



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **M-12087**

This is to certify that the
Diesel Engine

with type designation(s)
Steyr 6 cylinder diesel engines and Bukh + Steyr 6 cylinder diesel engines

Manufactured by
STEYR MOTORS GmbH
Steyr-gleink, Austria

is found to comply with
IMO Resolution MSC. 81(70) Testing of Lifesaving Appliances
DNV-OS-E406 Design of Free Fall Lifeboats

Application
The approval is valid for propulsion of free fall lifeboats.

Rating **See page 2**

Høvik, 2012-08-28
for **Det Norske Veritas AS**



This Certificate is valid until
2016-12-31



Torill Grimstad Osberg
Head of Section

DNV local office:
Essen CMC Southern Germany



Hans-Kristian Eriksen
Surveyor

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. If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: M-12087
 File No.: 723.10
 Job Id.: 262.1-013796-1

Product description

Four stroke diesel engine

Cylinder bore : 85 mm
 Piston stroke : 94 mm
 No. of cylinders : 6 in line

Engine Model	Rating (kW)	Engine speed (RPM)	Gearbox
6 Cylinder Marine Engines			
126M28	90	2800	ZF 45-1/45 A/45 C
166M28	120	2800	ZF 45-1/45 A/45 C
196K35	140	3500	ZF 45-1/45 A/45 C
236K43	156	4300	ZF 45-1/45 A/45 C
236K42	170	4200	ZF 45-1/45 A/45 C
256K43	184	4300	ZF 63-1/63 A/63 C
256H45	184	4500	ZF 63-1/63 A/63 C
286H43	205	4300	ZF 63-1/63 A/63 C
306H43	215	4300	ZF 63-1/63 A/63 C
SE126E25	90	2500	ZF45 1, ZF45 IV,ZF 45A, ZF 45 C, ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE156E26	110	2600	ZF45 1, ZF45 IV,ZF 45A, ZF 45 C,ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE196E35	140	3500	ZF45 1, ZF45 IV,ZF 45A, ZF 45 C,ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE236E40	170	4000	ZF45 IV, ZF 45 C,ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE236S36	170	3600	ZF45 IV, ZF 45 C,ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE266E40	195	4000	ZF45 IV, ZF 45 C,ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE266S36	195	3600	ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE286E40	205	4100	ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A
SE306J38	215	3800	ZF 63, ZF63 IV, ZF 63 A, ZF63 C, ZF220, ZF220 A

Application/Limitation

The approval is valid for propulsion of free fall lifeboats according to DNV-OS-E406, Section 7 E401,E402, Section 11 A1101 (first sentence), A1102, A1104, A1105, A1106, A1107, A1112 and A1113.

Type Approval documentation

2178578/0	Engine longitudinal section
2178578/1	Engine cross section
E100105/4	Inboard down angle
E100041/3	View exhaust side
Z001022/0	Operators manual
Z011798/0	Spare parts catalogue TACM 126
Z011797/0	Spare parts catalogue TACM 166
Z011799/0	Spare parts catalogue TACM 196
Z011796/1	Spare parts catalogue TACM 236K43
Z011796/2	Spare parts catalogue TACM 236K42
Z011810/0	Spare parts catalogue TACM 256
LOS 1	Lube oil scheme
CS 1	Cooling system,
FS 1	Fuel system



DNV

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2181156-0 SE306J38+ZF63
2181157-0 SE306J38 Bobtail
2181166-0 Engine longitudinal section
2181167-0 Engine cross section
2181160-0 Lubrication system scheme
2181161-0 Cooling system scheme
2181158-0 Fuel system scheme
P/N Z001140-0 Operation-, maintenance & warranty manual
P/N Z001138-0 Service manual
P/N Z011840-0 Spare Parts catalogue SE 306J38

Tests carried out

Test report M14TCAM Type 144/164, Date : 21st through 23rd April 1999
Test report M16TCAM Type 236/246, Date : 21st through 23rd April 1999
Test report 1511 SOLAS Test of the Steyr Marine 2012 SE Series, Dated : December 22nd 2011
Test Report No. 1700 – DNV-OS-E406 Certification Test dated 2012-08-22.

Marking of product

The product to be marked with the manufacturer's name or trademark and type number identification.

Certificate Retention Survey

For retention of the Type Approval, a DNV surveyor shall perform a survey every second year and before the expiry date of this certificate to verify that the conditions of the type approval are complied with.

END OF CERTIFICATE