

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

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)

YWC 0.25, 0.50, 1.00, 1.50, 2.00, 2.50, 3.00, 4.00, 5.00

Issued to

**Dongtai City Dongfang Marine Fitting Co., Ltd.
Dongtai, 100, China**

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**

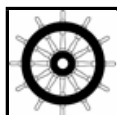
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-06-03**.

Issued at **Hamburg** on **2019-06-04**

DNV GL local station:
Nantong

Approval Engineer:
Hagen Markus



Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
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 SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 oily water separator system (OWS) of type YWC consist of three treatment stages.

- 1st Stage Coalescer separator - Oil drainage via oil dome by back flushing with pressurized water
- 2nd Stage Filter
- 3rd Stage Membrane

The bilge water is sucked through the first stage and then pumped through filter and membrane treatment stage by progressing cavity pump (Mono Pump) of type I-IB (1F), Manufacturer Shanghai Sanxing pump factory. Alternatively, a pump with the same speed-delivery characteristic curve.

Contamination monitoring of 2nd and 3rd filter stages by differential pressure measuring of inlet versus outlet of filter stage.

Cleaned bilge water monitoring by type approved 15 ppm Bilge Alarm of type OCM-15 or equivalent type.

Application/Limitation

The oily water separator system of type YWC is designed and tested according to IMO Resolution MEPC.107(49) for oily bilge water separation with maximum oil content at overboard discharge of 15 ppm.

Installation is not permitted in spaces subject to explosion hazard.

Type Examination documentation

Assembly drawings¹

Type designation	Size m ³ /h	Drawing	Dated
YWC 0.25	0.25	322DF-3-00	2008-10
YWC 0.5	0.5	322DF-1-00	2008-10
YWC 1.0	1.0	322DF-2-00	2008-10
YWC 1.5	1.5	322DF-6-00	2008-10
YWC 2.0	2.0	322DF-7-00	2008-10
YWC 2.5	2.5	322DF-8-00	2008-10
YWC 3.0	3.0	322DF-9-00	2008-10
YWC 4.0	4.0	322DF-4-00	2008-10
YWC 5.0	5.0	322DF-10-00	2008-10

Note

¹ Drawings for all sizes for 1st Coalescer, 2nd stage filter and 3rd stage membrane drawings according to "DRAWING LIST", dated 2009-04-02.

Piping and instrument diagrams (P&ID)

Type designation	Size m ³ /h	P&ID	Dated
YWC 0.25/0.50	0.25, 0.50	322DF-3-00XT	2009-01-08
YWC 1.00/1.50/2.00/2.50	1.0, 1.5, 2.0, 2.5	322DF-2-00XT	2009-01-08
YWC 3.00/4.00/5.00	3.0, 4.0, 5.0	322DF-4-00	2009-01-08

Electrical supply, control and monitoring system

Job Id: **344.1-008865-1**
Certificate No: **MEDB00004VC**

Equipment	Drawing	Date
Control Control Box Diagram	322DF-4-00-1, -2, -3 SME	2009-01-08
	322DF-4-00SME1	2009-01-08
	322DF-4-00SME2	2009-01-08
Electrical Control Box Instruction (Manual)	322DF-4-00SME	2008-12-08

Operation, installation and maintenance manuals

Instruction Book (Manual) 322DF-2-00SM, issue 2009-01-08

Tests carried out

Test data and results of tests conducted on 15ppm Bilge Separators in accordance with part 1 of the annex to the Guidelines and Specifications contained in IMO Resolution MEPC.107(49).

Oily water separator

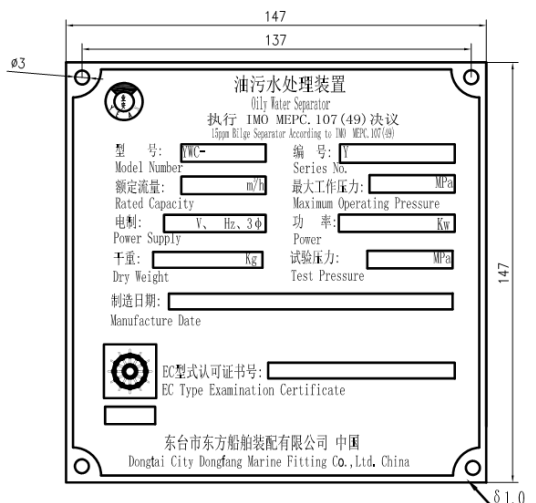
Tested sizes: YWC – 1.0 and YWC – 4.0
Test location: Dongtai City Dongfang Marine Fitting Co., Ltd.
Date: 2008-12-09 and -12-10
Method of sample analysis: IMO Resolution MEPC.107(49), Part 4
Samples analyzed by: Shanghai Environmental Centre, WT20080910:2008-12-29

Electrical Control Box

Environmental test report: Research Institute of China Shipbuilding Industry Corporation, Report No.: S393-SR/DW/GW/QY/ZD-2008

Marking of product

Each separator unit is to be provided with a name plate as follows:
Reference is made to drawing 316L – YWC nameplate.



APPENDIX

IMO Test Data and Results

Test data and results of tests conducted on a 15 ppm Bilge Separator in accordance with Part 1 of the Annex to the Guidelines and Specifications contained in IMO Resolution

Job Id: **344.1-008865-1**
Certificate No: **MEDB00004VC**

MEPC.107(49), published in the following Certificate of Type Approval Certificates issued by China Classification Society

Type	Certificate No.
YWC 0.25	NJ13T00270_02
YWC 0.50	NJ13T00270_03
YWC 1.00	NJ13T00270_04
YWC 1.50	NJ13T00270_05
YWC 2.00	NJ13T00270_06
YWC 2.50	NJ13T00270_07
YWC 3.00	NJ13T00270_08
YWC 4.00	NJ13T00270_09
YWC 5.00	NJ13T00270_10

End of certificate