

LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT

Issued by: Hamburg Technical Support Office (HPC 1661082)

Issued to: Armaturen-Wolff Friedrich H. Wolff GmbH & Co. KG

For: QUICK CLOSING AND OPENING VALVES

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 03 (July 2017) and this Design Appraisal Document forms part of the Certificate.

COMMENTS

1. Where an electric actuator is intended for quick closing valves at fuel oil service tanks for single fuel supply to main propulsion engines or to essential auxiliary generator engines the double solenoid types are to be used with an uninterrupted power supply system.

APPROVAL DOCUMENTATION

| | | |
|----------------|--|------------|
| - | Application Checklist | 25.11.2019 |
| - | Specification of electric QCV and requirements for corresp. control technology | 13.11.2019 |
| - | Numbering system of products, pgs. 48 - 51 | - |
| 332150200-3 | Quick closing valve, PN25, DN200 with hydr./pneumatic actuator (fire safe) | 24.09.2009 |
| 332150250-3 | Quick closing valve, PN25, DN250 with hydr./pneumatic actuator (fire safe) | 24.09.2009 |
| 333150200-3 | Quick closing valve, PN25, DN200 with hydr./pneumatic actuator (fire safe) | 01.02.2012 |
| 333150250-3 | Quick closing valve, PN25, DN250 with hydr./pneumatic actuator (fire safe) | 01.02.2012 |
| 334150200-3, A | Quick closing valve, PN16, DN200 with hydr./pneumatic actuator (fire safe) | 24.09.2009 |
| 334150250-3, A | Quick closing valve, PN16, DN250 with hydr./pneumatic actuator (fire safe) | 24.09.2009 |
| 335150200-3 | Quick closing valve, PN16, DN200 with hydr./pneumatic actuator (fire safe) | 01.02.2012 |
| 335150250-3 | Quick closing valve, PN16, DN250 with hydr./pneumatic actuator (fire safe) | 01.02.2012 |
| 3321F000-3 | Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN25 | 31.01.2012 |
| 3331F000-3 | Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN25 | 31.01.2012 |
| 3341F000-3 | Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN16 | 31.01.2012 |
| 3351F000-3 | Quick closing valve, spring loaded, fire safe, DN125 – DN250, PN16 | 31.01.2012 |
| 33405_D1_d | Quick closing valve, PN 16, DN 15 - 50 with hydraulic actuator | 20.03.2007 |
| 33415_D1_d | Quick closing valve, PN 16, DN 15 - 50 with hydraulic actuator | 23.06.2006 |
| 33415_D2_d | Quick closing valve, PN 16, DN 65 - 150 with hydraulic actuator | 23.06.2006 |
| 33416_D1_d | Quick opening valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator | 25.05.2007 |
| 34416_D1_d | Quick closing valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator | 29.05.2007 |
| 33516_D1_d | Quick closing valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator | 25.05.2007 |
| 34516_D1_d | Quick opening valve with bellow, PN 16, DN 50 with hydr./pneumatic actuator | 29.05.2007 |
| 33515_D1_d | Quick closing valve, PN 16, DN 15 - 50 with hydraulic actuator | 20.03.2007 |
| 33515_D2_d | Quick closing valve, PN 16, DN 65 - 150 with hydraulic actuator | 20.03.2007 |
| 33404000_12_F | Actuator ø40, DN 15 – 50 | 03.05.2006 |
| 33404000_14a_F | Actuator ø52, DN 65 – 150 | 27.04.2006 |

TEST REPORTS

| | | |
|-----------------------|---|------------|
| PRJ11100246056_3 | Production Quality Assessment | 23.01.2020 |
| 08-1937 | Dust and water jet test for a valve – PRA 709 (elect. release unit with double solenoid) acc. DIN EN 60529 – IP 55 at PACONSULT / Hamburg, Germany | 19.03.2019 |
| GF 320 MB: E1348 | Fire release function test for -TS thermal link of valve actuator with single or double solenoid aligned to EN ISO 15541:2001 to demonstrate of release at 700°C within 30 seconds at fire test laboratory of WTD Eckernfoerde, Germany | 03.11.2014 |
| 07-1875 | Vibration Test Report for valves and switch box at PACONSULT | 06.02.2008 |
| 0710143 / 19174-07 | Visit Report / Function and Performance Test without rubber seals | 13.09.2007 |
| 137-03 | Test Report, PACONSULT | 13.03.2003 |



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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.