

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-content meters

with type designation(s)
Dynamic DOM-107
Dynamic IDOM-107

Issued to

DESARROLLO TECNICAS INDUSTRIALES DE GALICIA, S.A
LA CORUÑA, Spain

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397**,
item No. MED/2.3. Marpol 73/78 as amended, Annex I Regulation 14, IMO Res.
MEPC.107(49), IMO MEPC.1/Circ. 643

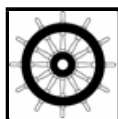
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-03-26**.

Issued at **Høvik** on **2020-03-27**

DNV GL local station:
NB/CMC Team West

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 DOM-107 Bilge Alarm is intended for installation on-board ships for monitoring the oil content of bilge water. The unit monitors the effluent from an approved Bilge Water Separator and sends an alarm signal that facilitates the activation of discharge control devices when the oil content exceeds 15ppm.

The DOM-107 uses the principle of scattered light for real time detection and measurement of oil content.

The DOM-107 can also be integrated into the control cabinet of a Desarrollo Tecnicas Industriales de Galicia, S.A. OWSANP series Oily Water Separator. In this configuration the control functions of the DOM-107 are integrated into the control panel of the OWSANP separator. This configuration is designated IDOM-107 (integrated DOM-107).

The 15ppm Bilge Alarm is designed and tested to meet the requirements of IMO Resolution MEPC.107(49).

Application/Limitation

The enclosure for the DOM-107 has been tested for Ingress Protection (IP) according IEC 60529 and is rated at IP65.

The equipment is not permitted to be installed in spaces subject to explosion hazards.

A copy of the Operating and Maintenance Manuals shall be on board the vessel at all times.

The following shall be verified during installation :

- The alarm is always activated whenever clean water is used for cleaning or zeroing purposes.
- The alarm is always activated if the Bilge Alarm fails to function, requires a warm-up period or otherwise be de-energized.
- Any alarm will activate the automatic stopping device preventing overboard discharge and lead to recirculation.
- The overall response time (including the response time of the alarm) between the effluent discharge exceeding 15 ppm oil and the operation of the automatic stopping device preventing overboard discharge is not more than 20 seconds.

Type Examination documentation

Mechanical and Assembly Drawings:

Monitor Dynamic DOM-107	DTG-0955X-0004	01 (27.05.2016)

Electrical/Control Drawings:

PBA Placa Base Monitor Dynamic DOM-107	DTG-0952X-003	23.05.2016

Dekra Testing and Certification, S.A.U. Test Report: Degrees of protection provided by enclosures (IP Code, rating IP65)	NIE: 55519RSE.001	01.12.2017

"DELTA" OWSANP Control Diagram	OWNSANP-000-E02	2 (07.2017)

Job Id: **344.1-010042-1**
Certificate No: **MEDB000064Y**

"DELTA" OWSANP Flow Diagram	OWSANP-000-F01	2 (07.2017)
Bilge Alarm- Dynamic DOM-107 - Instruction Manual	DOM-107-02	6 (02.2020)

Tests carried out

Performance Tests:

- Approval Tests According to MEPC.107(49), 15ppm Bilge Alarm Dynamic DOM-107, Revision 1, dated 12.05.2005 (witnessed by ABS).

Environmental Tests:

- Test Report Specification MEPC 49/22/Add.2 Annex 13: DOM-107 Oil Content Meter, Dekra Report No. NIE: 53850RSE.001, dated 14.07.2017 (witnessed by ABS).

Marking of product

For traceability to this EC Type-Examination, each unit to be marked with;

- Manufacturer's name and trade mark
- Type designation
- Serial No.
- Mark of Conformity

APPENDIX

Test data and results of tests conducted on a 15 ppm Bilge Alarm in accordance with Part 2 of the Annex to the Guidelines and Specifications contained in IMO Resolution MEPC.107(49)

15 ppm Bilge Alarm submitted by:

Test location:

Organisation conducting the test:

Method of sample analysis:

Test rig according to drawing:

Samples analysed by:

Environmental testing of the electronic sections of the 15 ppm Bilge Alarm 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 protocol.

Environmental Test(s) carried out at

Remarks:

Test fluid "A"

Test fluid "B"

Test fluid "C"

Test water

Test temperature

Calibration Test and Response Time

	Test Fluid					
	A		B		C	
	Oil Content Meter Reading	Grab sample	Oil Content Meter Reading	Grab sample	Oil Content Meter Reading	Grab sample
0 ppm						
15 ppm						
Full scale (ppm)						
Water Temperature						
Re-zero	☐ ☒		☐ ☒		☐ ☒	

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Recalibrate	☐ ☒	☐ ☒	☐ ☒
Response Time			

Contaminant(s) and Colour Test

Non-oil particulate matter.

Meter reading shift with ppm non-oil particulate contaminants and with very salt water.

		Expected Reading	Oil Content Meter Reading
Clean water and 10 ppm Test Fluid "B"			
Very salty water (6% common salt with clean water)			
Fluid B and Iron Oxide in a concentration of	10 ppm		
Fluid B and Iron Oxide in a concentration of	50 ppm		
Fluid B and Iron Oxide in a concentration of	100 ppm		

Sample Pressure of Flow Test

15 ppm Bilge Alarm reading shift at normal:

15 ppm Bilge Alarm reading shift at 50 % of normal:

15 ppm Bilge Alarm reading shift at 200 % of normal:

Deviations from this test should be stated if necessary:

Shut-Off Test

15 ppm Bilge Alarm before shut-off

15 ppm Bilge Alarm reading after start-up
(minimum dry period 8 hours)

Damage to meter as follows:

Utilities Supply Variation Test

100 % voltage:	
110 % voltage effects:	
90 % voltage effects:	
110 % air pressure effects:	
90 % air pressure effects:	
110 % hydraulic pressure effects:	
90 % hydraulic pressure effects:	

Other Comments:

Calibration and Zero Drift Test

Calibration drift:	
Zero drift:	