



CERTIFICATE NUMBER  
15-HS1385403-PDA

DATE  
23 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 53**

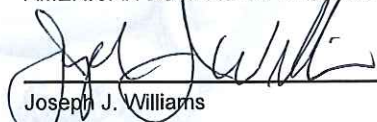
This Product Design Assessment (PDA) Certificate 15-HS1385403-PDA, dated 23/Jul/2015 remains valid until 22/Jul/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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

  
\_\_\_\_\_  
Joseph J. Williams  
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).

**EATON**  
HYDRAULICS GROUP, FILTRATION DIVISION  
44 APPLE STREET  
TINTON FALLS NJ  
United States 07724  
Telephone: 732-212-4700  
Fax: 952-906-3706  
Email: markalevis@eaton.com  
Web: eaton.com/filtration

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**Product:** Strainer

**Model:** Model 53

**Intended Service:**

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

**Description:**

Duplex basket strainers with flanged or threaded connections. The strainers covered by this certificate are available in the following materials: Carbon Steel (ASTM WCB), Stainless Steel (ASTM A351 CF8M) and Bronze (ASTM B148 C95400).

**Rating:**

Design Pressure: 200 psi (13.8 bar)  
Design Temperature: 150degF (65.5degC)

Carbon Steel (ASTM A216 WCB); 150 # Flanged (ASME B16.5); Sizes: 1", 1.5", 2", 2.5", 3", 4";  
Carbon Steel (ASTM A216 WCB); NPT (ASME B1.20.1); Sizes: 3/4", 1", 1.25", 1.5", 2", 2.5";

Stainless Steel (ASTM A351 CF8M); 150 # Flanged (ASME B16.5); Sizes: 1", 1.5", 2", 2.5", 3", 4";  
Stainless Steel (ASTM A351 CF8M); NPT (ASME B1.20.1); Sizes: 3/4", 1", 1.25", 1.5", 2";

Bronze (ASTM B148 C95400); 150 # Flanged (ASME B16.24); Sizes: 1", 1.5", 2", 2.5", 3", 4";  
Bronze (ASTM B148 C95400); NPT (ASME B1.20.1); Sizes: 3/4", 1", 1.25", 1.5", 2", 2.5";

**Service Restriction:**

1) Unit Certification is not required for this product. If the manufacturer or purchaser's 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) Strainers for piping systems containing flammable fluids are to be constructed of steel or other materials approved by ABS as per 4-6-2/3.5 of the SVR.

**Comments:**

1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

2) The strainers' 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 or ASTM F1200-88, 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. CALC4032, ST053010BF11 Calculation, Revision: B, Pages: 1  
Drawing No. CALC4033, ST053015BF11 Calculation, Revision: A, Pages: 1  
Drawing No. CALC4034, ST053020BF11 Calculation, Revision: A, Pages: 1

**EATON**  
HYDRAULICS GROUP, FILTRATION DIVISION  
44 APPLE STREET  
TINTON FALLS NJ  
United States 07724  
Telephone: 732-212-4700  
Fax: 952-906-3706  
Email: markalevis@eaton.com  
Web: eaton.com/filtration

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Drawing No. CALC4035, ST053025BF11 Calculation, Revision: A, Pages: 1  
Drawing No. CALC4036, ST053030BF11 Calculation, Revision: B, Pages: 1  
Drawing No. CALC4037, ST053040BF11 Calculation, Revision: B, Pages: 1  
Drawing No. SD053082, model 53 "BTX"- duplex strainer ANSI Class 150 FF Flange & NPT sizes 3/4" thru 4" bronze, Revision: L, Pages: 1  
Drawing No. SD053083, model 53 "BTX"- duplex strainer ANSI Class 150 RF Flange & NPT sizes 3/4" thru 4" Carbon Steel, Revision: K, Pages: 1  
Drawing No. SD053084, model 53 "BTX"- duplex strainer ANSI Class 150 RF Flange & NPT sizes 3/4" thru 4" Stainless Steel, Revision: J, Pages: 1  
Drawing No. ST053007BT11, 3/4" #53 BTX NPT BRZ, Revision: A, Pages: 1  
Drawing No. ST053007BT22, 3/4" #53 BTX NPT SS, Revision: A, Pages: 1  
Drawing No. ST053007BT33, 3/4" #53 BTX NPT CS, Revision: A, Pages: 1  
Drawing No. ST053010BF11, 1"#53 BTX 150#FF FLG'D BRZ, Revision: A, Pages: 1  
Drawing No. ST053010BR22, 1"#53 BTX 150#FF FLG'D SS, Revision: A, Pages: 1  
Drawing No. ST053010BR33, 1"#53 BTX 150#FF FLG'D CS, Revision: A, Pages: 1  
Drawing No. ST053010BT11, 1"#53 BTX NPT BRZ, Revision: A, Pages: 1  
Drawing No. ST053010BT22, 1"#53 BTX NPT SS, Revision: A, Pages: 1  
Drawing No. ST053010BT33, 1"#53 BTX NPT CS, Revision: A, Pages: 1  
Drawing No. ST053012BT11, 1.25"#53 BTX NPT BRZ, Revision: A, Pages: 1  
Drawing No. ST053012BT22, 1.25"#53 BTX NPT SS, Revision: A, Pages: 1  
Drawing No. ST053012BT33, 1.25"#53 BTX NPT CS, Revision: A, Pages: 1  
Drawing No. ST053015BF11, 1.5" #53 BTX 150#FF BRZ, Revision: A, Pages: 1  
Drawing No. ST053015BR22, 1.5" #53 BTX 150#FF CS, Revision: A, Pages: 1  
Drawing No. ST053015BR33, 1.5" #53 BTX 150#FF CS, Revision: A, Pages: 1  
Drawing No. ST053015BT11, 1.5" #53 BTX NPT BRZ, Revision: A, Pages: 1  
Drawing No. ST053015BT22, 1.5" #53 BTX NPT SS, Revision: A, Pages: 1  
Drawing No. ST053015BT33, 1.5" #53 BTX NPT CS, Revision: A, Pages: 1  
Drawing No. ST053020BF11, 2"#53 BTX 150#FF FLG'D BRZ, Revision: A, Pages: 1  
Drawing No. ST053020BR22, 2"#53 BTX 150#FF FLG'D SS, Revision: A, Pages: 1  
Drawing No. ST053020BR33, 2"#53 BTX 150#FF FLG'D CS, Revision: A, Pages: 1  
Drawing No. ST053020BT11, 2"#53 BTX NPT BRZ, Revision: A, Pages: 1  
Drawing No. ST053020BT22, 2"#53 BTX NPT SS, Revision: A, Pages: 1  
Drawing No. ST053020BT33, 2"#53 BTX NPT CS, Revision: A, Pages: 1  
Drawing No. ST053025BF11, 2.5" #53 BTX 150#FF FLG'D BRZ, Revision: A, Pages: 1  
Drawing No. ST053025BR22, 2.5" #53 BTX 150#FF FLG'D SS, Revision: A, Pages: 1  
Drawing No. ST053025BR33, 2.5" #53 BTX 150#FF FLG'D CS, Revision: A, Pages: 1  
Drawing No. ST053025BT11, 2.5"#53 BTX THR'D NPT BRZ, Revision: A, Pages: 1  
Drawing No. ST053025BT33, 2.5"#53 BTX THR'D NPT CS, Revision: A, Pages: 1  
Drawing No. ST053030BF11, 3"#53 BTX 150#FF FLG'D BRZ, Revision: A, Pages: 1  
Drawing No. ST053030BR22, 3"#53 BTX 150#FF FLG'D SS, Revision: A, Pages: 1  
Drawing No. ST053030BR33, 3"#53 BTX 150#FF FLG'D CS, Revision: A, Pages: 1  
Drawing No. ST053040BF11, 4"#53 BTX 150#FF FLG'D BRZ, Revision: A, Pages: 1  
Drawing No. ST053040BR22, 4"#53 BTX 150#FF FLG'D SS, Revision: A, Pages: 1  
Drawing No. ST053040BR33, 4"#53 BTX 150#FF FLG'D CS, Revision: A, Pages: 1  
Drawing No. materials, material designations, Revision: A, Pages: 1

**Terms of Validity:**

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United States 07724  
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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) 4-1-1/Table 6, 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 (2015) 4-2-2/1.3, 4-2-2/3, 6-1-6/5 and 6-1-6/Table 1.

**National:**

ASTM F1199 - 80 (Reapproved 2010);

2013 ASME BPVC, Section VIII, Division 1;

ASME B16.5-2013;

ASME B16.24-2011;

ASME B1.20.1-2013;

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA