

TYPE APPROVAL CERTIFICATE

This is to certify:**That the 5 ppm Bilge Water Separator**

with type designation(s)

PPT-BWS/MESB, MPEB-VT, PPT-BWS / FF-DA / MESB-VT, MPS/MF

Issued to

**Filtration Group GmbH
Hamburg, Germany**

is found to comply with

DNV GL class programme DNVGL-CP-0208 – Type approval – 5 ppm bilge water separators**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Type:	Capacity:
PPT-BWS/MESB	1.0, 2.5, 5.0, 10.0 m³/h
MPEB-VT	0.5, 1.0, 2.5, 5.0, 10.0
PPT-BWS / FF-DA / MESB-VT	0.5, 1.0, 2.5, 5.0, 10.0
MPS/MF	0.25, 0.5, 1.0, 2.5, 5.0, 7.5

Issued at **Hamburg** on **2019-09-11**This Certificate is valid until **2024-09-10**.for **DNV GL**DNV GL local station: **Hamburg CMC**Approval Engineer: **Hagen Markus**

Olaf Drews
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-029461-1**
Certificate No: **TAP00001X0**

Product description

This certificate includes bilge water separator systems based on a combination of a coalesce stage with an adsorber unit stage and one separator system of type MPS/MF which is based on a combination of a coalescer with membrane filtration stage.

The oil content of the effluent is monitored by an type approved oil content meter of type OMD24 with integrated no-flow switch. Alarm set point to 5 ppm.

Overview

P&I Diagramms		
Separator system	Document number	Issue
PPT-BWS/MESB	5070-20129389-S00_265_000-01	2019-04-19
MPEB-VT	MPEB-VT 500-10000 Standard	2019-04-04
PPT-BWS/FF-DA/MESB-VT	2-NS-05 7721.3	2019-08-22
MPS/MF	2-NS 10 8693_1	2019-08-22

Electronic section		
Wiring diagrams	PPT-BWS/MESB	5070-20166088-S00, N17/051, 4502725031, 2018-02-26
	MPEB-VT	5070-20166010-S00
	PPT-BWS/FF-DA/MESB-VT	5724-V3, 5724-05
	MPS/MF	5070-20170390, N05_053_2, 1224-37, 2012-12-10
Oil Content Meter (OCM)	Deckma, OMD24	Alarm set point to 5ppm provided with no-flow sensor in sample outlet line (stop of discharge) - Deckma Installation Manual Conversion-Kit OMD-24 - Installation drawing "OMD-24EV und Flow Sensor auf Montageplatten"
Software	PPT-BWS/MESB	Overview "Software versions", 2019-09
	MPEB-VT	
	PPT-BWS/FF-DA/MESB-VT	
	MPS/MF	

Components	
Feed pump type	Seepex BN or a pump with same speed-delivery characteristic curve.

Production places

Responsibility

The company Filtration Group GmbH, Hamburg Germany takes the responsibility that the design and the production of the products is in compliance with the Rules, Standards and/or Regulations listed on page 1 of this certificate.

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Application/Limitation

The bilge water separator series are type approved for installation on board ships and offshore units for oily water separation, maximum oil content of 5 ppm at discharge overboard.

The equipment is designed and tested to meet the requirements of the IMO Resolution MEPC.107(49) and DNV GL Type approval program CP 208.

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

Treatment capacities

Type	Capacity [m3/h]	IMO Certificate ¹	Valid until
PPT-BWS / MESB	1.0, 2.5, 5.0, 10.0	330375, 6, 7, 8-00	2024-06-30
MPEB-VT	0.5, 1.0, 2.5, 5.0, 10.0	330370, 1, 2, 3, 4-00,	
PPT-BWS /FF-DA/ MESB-VT	0.5, 1.0, 2.5, 5.0, 10.0	330 254, 5, 6, 7, 8	2022-04-30
MPS/MF	0.25, 0.5, 1.0, 2.5, 5.0, 7.5	330 306, 7, 8, 9, 10, 11	

Notes

¹ Issued by BG Verkehr, Germany

The following fail-safe arrangements and alarms shall be verified after installation of the bilge water separator:

1. The alarm is always activated whenever:
 - clean water is used for cleaning or zeroing purposes of the meter
 - no flow of sample through the oil-content meter is detected by the flow sensor
2. Any alarm will activate the automatic stopping device and lead to recirculation
3. The overall response time (including the response time of the alarm) between an effluent discharge exceeding 5 ppm and to the Automatic Stopping Device preventing the overboard discharge is less than 20 s
4. By-passing of the oil content meter (alarm) during normal operation shall by no means be possible.

Type tests

The bilge water separator series specified in this certificate are type tested in accordance with:

- IMO Resolution MEPC.107(49), Annex Part 1
- DNV GL Class Programme CP 0208, 5 ppm bilge water separators.

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Type Approval Documentation

Marking of product

For traceability to this type approval, each unit to be provide with a name plate:

Scope	Example
Manufacturers name	Filtration Group
Type designation	MPEB VT 2,5 1.st Stage
Reference to IMO Certificates	Approved by SEE BG 01.07.2014, Approval no. 330181
Flow rate	2,5 m³/h
Max. Diff. pressure	1,5 Bar
Design pressure	3.5 Bar
Max. operating temp.	60°C
Serial no.:	N17/017
Built in	2017

The oil content meter (OCM) is in addition to be marked with a sticker "Alarm Point set to 5 ppm".

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNVGL-CP-0338, Sec.4.

End of Certificate