



CERTIFICATE NUMBER

14-HS1191666-PDA

DATE

31 July 2014

ABS TECHNICAL OFFICE

Houston SED - Ship 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
- HOUSTON**

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: **Pneumatic Actuator**

MODEL: **CB Series (CBA, CBA-X30 & CBB)**

This Product Design Assessment (PDA) Certificate 14-HS1191666-PDA, dated 31/Jul/2014 remains valid until 30/Jul/2019 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


Mohamed C Boukamcha

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).

EMERSON PROCESS MANAGEMENT-VALVE AUTOMATION

19200 NW FRWY
HOUSTON
TX 77065
United States
Telephone: 1-281-477-4100
Fax: 281-477-2800
Email: kenneth.chin@emerson.com
Web: www.emerson.com

Tier: 2

Product: Pneumatic Actuator
Model: CB Series (CBA, CBA-X30 & CBB)

Intended Service:
Marine and Offshore Applications - Valve Operation.

Description:

- Pneumatic actuators for ball, butterfly, lubricated/non-lubricated plug valves, and other 90 degree rotating mechanisms.
- Spring-return (SR) or double-acting (DA) configurations.
- Scotch-yoke design.

Ratings:
Operating Pressures: 40 psig to 150 psig;
Operating (Ambient) Temperatures: -20 °F to +200 °F;
Degrees of Protection: IP66 and IP67;

CBA and CBB Series:
Torque Output Range, DA, Start/End: 678 lbf-in to 11515 lbf-in;
Torque Output Range, DA, Min.: 404 lbf-in to 6868 lbf-in;
Torque Output Range, SR, Start: 375 lbf-in to 11910 lbf-in;
Torque Output Range, SR, Min.: 153 lbf-in to 6189 lbf-in;
Torque Output Range, SR, End: 172 lbf-in to 11189 lbf-in;

CBA-X30 Series:
Torque Output Range, DA, Start/End: 7388 lbf-in to 20337 lbf-in;
Torque Output Range, DA, Min.: 4248 lbf-in to 11694 lbf-in;
Torque Output Range, SR, Start: 4589 lbf-in to 22962 lbf-in;
Torque Output Range, SR, Min.: 1704 lbf-in to 10885 lbf-in;
Torque Output Range, SR, End: 1892 lbf-in to 19166 lbf-in;

Service Restrictions:
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.

1. Covers standard temperature trim range only.

Notes / Drawings / Documentation:
Supporting Documentation:
Ref. review letter dated 2 June 2009, Task 462617;
152230, rev. A, CBBXXX-SRX Assembly Dwg;
151551, rev. A, Torque Shaft CBB X25;
151550, rev. A, HSG CBBX25/SR;
152013, rev. B, Torque Shaft CBB420/520;
152011, rev. A, HSG CBB420/520.

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152011, rev. A, HSG CBB420/520;
152014, rev. B, Torque Shaft CBB315/415;
152012, rev. A, HSG CBB315/415;
152441, rev. A, CBB420-SRX Dimensional Data;
152443, rev. A, CBB315-SRX Dimensional Data;
152444, rev. A, CBB525-SRX Dimensional Data;
129738, rev. E, CBAXXX Assembly Dwg;
128972, rev. C, CBA315 Dimensional Data;
128976, rev. B, CBA415-SRX Dimensional Data;
129739, rev. F, CBAXXX-SRX Assembly Dwg;
128981, rev. B, CBA520 Dimensional Data;
128984, rev. B, CBA525 Dimensional Data;
128987, rev. B, CBA725 Dimensional Data;
128978, rev. C, CBA420 Dimensional Data;
129743, rev. L, CBA300-SRX Assembly Drawing;
128997, rev. C, CBA930-SRX Dimensional Data with Options;
125610, rev. C, Housing CBA300;
125614, rev. C, Torque Shaft CBA300;
125689, rev. F, Cylinder CBA930-SR;
125645, rev. B, Piston CBA930/SR;
129742, rev. F, CBA300 Assembly Drawing;
128996, rev. C, CBA930 Dimensional Data with Options;
125688, rev. F, Cylinder CBA930;

Term of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 - 2014 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Steel Vessels 4-6-7/5.3.3;

Rules for Conditions of Classification, Part 1 - 2014 Offshore Units and Structures 1-1-A2, 1-1-A3, which covers the following:

Mobile Offshore Drilling Units 6-1-6/5.9;

National:

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Tier: 2

NA

International:

NA

Government Authority:

NA

EUMED:

NA

Others:

Bettis Engineering Design Operational Procedural Guidelines.

Attachment to Product Design Assessment (PDA) Certificate 14-HS1191666-PDA
List of Models Covered by This PDA:

Model/Suffix:	Double-Acting	Spring-Release			
		-SR40	-SR60	-SR80	-SR100
CBA315	X	X	X	X	X
CBA415	X	X	X	X	X
CBA420	X	X	X	X	X
CBA520	X	X	X	X	X
CBA525	X	X	X	X	X
CBA725	X	X	X	X	X
CBA730	X	X	X	X	X
CBA830	X	X	X	X	X
CBA930	X	X	X	X	X
CBA1030	X	X	X	X	X
CBB315	X	X	X	X	X
CBB415	X	X	X	X	X
CBB420	X	X	X	X	X
CBB520	X	X	X	X	X
CBB525	X	X	X	X	X
CBB725	X	X	X	X	X