

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fuel Oil Separators

with type designation(s)
OSD and OSE series

Issued to

GEA Westfalia Separator Group GmbH
Oelde Nordrhein-Westfalen, Germany

is found to comply with

DNV GL rules for classification – Ships

DNV GL class programme DNVGL-CP-0210 – Type approval – Fuel oil separators

Application :

Heavy Fuel Oil separators on ships with additional class notation "Fuel" as specified in DNVGL Rules Part 6, Chapter 2, Section 4.

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2021-12-04**.

Issued at **Hamburg** on **2016-12-05**

DNV GL local station: **Essen**

Approval Engineer: **Hagen Markus**

for **DNV GL**

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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:
Certificate No: **TAM00000BF**

Product description

Centrifugal separator for cleaning of marine fuels according to ISO 8217.

Application / Limitation

Feed temperature: up to +115 °C
Ambient temperature: +5 °C up to +55 °C
Maximum fuel oil viscosity: 700 cSt at +50 °C

The fuel separators of type OSE are not approved for liquids with flashpoint below +60 °C.

Separator series OSD

Certified Flow Rate (CFR)

Model	Bowl speed (rpm)	CFR l/h HFO 380cSt at 50 °C	CFR l/h HFO 700cSt at 50 °C
OSD 6/3	12000	860	450
OSD 6/4		1300	650
OSD 6/5		1400	740
OSD 6/6		1600	990
OSD 18/8	11500	2100	1300
OSD 18/10		2800	1800
OSD 18/15		3300	2000
OSD 18/18		4000	2500
OSD 35/20	8200	4400	2800
OSD 35/25		5000	3100
OSD 35/30		5300	3400
OSD 35/35		5500	4100
OSD 35/40		5800	4500
OSD 60/40	6800	8200	6600
OSD 60/50		9600	7000
OSD 60/60		10400	8100

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Separator series OSE

Certified Flow Rate (CFR)

Model	Bowl speed (rpm)	CFR l/h HFO 380cSt at 50°C	CFR l/h HFO 700cSt at 50°C
OSE 5/3	12000	950	500
OSE 5/4		1050	550
OSE 5/5		1200	650
OSE 5/6		1500	800
OSE 10/6	12000	1800	1150
OSE 10/8		2050	1250
OSE 10/10		2350	1470
OSE 10/12		2800	1750
OSE 20/15	12000	3800	2350
OSE 20/18		4650	2850
OSE 20/20		5250	3200
OSE 20/22		5950	3650
OSE 20/25		7350	4500
OSE 30/25	11000	7450	4550
OSE 30/30		8250	5000
OSE 30/35		9200	5650
OSE 40/25	8400	6600	4200
OSE 40/30		7850	5150
OSE 40/35		8300	5450
OSE 40/40		9500	6250
OSE 40/50		10850	7200
OSE 80/50	6800	12600	9750
OSE 80/60		13300	10350
OSE 80/70		14150	10950
OSE 80/80		16100	12500
OSE 80/90		19000	13850

Responsibilities

The company (stated on the front page of this certificate) takes the responsibility that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Manufactured by

GEA Westfalia Separator Group GmbH
Werner-Habig-Straße 1
59302 Oelde
Germany

DNV GL local station

Essen Operation II
Maritime, Survey CMC for Class
Schnieringshof 14
45329 Essen
Germany



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Type Approval documentation

Electrical control and monitoring system

Standard configuration according to document «Musterplan D10».

As the configuration of the instrumentation and control systems may be different from case to case, this is to be tested in the presence of DNV GL surveyor after installation on board ship.

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Tests carried out

Performance tests according section 3 of CP – 0208

Separator type	Year tested
OSD 6/4, 6/6	May, June 2008
OSD 18/10, 18/18	November 2006
OSD 35/25, 35/35, 35/40	March, April 2007
OSD 60/40, 60/50	June, October 2007
OSE 40/35-136	August 2010, 2011
OSE 10/8-136	March 2011

Marking of product

For traceability to this type approval certificate at least the following marking shall be part on the name plate on each separator unit:

- Manufacturers name or trade mark
- Separator type designation
- Certified Flow Rate (CFR) according to this certificate

Periodical assessment

The scope of the "Periodical Assessment" is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Periodical Assessment to be performed after 2 and 3.5 years (certificate retention) and prior to renewal (certificate renewal).

The objective of the periodical assessment is to verify that the design and production conditions for the hose assemblies covered by this type approval have not been altered.

Main scope of the assessment:

- verification of the production and quality control system
- review of quality control documentation of recent deliveries
- review of the type approval documentation and that this is still the basis for the production
- review of design changes , pre- material and performance of the product
- verification of the product marking

END OF CERTIFICATE