

CERTIFICATE NUMBER EFFECTIVE DATE EXPIRY DATE ABS TECHNICAL OFFICE 18-LD1715199-PDA 14-Mar-2018 13-Mar-2023 London Engineering Department

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

VICTOR MARINE LTD.

located at

UNIT 7, WATERLOO COURT, MARKHAM VALE, CHESTERFIELD, United Kingdom, S44 5HN

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 Oil Filtering Equipment (15 ppm Equipment)

Model CS250, CS500, CS1000, CS2000, CS3000, CS4000, CS5000

This Product Design Assessment (PDA) Certificate 18-LD1715199-PDA, dated 14/Mar/2018 remains valid until 13/Mar/2023 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 Burday Of Shipping

Mohammed K.M. Abbas, Engineer/Consultant

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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

VICTOR MARINE LTD.

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Email: syeadon@victormarine.com Web: www.victormarine.com

Tier: 3 - Type Approved, unit certification not required

Product:

Oil Filtering Equipment (15 ppm Equipment)

Model:

CS250, CS500, CS1000, CS2000, CS3000, CS4000, CS5000

Intended Service:

For processing oily mixtures of bilge water from machinery space to produce an effluent with oil content not exceeding 15 parts per million (PPM) for Marine and Offshore Applications.

Description:

The system consists of three stages of separation/filtration achieved by two adjacent corrosion protected cylindical vessels connected by inter stage piping, mounted on a skid. It also incorporates an integral positive displacement pump. The first vessel consists of hydrophobic high viscosity removal system (Hi-VOR plate system), a high matrix oleophilic pack, pneumatic oil discharge valve, capacitance probe to control oil discharge, air vent, pressure gauge and sampling valve. The second chamber is fitted with a sampling valve, oily discharge valve and has two stages of filtration which consists of oleophilic coalescing filtering element and the adsorption granular media polishing unit (AGM filtration) for emulsion treatment.

Tested in accordance with IMO Resolution MEPC.107(49) and Guidance note MEPC.1/ Circ.643, and less than 5ppm achieved.

Rating:

CS250: 0.25 cum/hour,

CS500: 0.50 cum/hour,

CS1000: 1.0 cum/hour,

CS2000: 2.0 cum/hour,

CS3000: 3.0 cum/hour,

CS4000: 4.0 cum/hour,

CS5000: 5.0 cum/hour

Service Restriction:

- 1) Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
- 2) The equipment is to be operated in conjunction with an approved oil content meter (15PPM bilge alarm).

3) The equipment suitable to be used in Non-Hazardous area.

4) The equipment to comply with installation requirements stated in 6.1 of the MEPC Res. 107(49)

Comments:

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

2) For ABS ENVIRO + Notation, alarm is to be arranged to indicate when the oil content of the effluent exceeds 5 ppm. In addition, automatic stopping arrangements are to be provided for any discharge of oily mixtures when the oil content in the effluent exceeds 5 ppm.

Notes/Drawing/Documentation:

- 1) Effluent sample collection and analysis by SGS Institut Fresenius GmbH (Germany).
- a) Certificate Number: 105_430749_ČS1000 dated 17 August 2005 for Model CS1000
- b) Certificate Number 105 430749 CS4000 dated 17 August 2005 for Model CS4000.
- 2) Environmental testing by laboratory SIRA (UK). Type test reports numbers N 0525, N 0527, N 0530 and N 0532 of August 2005.
- 3) Drawing No. CS0500-001, GENERAL ARRANGEMENT, Revision: B

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- 4) Drawing No. CS2000-001, GENERAL ARRANGEMENT, Revision: B
- 5) Drawing No. CS4000-001, GENERAL ARRANGEMENT, Revision: C
- 6) Drawing No. CS0250-001, GENERAL ARRANGMENT, Revision: G
- 7) Drawing No. CS1000-001, GENERAL ARRANGEMENT, Revision: L
- 8) Drawing No. CS3000-001, GENERAL ARRANGEMENT, Revision: M 9) Drawing No. CS5000-001, GENERAL ARRANGEMENT, Revision: L
- 10) Installation, Operation and Maintenance Manual, CS Series Oily Water Separator, Issue: 17

Terms of Validity:

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STANDARDS

ABS Rules:

- 1) 2018 Steel Vessels Rules: 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-4/5.7.2
- 2) 2018 Rules for offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3
- 3) 2009 ABS Guide for the Environmental Protection Notation for vessels (Up-dated June 2016) 4/5.1.3

National:

NA

International:

- 1) Regulation 14 (6) Annex 1 of MARPOL 73/78 (2011 Consolidated Edition)
- 2) IMO Resolution MEPC.107 (49) adopted on 18 July 2003
- 3) IMO MEPC.1/ Circ.643 of 12 November 2008.

Government:

NA

EUMED:

NA

OTHERS:

NA