



CERTIFICATE NUMBER
16-SG1491594-PDA

DATE
10 Mar 2016

ABS TECHNICAL OFFICE
Houston SED Machinery -
Equipment

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of **EMERSON PROCESS MANAGEMENT-VALVE AUTOMATION** 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: **Actuator, Hydraulic**

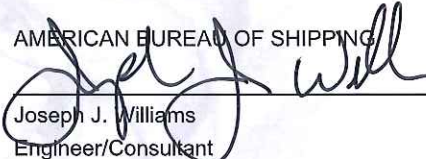
Model: **HD Series (H25xx & H35xx)**

This Product Design Assessment (PDA) Certificate 16-SG1491594-PDA, dated 10/Mar/2016 remains valid until 09/Mar/2021 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/Consultant

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).

EMERSON PROCESS MANAGEMENT-VALVE AUTOMATION

19200 NW FRWY

HOUSTON TX

United States 77065

Telephone: 1-281-477-4100

Fax: 281-477-2800

Email: kenneth.chin@emerson.com

Web: www.emerson.com

Tier: 2 - PDA Issued

Product: Actuator, Hydraulic
Model: HD Series (H25xx & H35xx)
Intended Service:
Marine & Offshore Application - Valve Operation

Description:
Double-Acting, Spring- Return Hydraulic Actuators - H251.0, H251.0-SRXX, H251.2, H251.2-SRXX, H251.5, H251.5-SRXX, H352.1, H352.1-SRXX.

Rating:
See attached "pdf" Data Sheet HHM 1.01, 1.02, 2.01, Rev.B dated 8/2010 (Performance, MAWP, MOP, Torque)

Service Restriction:
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:
The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. We note that the yoke materail has been modified to include an alternate material with equal or greater mechanical properties.

Notes/Drawing/Documentation:
Drawing No. 112868, Assembly Drawing H25X.X/H35X.X-SR (CCW), Revision: B, Pages: 1
Drawing No. 036239, Assembly Drawing H251.5A Actuator, Revision: F, Pages: 1
Drawing No. 108987, Rod Cover Model H25 Actuator, Revision: B, Pages: 1
Drawing No. 39452, Weld Assembly Rod End Cover H25/H35 Actuator, Revision: A, Pages: 1
Drawing No. 39451, Tubing Rod End Cover, Model H25 Actuator, Revision: A, Pages: 1
Drawing No. 39449, Flange for Rod End Cover, Model H25 Actuator, Revision: B, Pages: 1
Drawing No.071179, Piston Rod 521/721 HD High Cycle/STD Service, Revision: G, Pages: 1
Drawing No.214326, Ram Rod H2512-SR, Revision: C, Pages: 1
Drawing No.214303, Ram Rod H251.0-SR, Revision:C, Pages: 1
Drawing No.140023, Ram Rod BSG H251.2 Polymyte, Revision: A, Pages: 1
Drawing No.140022, Ram Rod BSG H251.0 Polymyte, Revision: A, Pages: 1
Drawing No. A-36170, Ram Rod Bushing H251.5A Actuator, Revision: C, Pages: 1
Drawing No.108986, Rod Cover, Model H35 Actuator, Revision: A, Pages: 1
Drawing No.39447, End Plug, Rod End Cover, Model H35 Actuator, Revision: A, Pages: 1
Drawing No.39446, Tubing, Rod End Cover, Model H35 Actuator, Revision: A, Pages: 1
Drawing No.39448, Flange, Rod End Cover, Model H35 Actuator, Revision: B, Pages: 1

Terms of Validity:
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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 2016 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2016 Steel Vessel Rules 4-6-7/3.5.5

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA