



# Certificate

Project: **Bettis RGS Q-Series Actuator Type Testing**

Client: **Emerson Process Management**

Office: **Houston**

Client's Order Number: **LRE-16-10592 Rev 1**

Date: **06 February 2017**

Order Status: **Complete**

Inspection Dates

First: **07 October 2016**

Final: **02 February 2017**

This certificate is issued to **Emerson Process Management to certify that the undersigned did at their request attended their works located at QTRCO, 13120 Theis Lane, Tomball TX 77375 on and between the above mentioned dates for the purpose of witness testing and inspection of the equipment as per the scope detailed below.**

#### Equipment Subject to Test:

- **Actuator:** Bettis RGS Q-Series quarter turn spring return valve actuator; Model: RGSQS210SR-S31, Part #: RGSQS210SR-S31-LT; Serial Number: #39515; MOP: 10.34 barg (150 psig) Pneumatic
- **Spring:** Spring Part #: (2) R10X206-07 & (2) R10X206-08; Spring Serial: #1007A; #1007B; #1008A; #1008B

#### Reference Procedures:

- o **Shell**
  - A Guide on Endurance Testing of Pneumatic Actuators, Rev. H, March, 2016, by Frans Martens
  - Shell DEP 32.36.01.18-GEN. February 2016
- o **Emerson**
  - Emerson Test Procedures: Actuator: RGSQ201408-03.2 Rev H.2; Spring: RGSQ201405-03.2 Rev F.2.
  - Test Report: RGSQS210SR-S31-LT Actuator and Spring Test Report, 31-Jan-2017

#### Scope of Inspection:

- Witnessed type testing of the listed equipment per above referenced documents.
- Conducted visual inspection on all critical parts prior and after each test.
- Verified actuator/spring performance compliance with the requirement foreseen prior and post endurance test per above referenced documents.
- Verified test set-up for compliance with test procedure requirements.
- Verified calibration records of equipment and instruments used for testing.
- Confirmed traceability of the test assembly components presented by the BOM provided.

#### Conclusion:

The test setup and test results of the equipment described above are in accordance with the testing procedure, product specification and customer requirement. The equipment is found to be satisfactory meeting the requirements of the scope of the inspection detailed. It is concluded that Bettis RGSQS210SR-S31 model has successfully passed Shell Type Testing specified requirements.



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