

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Oil-filtering equipment (for an oil content of the effluent not exceeding 15 p.p.m.)

with type designation(s)

HCS-20, HCS-50, HCS-100, HCS-200, HCS-300, HCS-500 and HCS-1000

Issued to

**Heishin Pump Works Co., Ltd.
Kago-gun, Hyogo Pref., Japan**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/2.1. Marpol 73/78 as amended, Annex I Regulation 14, IMO Res. MEPC.107(49), IMO MEPC.1/Circ. 643

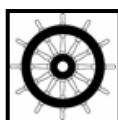
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2020-04-13**.

Issued at **Høvik** on **2018-09-03**

DNV GL local station:
Kobe

Approval Engineer:
Thomas Grafton



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
Head of Notified Body



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

The equipment is intended for installation in machinery spaces onboard ships for oily bilge water separation: Maximum 15 ppm at discharge overboard. The 15 ppm bilge separators are designed and tested to meet the requirements of IMO Resolution MEPC.107(49).

The design is made up of a first treatment phase where rough gravity separation is achieved by using baffle plates, a second stage with an emulsion breaker that also filters out solids, a third stage with a coalescer and a fourth stage with another coalescer.

Application/Limitation

Application:

Type:	Capacity (m ³ /h):	Max. pump capacity (m ³ /h):
HCS-20	0.2	0.22
HCS-50	0.5	0.55
HCS-100	1.0	1.1
HCS-200	2.0	2.2
HCS-300	3.0	3.3
HCS-500	5.0	5.5
HCS-1000	10.0	11.0

Installation:

The supplied unit includes an integrated feed pump with make and model as described in the piping diagrams listed in the Type Examination Documentation.

When required by MARPOL Annex I Reg.14.7, the unit shall be integrated with a 15ppm Oil Content Monitor complying with IMO Res.MEPC.107(49). This Oil Content Monitor shall be provided with a separate EU Marine Equipment Directive Type Approval Certificate.

The 15ppm Oil Content Monitor shall be installed as described in the piping diagrams listed in the Type Examination Documentation. The "Sampling Valve" shown on the piping diagrams shall be kept open in normal operation.

A Flow (Pressure) Sensor shall be installed between the "Sampling Valve" and the 15ppm Oil Content Monitor, as shown in the piping diagrams listed in the Type Examination Documentation.

The following items shall be verified on the final installation (15ppm Bilge Separator and 15ppm Oil Content Monitor): -

1. An alarm signal in the Oil Content Monitor is activated whenever clean water is used for cleaning or zeroing purposes
2. An alarm signal in the Oil Content Monitor is activated whenever no flow of sample through the Oil Content Monitor is detected by the flow sensor
3. Any alarm signal will activate the Automatic Stopping Device preventing overboard discharge and lead to recirculation
4. The overall response time (including the response time of the 15ppm Oil Content Monitor) between an effluent discharge from the 15ppm Bilge Separator exceeding 15ppm, and the operation of the Automatic Stopping Device preventing overboard discharge, shall be not more than 20 seconds
5. By-passing the 15ppm Oil Content Monitor during normal operation shall by no means be possible
6. Every access of the Oil Content Monitor (beyond check on instrument drift, repeatability of the instrument reading, and the ability to re-zero the instrument) requires breaking of a seal.

Job Id: **344.1-004214-2**
Certificate No: **MEDB00004J1**

Note: Depending on the make/model of 15ppm Oil Content Monitor, the no flow situation described in item 2 may activate the Automatic Stopping Device preventing overboard discharge without an "alarm signal". This is acceptable and is normally occurring when the flow sensor is connected to the input signal that detects when the 15ppm Oil Content Monitor is de-energized. (IMO Res.MEPC.107(49) Section 4.2.7 requires that a de-energized Oil Content Monitor activates the Automatic Stopping Device preventing overboard discharge.)

Limitations:

Installation of the equipment in spaces subject to explosion hazard is not permitted.

A copy of the Operation, installation and maintenance manual shall be on board vessel at all times.

Type Examination documentation

Listed drawings/ documents refer to all capacities, except as indicated.

Tests carried out

Marking of product

The marking shall give at least the following information:

- identification of manufacturer
- equipment type designation or model identification
- maximum throughput and maximum influent pressure at which the separator is designed to operate
- serial number
- Revision information, as applicable, for all firmware or software modules installed per hardware unit, necessary to identify the equipment.

-----*This certificate replaces previous certificate MED-B-9663 which is now withdrawn*-----