



CERTIFICATE NUMBER
15-HS1385399-PDA

DATE
14 Jul 2015

ABS TECHNICAL OFFICE
Houston SED Machinery - Piping
& Electrical Sys.

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of
EATON

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.

Product: **Strainer**

Model: **Model 73**

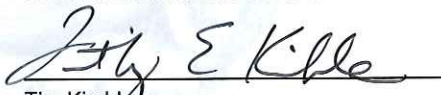
This Product Design Assessment (PDA) Certificate 15-HS1385399-PDA, dated 14/Jul/2015 remains valid until 13/Jul/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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.

AMERICAN BUREAU OF SHIPPING


Tim Kimble
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

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Tier: 2 - PDA Issued

Product: Strainer

Model: Model 73

Intended Service:

Marine and Offshore Applications - Fuel oil, lube oil, fresh water and sea water systems for marine vessels and offshore installations

Description:

Simplex Strainer with flanged connections. The strainers covered by this certificate are available in the following materials: Ductile Iron (ASTM A395), Cast Iron (ASTM A126 CL C), Bronze (ASTM B148 C95800).

Rating:

Design Pressure: 200 psi
Design Temperature range: 100°C
Ductile Iron (ASTM A395); 150# Flat Face Flanged Connection (ASTM B16.42); Sizes 10", 12", 14", 16" & 18"
Ductile Iron (ASTM A395); 150# Raised Face Flanged Connection (ASME B16.42); Sizes 10" & 12"
Bronze (ASTM B148 C95800); 150# Flat Face Flanged Connection (ASME B16.24 for 10" & 12" and ASME B16.5 for 14" & 16"); Sizes: 10", 12", 14" & 16"

Design Pressure: 150 psi

Design Temperature range: 100°C

Cast Iron (ASTM A126 CL C); 125# Flat Face Flanged Connection (ASME B16.1); Sizes 14", 16" & 18"

Service Restriction:

- 1) Unit Certification is required for the model 73. 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.
- 2) The attending Surveyor is to conduct Fabrication, Testing and Certification survey in accordance with 4-4-1/7 of the Steel Vessel Rules.

Comments:

- 1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) The strainer's body is to bear permanent identification, such as manufacturer's name or trademark, standard of compliance, material identity, pressure rating, etc., as required by the standard of compliance (ASTM F1199-88, as applicable), as per 4-6-1/7.1.4 & Table 2 of the SVR.
- 3) The installation of the strainers is to comply with the applicable requirements in 4-6-5/3.3.4, 4-6-5/3.5.4, 4-6-5/5.3.6, 4-6-5/5.5.2 and 4-6-5/7.7.2 of the SVR, as applicable.

Notes/Drawing/Documentation:

Drawing No. 69213-2009-AQ-USA-ANAB, ISO 9001:2008, Revision: A, Pages: 1
Drawing No. ASTM F1199 10.16.2014, ASTM letter of conformance, Revision: A, Pages: 1
Drawing No. CALC3870, ST073140AF40 CALCULATION, Revision: A, Pages: 1
Drawing No. CALC3871, ST073160AF40 CALCULATION, Revision: A, Pages: 1
Drawing No. CALC4040, ST073100BF60 CALCULATION, Revision: A, Pages: 1
Drawing No. CALC4041, ST073120BF60 CALCULATION, Revision: A, Pages: 1
Drawing No. CALC4042, ST073140BF60 CALCULATION, Revision: A, Pages: 1
Drawing No. CALC4043, ST073160BF60 CALCULATION, Revision: A, Pages: 1
Drawing No. CALC4044, ST073180AF40 CALCULATION, Revision: A, Pages: 1
Drawing No. CALC4045, ST073180BF60 CALCULATION, Revision: A, Pages: 1
Drawing No. SD073031, model 73 simplex strainer, 150# flat face flange, sizes 10" thru 16" bronze, Revision: E,

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Tier: 2 - PDA Issued

Pages: 1
Drawing No. SD073034, model 73 simplex strainer, 125# flat face flange, sizes 10" thru 18" cast iron, Revision: H,
Pages: 1
Drawing No. SD073036, model 73 simplex strainer, 150# flat face flange, sizes 10" thru 18" ductile iron, Revision: G,
Pages: 1
Drawing No. SD073037, model 73 simplex strainer, 150# raised face flange, sizes 10" thru 12" ductile iron, Revision:
G, Pages: 1
Drawing No. ST073100BF10, 10"#73 150#FF BRZ STD, Revision: A, Pages: 1
Drawing No. ST073100BF60, 10" #73 150#FF DI STD, Revision: A, Pages: 1
Drawing No. ST073100BR60, 10"#73 150#RF DI STD EXCEPT RAISE-FACE, Revision: A, Pages: 1
Drawing No. ST073120BF10, 12"#73 150#FF BRZ STD, Revision: A, Pages: 1
Drawing No. ST073120BF60, 12" #73 150#FF DI STD, Revision: A, Pages: 1
Drawing No. ST073120BR60, 12"#73 150#RF DI STD EXCEPT RAISE-FACE, Revision: A, Pages: 1
Drawing No. ST073140AF40, 14"#73 125#FF CI STD, Revision: A, Pages: 1
Drawing No. ST073140BF10, 14"#73 150#FF BRZ STD, Revision: A, Pages: 1
Drawing No. ST073140BF60, 14" #73 150#FF DI STD, Revision: A, Pages: 1
Drawing No. ST073160AF40, 16"#73 125#FF CI STD, Revision: A, Pages: 1
Drawing No. ST073160BF10, 16"#73 150#FF BRZ STD, Revision: A, Pages: 1
Drawing No. ST073160BF60, 16"#73 150#FF DI STD, Revision: A, Pages: 1
Drawing No. ST073180AF40, 18"#73 125#FF CI STD, Revision: A, Pages: 1
Drawing No. ST073180BF60, 18"#73 150#FF DI STD, Revision: A, Pages: 1
Drawing No. STXXX73, LETTERING & MARKINGS 10"-18" model 72, Revision: A, Pages: 1
Drawing No. materials, material designations, Revision: A, Pages: 1

Terms of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 – 2015 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Steel Vessel Rules (2015) 4-4-1/1.1, 4-4-1/Table 1, 4-4-1/7, 4-6-1/7 and 4-6-2/3.

ABS Rules for Conditions of Classification, Part 1 – 2015 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Mobile Offshore Drilling Units 4-2-2/1.3, 4-2-2/3, 6-1-5/5, 6-1-6/5 and 6-1-6/Table 1.

National:

ASTM F1199 - 80(Reapproved 2010);

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2013 ASME BPVC, Section VIII, Division 1;

ASME B16.5-2013;

ASME B16.24-2011;

ASME B16.42-2011;

ASME B16.1 - 2010;

ASTM B148 C95800;

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA