



CERTIFICATE NUMBER

14-HS1264080-PDA

DATE

28 October 2014

ABS TECHNICAL OFFICE

Houston SED - Ship Equipment

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of
**ADVANCED POWER SYSTEMS INTERNATIONAL, INC. -
TORRINGTON**

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: **Fuel Catalyst**

MODEL: **FHD5-19-1.5, FHD10-38-1.5, FHD15-57-1.5, FHD20-76-1.5, FHD25-95-1.5, FHD30- 1 14-2, FHD90-341-2, FHD100-379-2,
FHD40-15 1 -2, FHD50- 1 89-2, FHD60-227-2, FHD70-265-2, FHD80-303-2, FHD110-416-2, FHD120-454-2**

This Product Design Assessment (PDA) Certificate 14-HS1264080-PDA, dated 28/Oct/2014 remains valid until 27/Oct/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


Mohamed O-Boukamcha

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 product 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).

ADVANCED POWER SYSTEMS INTERNATIONAL

111 UPPER VALLEY RD

TORRINGTON CT

United States 06790

Telephone: 860-496-7776

Fax: 860-496-7776

Email: chrisw@fitchfuelcatalyst.com

Web: www.fitchcatalyst.com

Tier: 5 - Unit Certification Required

Product: Fuel Conditioning Unit

Model: FHD5-19-1.5, FHD10-38-1.5, FHD15-57-1.5, FHD20-76-1.5, FHD25-95-1.5, FHD30-114-2, FHD40-151-2, FHD50-189-2, FHD60-227-2, FHD70-265-2, FHD80-303-2, FHD90-341-2, FHD100-379-2, FHD110-416-2, FHD120-454-2

Intended Service:

Marine & Offshore Applications.

Description:

Housing assemblies for Fitch Fuel Catalyst. The Fitch Fuel Catalyst is a permanent fuel treatment that reforms fuel (diesel, gasoline, or residual fuel oil), creating a more combustible, clean burning product. The Fuel Catalyst can be incorporated into an Existing Fuel Systems after the Filters.

Rating:

MAWP: 450 PSI @ 300 °F;

MDMT: -20 °F @ 450 PSI;

Housing assemblies:

1083-APS10102.5 and 1084-APS88182.5;

10,000 Engine Hours;

Service Restriction:

Unit Certification is required for this product - Group II pressure vessel.

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.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

1. Witnessed pressure testing of fuel catalyst housings is required as per 4-4-1/7.11.2 of the Steel Vessel Rules.

2. Fuel catalyst to be installed in accordance with the requirements of 4-6-4/13.3, 4-6-4/13.7.5, 4-6-5/3.3.4, and 4-6-5/3.5.4 of the Steel Vessel Rules or 4-2-5/7.7.1 of the MODU Rules.

Notes/Drawing/Documentation:

Supporting Data:

Dwg 1803, Rev. (-); 1803-APS10102.5FBC45

Calculation No. 1803-APS10102.5

Dwg 1804, Rev. (-); 1804-APS88182.5FBC45

Calculation No. 1804-APS88182.5

Terms of Validity:

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Tier: 5 - Unit Certification Required

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STANDARDS

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 4-4-1, 4-6-4/13.7.5;

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 6-1-5;

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

None.