

CERTIFICATE NUMBER

DATE 08 May 2014

ABS TECHNICAL OFFICE Taipei Engineering Services

Certificate of Design Assessment

This is to Certify that a representative of this Bureau did, at the request of VALUE VALVES CO., LTD. - NEW TAIPEI CITY

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: Valve, Wafer, Lug and Flanged Type Butterfly Valves

MODEL: VF-73 series

This Product Design Assessment (PDA) Certificate 14-TM427881-2-PDA, dated 08/May/2014 remains valid until 07/May/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

Shou-Hua Huang

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 manufacturing process 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).

VALUE VALVES CO., LTD.

NO. 9 CHUNG SHAN ROAD TU CHENG INDUSTRIAL DISTRICT NEW TAIPEI CITY 23680 Taiwan, R.O.C. Telephone: NA

MA Certificate No.: 09-TA1670236-X

PRODUCT:

Valve, Wafer, Lug and Flanged Type Butterfly Valves

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TIER:

MODEL: VF-73_ series

Intended Service:

For marine & industrial applications those are compatible with the valve to meet the standard specified by the Manufacturer; e.g. Air, Gas, Water(Fresh, Sea, Cold, Pure, Waste) and Oil etc.

Description:

Valve Sizes: 1.5 inch (40 mm) to 48 inch (1200 mm); other description refer to the Manufacturer's Specification

Ratings:

Maximum Working Pressure: 1.5" (40 mm)-48" (1200 mm): 5 kg/cm2, 10 kg/cm2 or 150LB (Standard); 1.5" (40 mm)-24" (600 mm): 16 kg/cm2 (Option); Maximum temperature can be limited by seat material. Consult factory

Service Restriction:

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. Other Service Restrictions are: 1) Valves of Gray Cast Iron are not to be used for the applications listed in 4-6-2/3.1.3; 2) Valves of Ductile Iron are not to be used for temperatures 350 Deg.C and above; 3) Ductile Iron may be used for Class II piping systems and for valves listed in 4-6-2/3.1.3 provided it has an elongation of not less than 12% in 50 mm; 4) The material for body, disc, stem and seat are to be suitable for the intended service; 5) Not suitable for fire-fighting service; 6) Not to be used for steam service; 7) The applications are to comply with 4-6-1/Table 1; 8) Materials rendered ineffective by heat are not to be used in shell valves; 9) Wafer type valves are not to be used in any connection to a vessel's shell.

Comments:

Valves connected to the shell of the vessel are to be hydrostatically tested, before installation, to a pressure of at least 5 bars, in the presence of the Surveyor. All valves are to be hydrostatically tested by the manufacturer and are to bear the trademark of the manufacturer legibly stamped or cast on the exterior of the valves as well as the pressure rating. Our design assessment does not cover to the pneumatic actuator. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. Duplicate PDA resides with Value Valves (SuZhou) LTD., Suzhou, China

Notes / Drawings / Documentation:

DRAWING NO. S73_0112FG01 REV 0; S73_0112FL01 REV 0; S73_1424G01 REV 0 and S73_2648FG01 REV 0.

Term of Validity:

VALUE VALVES CO., LTD.

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manufacturer and intended client.

STANDARDS

ABS Rules:

The Rules applicable to this PDA covers 2014 Steel Vessel Rules 1-1-4/7.7, 1-1-A3, A4 & 4-6-2/5.11 only.

National: ASME B16.34 6.1

International: ISO 5211/1&2 and ISO 5752

Government Authority: NA

EUMED: NA

Others: AWWA C504 3.1.5