Marine & Offshore

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This certificate is not valid when presented without the full attached schedule composed of 7 sections

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Notified Body 2690 - MARINE EQUIPMENT DIRECTIVE 2014/90/EU

EC TYPE EXAMINATION CERTIFICATE

as per Module B of Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations and Commission Implementing Regulation (EU) 2020/1170 of 16 July 2020

This certificate is issued to:

VICTOR MARINE LTD.

Chesterfield - UNITED KINGDOM

for the type of product

OIL-FILTERING EQUIPMENT (for an oil content of the effluent not exceeding 15 p.p.m.)

Victor MiniSep Oily Water Separators - CS Series

Requirements:
- MARPOL 73/78 as amended, Annex I, Regulation 14 amended by MEPC.265(68)
- IMO Res. MEPC.107(49) amended by MEPC.285(70)
- IMO MEPC.1/Circ.643

This certificate is issued on behalf of the French Maritime Authorities to attest that Bureau Veritas Marine & Offshore did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations.

This certificate will expire on: 22 Mar 2026

For Bureau Veritas Marine & Offshore Notified Body 2690,

At BV LONDON, on 22 Mar 2021,

Spencer Yule

This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. Bureau Veritas Marine & Offshore is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Victor MiniSep Oily Water Separators - CS Series Model CS250, CS500, CS1000, CS2000, CS3000, CS4000 and CS5000

Design

The Victor MiniSep Oily Water Separators - CS Series are designed to remove heavy fuel oils, diesels and oily emulsions in the ship's bilges. The CS Series uses a three-stage separation process. This involves a Hi-VOR treatment, an oleophilic coalescing filter element and an AGM filtration system including pumps, control systems and oil content meter.

Specification

CS Series	Max. flowrate (m^3/h)	Supply pump capacity (m3/h)	Motor rating (kW)	Width x Depth x Height (mm)	Operating Pressure
CS250	0.25	0.25	0.37/0.55	974 x 683 x 1474	20 psi (1.38 bar) / max. 50 psi (3.45 bar)
CS500	0.50	0.50	0.37/0.55	974 x 683 x 1474	20 psi (1.38 bar) / max. 50 psi (3.45 bar)
CS1000	1.0	1.0	0.55	1372 x 858 x 1474	20 psi (1.38 bar) / max. 50 psi (3.45 bar)
CS2000	2.0	2.0	0.75/1.1	1372 x 858 x 1474	20 psi (1.38 bar) / max. 50 psi (3.45 bar)
CS3000	3.0	3.0	1.1	1521 x 986 x 1547	20 psi (1.38 bar) / max. 50 psi (3.45 bar)
CS4000	4.0	4.0	1.5	1521 x 986 x 1547	20 psi (1.38 bar) / max. 50 psi (3.45 bar)
CS5000	5.0	5.0	1.5	1659 x 1062 x 1547	20 psi (1.38 bar) / max. 50 psi (3.45 bar)
CS5000 OS	5.0	5.0	2.2	2687 x 1600 x 1839	20 psi (1.38 bar) / max. 58 psi (4 bar)

Operating temperature	50-86 °F (10-30 °C) / max. 131 °F (55°C)
Air supply	75-100 psi (5-7 bar)
Power supply	380/460 VAC, 50-60 Hz
Inclination range	0 to 22.5 °

Raw Materials as per Manufacturer's Part List

CS Series	Mild Steel Model	Aluminium Alloy Model
Vessels	Mild Steel EN 10028 P265 and P355 / EN 10025 S235 and S275 BS4360 43A	Aluminium Alloy, AA5083
Pipe work	Mild Steel EN 10255 / ASTM A106 Grade B, BS4360 43A	Plastic, uPVC
Pump bodies	Mild Cast Iron / SS316	Mild Cast Iron / SS316
Valves	Bronze / Brass / Gunmetal / SS316	Bronze / Brass / Gunmetal / SS316

Electrical components as per the manufacturer's part list

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Drawings

General Arrangement	CS250, CS500 CS1000, CS2000 CS3000, CS4000 CS5000 CS5000 OS	Drawing CS0250-001 issue F Drawing CS1000-001 issue J Drawing CS3000-001 issue I Drawing CS5000-001 issue H Drawing 5000-001_IC_OS issue A
Process Flow Diagram	All models CS5000 OS	Drawing CS 1000-002 issue M Drawing CS 1000-002-OS issue A
Electrical Wiring Diagram	All models	Drawing CS1000-100-1 issue A Drawing CS1000-100-2 issue A Drawing CS1000-100-3 issue B Drawing CS1000-105 issue C
Electrical Wiring Diagram (Integrated Control Panel)	All models	Drawing CS11996-1 issue B Drawing CS11996-2 issue A

		Drawing CS11996-3 issue B
Installation, Operating and Maintenance Manual	All models	Full Manual issue 19
	CS5000 OS	Full Manual issue 1

No departure from the above documents shall be made without the prior consent of the notified body named on this certificate. The manufacturer must inform the notified body of any modification or changes to these documents and drawings.

3. TEST REPORTS

3.1 The 15 ppm bilge separator has been examined and type tested in accordance with the requirements of the specifications contained in part 1 of the annex to the guidelines and specifications contained in IMO resolution MEPC.107(49).

Under type and model designation: Victor MiniSep CS1000 & CS4000 incorporating

- 15 ppm Bilge Separator manufactured by Victor Marine Limited, according to specification/assembly drawing No. CS1000-001/1 and CS4000-001/1 dated 03/06/2005

- Coalescer manufactured by Victor Marine Limited, according to specification/assembly drawing No. CS1000-020 dated 11/07/2005

- Filters manufactured by Victor Marine Limited, according to specification/assembly drawing No. CS.OWS.01 dated 27/07/2005

- Control equipment manufactured by Victor Marine Limited, according to specification/assembly drawing No. CS1000-100-1 dated 12/08/2005

- Integral feed pump fitted: Type CS100-##-01 (rpm 315±10%), CS400-##-01 (rpm 640±10%) or CS400-##-02 (rpm 310±10%)

3.2 Test carried out in Victor Marine Ltd., facilities under the supervision of the laboratory SGS Institut Fresenius GmbH (Germany). Samples were collected and analysed by this laboratory.

Collection method in accordance with ISO 9377-2:2000. Analysis reports of 17/08//2005 issued by the lab.

3.3 Environmental testing of the electric and electronic components was carried out in accordance with MEPC. 107(49), Part 3. The tests were witnessed by the laboratory SIRA (England) . Type test reports No. N 0525, N 0527, N 0530 and N 0532 of August 2005.

3.4 Additional environmental test No. 5155 dated 23/07/20123 issued by the lab Parc Ltd (UK), UKAS accredited.

EUT: 1xControl Panel acc. to drawings CS11996-1, CS11996-2 & CS-11996-3

Note: Details of test data and results obtained are shown on the Appendix to this Certificate.

4. APPLICATION / LIMITATION

4.1 - This certificate is valid only for 15 ppm bilge separator referred to above. Operating media: Oil / Water. To be used as an oil filtering equipment designed to produce an effluent with oil content not exceeding 15 ppm. The equipment is to be fitted with a MED approved oil content meter (15 ppm bilge alarm).

4.2 - The equipment is suitable for installation in non-hazardous area, not explosion proof.

4.3 - The scope of the appraisal made by Bureau Veritas to issue this certificate is strictly restricted to the relevant requirements stated on the front page of this certificate. Other requirements like Ship's Flag Administration Regulations and/or Classification Societies Rules, typically for electrical equipment including control, safety devices and cables, are excluded from the scope of this certificate.

4.4 - The installation requirements on board ships will have to comply with the regulation 6.1 of MEPC.107(49).

4.5 - The equipment is to be fitted with heating facilities where necessary.

4.6 - A copy of this EC type-examination certificate should be carried aboard a ship with this separator at all times.

4.7 - Each separator is to be supplied with its manual for installation, use and maintenance in language accepted by the ship's Flag Administration.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 - This certificate does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D "Production Quality Assurance" or E "Product Quality Assurance" or F "Product Verification" of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

5.2 - The manufacturer shall institute quality control procedure in order to ensure that the oil filtering equipment is produced to the same standard as the prototype approved one, and to keep records of any production tests carried out in accordance with Requirements stated on the front page of this certificate.

5.3 - Each oil filtering equipment (15 ppm equipment) shall be delivered with a declaration of conformity to type issued by the manufacturer.

5.4 - For information concerning the production phase modules, **VICTOR MARINE Ltd.** has declared the following manufacturing sites:

- VICTOR MARINE Ltd.: 7, Waterloo Court, Markham Vale, Chesterfield, Derbyshire, UNITED KINGDOM

- Teknequip Kalisazsp z.o.o.: ul Paderewskiego 34, 62-800 Kalisz, POLAND

6. MARKING OF PRODUCT

The equipment shall be marked as follows:

- Manufacturer's name or logo
- Serial number
- Type designation

Reference is made to MED 2014/90/EU chapter 2.

In particular Article 10.3 specifies that the wheelmark shall be followed by the identification number of the Notified Body involved in the production control phase (module D, E or F) and by the year in which the mark is affixed (4 digits or last 2 digits).

7. OTHERS

It is **VICTOR MARINE Ltd.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the EC Type Examination Certificate No. 23512/B0 EC issued by the Society.

Appendix to the EC Type Examination Certificate No. 23512/B0 EC

Test data and results conducted on a 15 ppm bilge separator in accordance with Part 1 of the annex to the guidelines and specifications contained in IMO Resolution MEPC.107(49)

15 ppm Bilge Separators submitted by : **Victor Marine Limited, (UK)**
Sample Models : **Victor MiniSep CS1000 & CS4000**
Test location : **SGS Institut Fresenius GmbH (Germany)**

Method of sample analysis : **ISO 9377-2:2000 "Water quality - Determination of hydrocarbon oil index**
Part 2: Method using solvent extraction and gas chromatography
Samples analysed by : **SGS Institut Fresenius GmbH (Germany)**
Test reports : **No. 105-430749-CS1000 dated 17/08/2005 & No. 105-430749-CS4000 dated 17/08/2005**

Environmental testing of the electrical and electronic sections of the 15 ppm Bilge Separator has been carried out in accordance with part 3 of the annex to the guidelines and specifications contained in IMO resolution MEPC.107(49). The equipment functioned satisfactorily on completion of each test specified on the environmental test.
a) Environmental tests carried out by : **SIRA Ltd., (UK)**
Test reports : **No. N 0525, N 0527, N 0530 and N 0532 of August 2005**
b) Environmental tests carried out by : **Parc Ltd., (UK)**
Test report : **No. 5155 dated 23/07/20123**
EUT : **1xControl Panel acc. to drawings CS11996-1, CS11996-2 & CS-11996-3**

Properties of test fluids A and B	**Test fluid "A"**	**Test fluid "B"**
Density at 15ºC	989.1 kg/m3	874.7 kg/m3
Viscosity	338.8 centistokes @ 50ºC	3.35 centistokes @ 40ºC
Flashpoint	83.5°C	74°C
Ash content	<0.01 %	<0.01 %
Water content at start of test %	0,05 %	0,0171 %

Test fluid "C"
Surfactant : Sigma-Aldrich Certificate of Analysis LOT S13838
Iron oxides : Sigma-Aldrich Certificate of Analysis LOT S20330PC

Test water
Density at 20ºC : 998.5 kg/m3
Solid matter present : <0.001 % solids by weight

Test temperatures

Ambient	20°C - 25°C
Test fluid "A"	30°C
Test fluid "B"	24°C
Test fluid "C"	24°C
Test water	28°C - 32ºC

Diagram of test rig
according to TEST RIG 0001-1

Diagram of sampling arrangement
according to MEPC.107(49), annex Part 1, Fig. 4

TEST RESULTS (IN PPM) AND TEST PROCEDURES

Test Fluid A - Sample Model Victor MiniSep CS1000

	1	2	3	4	5	6	7	8	9
Influent	0.73 %	0.73 %	-	26.2 %	26.2 %	-	0 %	0 %	26.2 %
Effluent	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm

Refer to Figure "Test Fluid A" in IMO resolution MEPC.107(49), Appendix 1, p. 28.

Test Fluid B - Sample Model Victor MiniSep CS1000

	10	11	12	13	14	15
Influent	0.98 %	0.98 %	-	27.3 %	27.3 %	-
Effluent	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm

Refer to Figure "Test Fluid B" in IMO resolution MEPC.107(49), Appendix 1, p. 28.

Test Fluid C - Sample Model Victor MiniSep CS1000

	16	17	18
Influent	5.8 %	5.8 %	-
Effluent	2.0 ppm	2.0 ppm	2.0 ppm

Refer to Figure "Test Fluid C" in IMO resolution MEPC.107(49), Appendix 1, p. 28.

Test Fluid A - Sample Model Victor MiniSep CS4000

	1	2	3	4	5	6	7	8	9
Influent	0.73 %	0.73 %	-	26.2 %	26.2 %	-	0 %	0 %	26.2 %
Effluent	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm

Refer to Figure "Test Fluid A" in IMO resolution MEPC.107(49), Appendix 1, p. 28.

Test Fluid B - Sample Model Victor MiniSep CS4000

	10	11	12	13	14	15
Influent	0.98 %	0.98 %	-	27.3 %	27.3 %	-
Effluent	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm

Refer to Figure "Test Fluid B" in IMO resolution MEPC.107(49), Appendix 1, p. 28.

Test Fluid C - Sample Model Victor MiniSep CS4000

	16	17	18
Influent	5.8 %	5.8 %	-
Effluent	2.0 ppm	2.0 ppm	2.0 ppm

Refer to Figure "Test Fluid C" in IMO resolution MEPC.107(49), Appendix 1, p. 28.

***** END OF CERTIFICATE *****