

DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. M-11625

This is to certify that the Pourable Compound for Foundation Chocking

with type designation(s)

Manufactured by

Marine Service Jaroszewicz S.C. SZCZECIN, Poland

is found to comply with

Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft

Application

The chocking compound is approved for foundation chocking of diesel engines, reduction gears, rudder actuators, stern tubes and bearings, deck machinery and other auxiliary machinery.

Max service temp.:

see page 2

Max tot. surf. press

see page 2

Max press./weight:

0.9 N/mm2

Høvik, 2011-01-07 for Det Norske Veritas AS

Tomas Heber Tronstad Head of Section SKE A PLIA

DNV local office: Szczecin This Certificate is valid until 2014-12-31

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.

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Certificate No.: M-11625 File No.: 702.72

Job Id .:

262.1-010958-1

Product description

Pourable compound for foundation chocking

Application/Limitation

The chocking compound is approved for foundation chocking of diesel engines, reduction gears, rudder actuators, stern tubes and bearings, deck machinery and other auxiliary machinery.

Max. service temp: deg. C.	40	50	60	70	80
Max total surface pressure: N/mm ²	10.0	8.7	7.8	6.4	5.0

Max. specific load due to weight: 0.9 N/mm².

Type Approval documentation

Test Report from Politechnika Szczecinska, Nov. 1994.

Marking of product

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

Certificate retention survey

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

Other conditions

Chocking plan with boltstress-calculation to be submitted for approval in each particular case.

The tightening –up of engine and reduction gear holding down bolts, controlled at installation, is to be checked after trial trip when cooled down. Information about this is to be given at the delivery of the compound.

The manufacturer's instructions to casting and curing of the compound are to be followed

After hardening of the chocks and prior to tightening of the holding-down bolts a Barcol hardness test has to be performed with a result of at least 40.

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