



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 25-OCT-2021. 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 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

Model Name(s): 1. BRONZE GLOBE VALVE 2. BRONZE U.B GLOBE VALVE 3. BRONZE GLOBE VALVE 4. BRONZE U.B GLOBE VALVE 5. BRONZE HULL GLOBE VALVE 6. BRONZE GLOBE CHECK VALVE 7. BRONZE U.B GLOBE CHECK VALVE 8. BRONZE HULL GLOBE CHECK VALVE 9. BRONZE U.B GLOBE CHECK VALVE 10. BRONZE ANGLE VALVE 11. BRONZE U.B ANGLE VALVE 12. BRONZE ANGLE VALVE 13. BRONZE U.B ANGLE VALVE 14. BRONZE CHECK ANGLE VALVE 15. BRONZE U.B ANGLE CHECK VALVE 16. BRONZE ANGLE CHECK VALVE 17. BRONZE U.B ANGLE CHECK VALVE 18. BRONZE HULL ANGLE VALVE 19. BRONZE B.B GLOBE VALVE 20. BRONZE B.B ANGLE VALVE 21. BRONZE SWING CHECK VALVE 22. BRONZE N.R.S GATE VALVE 23. BRONZE B.B-OS&Y GATE VALVE 24. BRONZE U.B GATE VALVE 25. BRONZE HOSE ANGLE VALVE 26. BRONZE HOSE GLOBE VALVE 27. BRONZE STORM VALVE 28. BRONZE STORM ANGLE VALVE 29. BRONZE U.B GLOBE VALVE 30. BRONZE U.B ANGLE VALVE 31. CAST STEEL STORM ANGLE VALVE 32. CAST STEEL STORM ANGLE VALVE

Presented to:

OK KWANG ENGINEERING CO., LTD.
#262-3, HAKJANG-DONG
SASANG-KU
617-020
Korea, Republic of

Intended Service:	Sea and Fresh Water System, Inert Gas System, Fuel Oil and Lube Oil System, Water Ballast System, Boiler Water System, Sanitary System, Hydraulic Oil System
Description:	1. Body : JIS H 5111-BC6, ASTM B62, JIS G5101-SC480 2. Disc : JIS H 5111-BC6, JIS H 3250-C3771 BD/3604 BD/3771 BE, ASTM B62
Tier:	3
Ratings:	1. BRONZE GLOBE VALVE : 15A/20A/25A/32A/40A (5K) 2. BRONZE U.B GLOBE VALVE : 15A/20A/25A/32A/40A (5K) 3. BRONZE GLOBE VALVE : 15A/20A/25A/32A/40A (16K) 4. BRONZE U.B GLOBE VALVE : 15A/20A/25A/32A/40A (16K) 5. BRONZE HULL GLOBE VALVE : 15A/20A/25A/32A/40A (16K) 6. BRONZE GLOBE CHECK VALVE : 15A/20A/25A/32A/40A (5K) 7. BRONZE U.B GLOBE CHECK VALVE : 15A/20A/25A/32A/40A (5K) 8. BRONZE HULL GLOBE CHECK VALVE : 15A/20A/25A/32A/40A (16K) 9. BRONZE U.B GLOBE CHECK VALVE : 15A/20A/25A/32A/40A (16K) 10. BRONZE ANGLE VALVE : 15A/20A/25A/32A/40A (5K) 11. BRONZE U.B ANGLE VALVE : 15A/20A/25A/32A/40A (5K) 12. BRONZE ANGLE VALVE : 15A/20A/25A/32A/40A (16K) 13. BRONZE U.B ANGLE VALVE : 15A/20A/25A/32A/40A (16K) 14. BRONZE CHECK ANGLE VALVE : 15A/20A/25A/32A/40A (5K) 15. BRONZE U.B ANGLE CHECK VALVE : 15A/20A/25A/32A/40A (5K) 16. BRONZE ANGLE CHECK VALVE : 15A/20A/25A/32A/40A (16K) 17. BRONZE U.B ANGLE CHECK VALVE : 15A/20A/25A/32A/40A (16K) 18. BRONZE HULL ANGLE VALVE : 15A/20A/25A/32A/40A (16K) 19. BRONZE B.B GLOBE VALVE : 40A/50A/65A/80A/100A/125A/150A/200A 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 8" (150LB) 20. BRONZE B.B ANGLE VALVE : 50A/65A/80A/100A/150A/200A 2", 2-1/2", 3", 4", 6", 8" (150LB) 21. BRONZE SWING CHECK VALVE : 40A/50A/65A/80A/100A/125A/150A/200A/250A/300A/350A/400A/450A/500A/600A 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14", 16", 18", 20", 24" (150LB) 22. BRONZE N.R.S GATE VALVE : 50A/65A/80A/100A/125A/150A/200A/250A/300A/350A/400A/450A 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14", 16", 18" (150LB) 23. BRONZE B.B-OS&Y GATE VALVE : 50A/65A/80A/100A/125A/150A/200A/250A/300A/350A/400A/450A 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14", 16", 18" (150LB) 24. BRONZE U.B GATE VALVE : 15A/20A/25A/32A/40A/50A/65A/80A/100A 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4"(150LB) 25. BRONZE HOSE ANGLE VALVE : 40A/65A 1-1/2", 2-1/2" (150LB) 26. BRONZE HOSE GLOBE VALVE : 40A/65A 1-1/2", 2-1/2" (150LB) 27. BRONZE STORM VALVE : 50A/65A/80A/100A/125A/150A/200A 2", 2-1/2", 3", 4", 5", 6", 8"(150LB) 28. BRONZE STORM ANGLE VALVE : 50A/65A/80A/100A/125A/150A/200A 2", 2-1/2", 3", 4", 5", 6", 8" (150LB) 29. BRONZE U.B GLOBE VALVE : 15A/20A/25A/32A/40A/50A/65A/80A 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3"(150LB) 30. BRONZE U.B ANGLE VALVE : 15A/20A/25A/32A/40A/50A/65A/80A 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3"(150LB) 31. CAST STEEL STORM ANGLE VALVE : 50A/65A/80A/100A/125A/150A/200A/250A (5K) 32. CAST STEEL STORM ANGLE VALVE : 50A/65A/80A/100A/125A/150A/200A/250A (10K)
Service Restrictions:	Unit Certification is not required for this product. If the manufacturer or purchaser's request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
Comments:	1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 2. The burst test has been witnessed by the attending Surveyor. (Test Report No. BK1867992 dated 10 Aug. 2016 and Test Report No. BK463827 dated 18 September 2003) 3. All valves are to bear the trademark of the Manufacturer legibly stamped or cast on the exterior of the valve and also the primary pressure rating at which the manufacturer guarantees the valve to meet the requirements of the Standard.
Notes / Documentation:	Drawing No. Refer to the attached drawing.
Term of Validity:	This Product Design Assessment (PDA) Certificate 16-BK1570389-PDA, dated 26/Oct/2016 remains valid until 25/Oct/2021 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:

2016 Steel Vessel Rules 1-1-4/7.7, 1-1-A3 & A4, 4-6-2/5.15

National Standards:

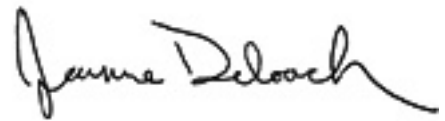
International Standards:

Government Authority:

EUMED:

Others:

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	16-BK1570389-PDA	27-OCT-2016	25-OCT-2021



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.