



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 11/SEP/2019. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 01/SEP/2019 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid 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.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Valve, FRP Ball & Butterfly

Model Name(s): Series 300M, 310M, 310, 310HD, 410M, 500M, 610M, 700, 710

Presented to:

NIL-COR LLC, AN ANDRONACO INDUSTRIES COMPANY
4855 BROADMOOR AVENUE
KENTWOOD
United States

Intended Service:

Marine & Offshore Applications - Piping Systems as listed in 4-6-3/Table 1, Columns I and K, of the Steel Vessels Rules, in Locations where No Fire Endurance Test is required.

Description:

Series 300M: Graphite-reinforced vinylester body. Flanged Ball Valves - Sizes 1" - 6" Ball Check Valve - Size 1" - 4" Wafer Butterfly Valves - Size 3" - 12" Full Face Wafer Butterfly Valves - Size 3" - 8" Lug Butterfly Valves - Size 3" - 8" Series 310M: Fiberglass - reinforced vinylester body. Flanged Ball Valves - Sizes 1" - 6" Ball Check Valve - Size 1" - 4" Wafer Butterfly Valves - Sizes 3" - 12" Full Face Wafer Butterfly Valves - Size 3" - 8" Lug Butterfly Valves - Size 3" - 8" Series 310: Graphite-reinforced vinylester body. Wafer Swing Check Valves - Sizes 3" - 12" Series 300HD: Fiberglass-reinforced vinylester body. Wafer Butterfly Valves - Sizes 14" - 42" Series 410M: Fiberglass - reinforced polysulfone body. Flanged Ball Valves - Sizes 1" - 4" Ball Check Valve - Size 1" - 4" Series 500M: Graphite fibre-polyphenylene sulfide body. Flanged Ball Valves - Sizes 1" - 4" Series 610M: Fiberglass - reinforced epoxy body. Flanged Ball Valves - Sizes 1" - 6" **Series 700: Elastomer Lined Composite body. Full Face Wafer/Lug Butterfly Valves - Sizes 2" - 12"** Series 710: Lined Fiberglass composite body. Full face Wafer/Lug Butterfly Valves - Sizes 2" - 12"

Tier:

3

Ratings:

Temperature limits: - 50 °F to 250 °F. Ball Valves & Ball Check Valves: 1", 1½", 2"

Service Restrictions: Dia. - Max Working Pressure: 200 psig; 3" Dia - Max Working Pressure: 125 psig; 4" - 6" Dia - Max Working Pressure: 90 psig; Butterfly Valves: 3"- 6" Dia. - Max. Working Pressure: 150 psig; 8"-12" Dia. - Max. Working Pressure: 80 psig;

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. (Hydrotest certificate to be submitted upon request). 1. Usage limited to Applications where "No Fire Endurance Test Required" by Table 4-6-3/1 of the Steel Vessel Rules and is to be fitted on only Open Decks and within Tanks, Cofferdams, Void Spaces, Pipe Tunnels and Ducts as No Fire Endurance Test or Flame Spread Test has been carried out in accordance with 4-6-3/5.11 and 4-6-3/5.13 of the Steel Vessels Rules and within the Specific System's Restrictions. 2. Not to be used in Firefighting Systems. 3. Manufacturer's Chemical Resistance Guide is to be referenced for Chemical Applications and Temperature Limits. 4. ONLY Series 300 Graphite-Reinforced Ball & Butterfly Valves are considered conductive (SV Rules 4-6-3/7.7) and can be used in areas classified as 'Hazardous' per SV Rules 4-8-4/27 and MODU Rules 4-1-3/1. All other products are to be used only where 'non-conductive' components are required (or in 'Non-Hazardous Areas'). 5. Acceptability of the tests performed may be subject to approval by the Administration of the vessel's Registry. 6. Not to be used as shell valve.

Comments: The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. All valves are to be hydrostatically tested by the manufacturer to the pressure required by the pressure rating of the valve. The certificate of test is to be submitted upon request.

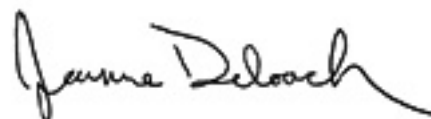
Notes / Documentation: Technical Specifications, Full-Face Wafer/Lug Butterfly Valves: 2" - 12" Series 710 lined Fiberglass Composite, dated 13 DEC 2013; Technical Specifications, Full-Face Wafer/Lug Butterfly Valves: 2" - 12" Series 700 Elastomer Lined Composite, dated 13 DEC 2013; WebApp_andronaco_com_20140812_100049; WebApp_andronaco_com_20140813_074742; WebApp_andronaco_com_20140814_100629;

Term of Validity: This Product Design Assessment (PDA) Certificate 14-HS1209421E-PDA, dated 02/Sep/2014 remains valid until 01/Sep/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.

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 4-6-3/5.15 and 4-6-3/7.7, 4-6-3/5.1, 4-6-3/5.5, 4-6-3/5.7, 4-6-3/5.9, 4-6-2/5.9.4; Rules for Conditions of Classification, Part 1 - 2014 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: Mobile Offshore Drilling Units;

National Standards:
International Standards:
Government Authority:
EUMED:
Others: None.

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	14-HS1209421E-PDA	02/SEP/2014	01/SEP/2019



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.