



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 26-NOV-2022. 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: Air Pipe Head
Model Name(s): APH Series

Presented to:
HYDRASEARCH COMPANY INC.
203A LOG CANOE CIRCLE
MD 21666
United States

Intended Service:	Marine and Offshore Applications - Used on ballast water, venting cargo holds and fuel venting systems
Description:	Floating Ball Type Weather-tight Automatic Closing Devices of Vent Outlets Flanged or Threaded, External and Internal Housing and Cover manufactured with Carbon steel (Hot Dip Galvanized ASTM A-123), Float Ball with 304 Stainless Steel, Float Seal with BUNA-N, and Flame/Insect Screen constructed with 304, 316 Stainless Steel.
Tier:	3
Ratings:	Sizes: 2", 2.5", 3", 4", 5", 6", 8", 10", 12" Connection Type: Flanged Flange - B16.5 Welding Neck - Class 150, Raised Face
Service Restrictions:	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. i) The diameter of each vent pipe must not be less than 2 inches nominal pipe size for water ballast tanks, and 2 1/2 inches nominal pipe size for fuel oil tanks as indicated in Steel Vessel Rules 4-6-4/9.3.3 (a) ii) Not suitable for Liquid Cargo Tanks.
Comments:	The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes / Documentation: Drawing No. A041-001, AIR PIPE HEAD ASSEMBLY - 5IN, Revision: A, Pages: 1
 Drawing No. A041-010, AIR PIPE HEAD ASSEMBLY - 6IN FLANGED, Revision: A, Pages: 1
 Drawing No. A041-019, AIR PIPE HEAD ASSEMBLY - 8IN FLANGED, Revision: A, Pages: 1
 Drawing No. A041-028, AIR PIPE HEAD ASSEMBLY - 10IN FLANGED, Revision: A, Pages: 1
 Drawing No. A041-036, AIR PIPE HEAD ASSEMBLY - 12IN, Revision: A, Pages: 1
 Drawing No. A041-151, AIR PIPE HEAD ASSEMBLY, 2IN FLANGED, Revision: A, Pages: 1
 Drawing No. A041-161, AIR PIPE HEAD ASSEMBLY, 2.5IN FLANGED, Revision: A, Pages: 1
 Drawing No. A041-164, AIR PIPE HEAD ASSEMBLY, 3IN FLANGED, Revision: A, Pages: 1
 Drawing No. A041-174, AIR PIPE HEAD ASSEMBLY, 4IN FLANGED, Revision: A, Pages: 1
 Hydrasearch: Marine Tank Reverse Flow Check Valve Characterization (ASC Document L-17-HVT-01), Dated: August 21, 2017
 Utah Water Research Laboratory Hydraulics Report No. 3893 dated October 2017.
 Pro-Mar Tightness Test on 2", 4" and 10" Tank Vent Check Valve. Pro-Mar Impact Test on 3", 5" and 12" Metallic Float.


Term of Validity: This Product Design Assessment (PDA) Certificate 17-HS1688739-PDA, dated 27/Nov/2017 remains valid until 26/Nov/2022 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: The Rules for Conditions of Classification, Part 1 2017 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: Steel Vessel 4-6-4/9.3.3 (a), 4-6-4/9.3.5 (a), 9.3.5 (b) i), 4-6-4/9.3.7; The Rules for Conditions of Classification, Part 1 – 2017 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: Mobile Offshore Drilling Units 4-2-3/1.7, 1.9.4, 1.9.5;

National Standards:
International Standards: IACS Unified Rule P3 (Rev 4, January 2016)

Government Authority:
EUMED:
Others:

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	17-HS1688739-PDA	29-NOV-2017	26-NOV-2022


 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.