



CERTIFICATE NUMBER

04-HS407482C/1-PDA

DATE

14 September 2009

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 - BETTIS - WALLER

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. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Actuator
MODEL: G, GC & GH & GHC Series
ABS RULE: 2009 Steel Vessels Rules 2009 1-1-4/7.7, 1-1-A3/5, 4-6-7/3.5.5(a)
OTHER STANDARD:

AMERICAN BUREAU OF SHIPPING

Hans P. Haendler

Engineering Type Approval Co-ordinator

EMERSON PROCESS MANAGEMENT - BETTIS

18703 GH CIRCLE - P.O. BOX 508
WALLER
TX 77484
United States
Telephone: 281-727-5381
Fax: 281-727-5319

Valve Automation Division

Product: Actuator

Model: G, GC & GH & GHC Series

Intended Service:
Marine & Offshore Application

Description:
Pneumatic Actuators for Valve Operation

Ratings:
Torque Outputs: Double-Acting: 12,581 - 6,000,000 lb-in (1420-678,000 Nm);
Spring- Return End Torques: In excess 3,000,000 lb-in (339,000 Nm);
Maximum Allowable Working Pressure (MAWP): 40 - 200 PSIG (3 -14 bar);
Ambient Temperatures: -20°F to +200°F (-29°F to +93°F)
See attached "pdf" file for Model details & MAWP

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.
* For use in Class III piping systems only.
* Not for use in propulsion and steering systems.

Comments:
None

Notes / Drawings / Documentation:
This Product Design Assessment (PDA) is valid only 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.

Term of Validity:
This product/model is covered under Product Design Assessment (PDA) Certificate # 04-HS407482C/1-PDA, dated 14/Sep/2009. This PDA Certificate expires 13/Sep/2014. It will remain valid for 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first). It is valid for all vessels contracted on or before the date of the Rules used in this evaluation.

STANDARDS

ABS Rules:
2009 Steel Vessels Rules 2009 1-1-4/7.7, 1-1-A3/5, 4-6-7/3.5.5(a)

National:
NA

International:
NA

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Government Authority:

NA

EUMED:

NA

Others:

NA