15°C to 200°C for SANHA Therm Industry series 28000 with pipe sizes (O.D. x t) [mm]:108 x 2.0 mm

Service Restrictions:

Unit Certification is not required for this product as per 4-4-1/Tab 6, 4-6-1/Tab. 2. 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. All pipe are to be hydrostatically tested according 2-3-12/29 and an affidavit covering this test may be accepted by the Surveyor. Not to be used in potable water systems and for flammable fluids with flash point below 60°C. Ferrous materials used in piping systems operating at lower than -18°C are to have adequate notch toughness properties. These pipes are not to be used on Gas Carriers cargo piping without prior notice to ABS.

Comments:

Each particular application, including deck/bulkhead penetrations, of the pressure system is to be specifically approved in connection with the relevant system and installation. Upon installation onboard the vessel, the Surveyor is to verify that a pressure relief valve is provided and set in accordance with 4-6-2/9.9 of the Rules for Building and Classing Steel Vessels 2015. Use of the fittings pipe system in accordance with manufacturer's instructions. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes / Documentation:

Drawing No. Katalog SANHA Therm System, Catalog, Revision: -, Pages: -
 Drawing No. SANHA Therm - Product Catalogue, Product Catalog, Revision: -,
 Pages: - Drawing No. SANHA Therm - System Description, Revision: -, Pages: -
 Drawing No. SKMBT_C25314100309131, Request Form, Revision: -, Pages: -
 Drawing No. SanhaTherm 24000, Connections, Revision: -, Pages: - Drawing No.
 SanhaTherm Industry 28000, Connections, Revision: -, Pages: - Drawing No.
 SanhaTherm Tubes 15-108, Revision: -, Pages: - Drawing No. Test Report
 K128_14, Test report, Revision: -, Pages: - Drawing No. Type Approval ABS -
 SANHA Therm, Type request, Revision: -, Pages: -

Term of Validity:

This Product Design Assessment (PDA) Certificate 15-HG1359166-PDA, dated 15/May/2015 remains valid until 14/May/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules:

Classification of Drilling Systems 2012 (Up-dated Feb 2014), -1-4/9.7, 1-1-A2 and 3, 4/Table 1, 5/3.3, 6/7.1 Rules for Building and Classing Steel Vessels (2015) 1-1-4/7.7, 1-1-A3 and 4, 2-3-12, 4-6, 2-4-4/17, 4-6-2/5.9 Mobile Offshore Drilling Units (2015) 1-1-4/9.7, 1-1-A2 and 3, 4-2-2/5 Bulk Carriers for Service on Great Lakes (1978) Up-date April 2008 1-1-4/7.7, 1-1-A3 and 4 Steel Vessels for Service on Rivers and Intracoastal Waterways (2015) 1-1-4/7.7, 1-1-A3 and 4, Steel Vessels Under 90 Meters (295 Feet) in Length (2015) 1-1-4/7.7, 1-1-A3 and 4, Offshore Support Vessels (2015) 1-1-4/7.7, 1-1-A3 and 4,

National Standards:**International Standards:**

ISO 19921:2005 (Reviewed 2009)

Government Authority:**EUMED:****Others:**

IACS Req. 2001/Rev.3 2012 - IACS UR P2 (Rev. 2 Nov 2001)


Model Certificate**Model Certificate No****Issue Date****Expiry Date**

PDA

15-HG1359166-PDA

15/MAY/2015

14/MAY/2020



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.