

DET NORSKE VERITAS TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. S-5786

This Certificate consists of 2 pages

This is to certify that the

Sacrificial Anode for Corrosion Protection

with type designation(s)

A-Guard

Manufactured by

MCPS Limited.

TYNE & WEAR, United Kingdom

is found to comply with

DNV's Recommended Practice B401.

Det Norske Veritas' Type Approval Programme 1-601.2, 2000, Sacrificial Anode Materials

Application

The mean current capacity of the sacrificial anode material after 12 months free running testing is 2357 Ah/kg. The mean closed circuit potential is - 1079 mV vs. Ag/AgCl seawater. The approval is given for use in sea water at temperatures below 30°C.

Place and date
Høvik, 2009-06-17
for Det Norske Veritas AS

Helge Drange

Head of Section

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Local Office
DNV Newcastle-upon-Tyne

This Certificate is valid until

2013-06-30

Jan Weitzenböck

Surveyor

Notice: 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 meant the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and only other acting on behalf of Det Norske Veritas.

DET NORSKE VERITAS AS

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File No.: 491.21

Product description

A-Guard: Aluminium-based sacrificial anode material.

Application/Limitation

Approval is given for the sacrificial anode material; not for anode design.

Type Approval documentation

Emails from DNV Newcastle from April to June 2009, including Application for Type Approval dated 2009-04-15, Test Report from DNV Energy of 2008-03-12, Quality Control procedures, and DNV Type Approval Survey Report of 2009-06-02.

Tests carried out

Type Testing carried out according to Type Approval documentation, incl.:

Type Test Report from DNV Energy Report No. 2008-5106 "Long Term Electrochemical Testing According to DNV-RP-B401, Appendix C of A-guard Aluminium Alloy (Al/Zn/In)", Rev. 00, of 2008-03-12.

Marking of product

Product shall be marked with manufacturer's name; MCPS, type designation; AG and Melt Number.

Certificate Retention/Renewal Survey

The scope of the Retention/Renewal Survey 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.

Survey to be performed after two (2) years (Certificate Retention Survey) and at renewal after four (4) years (Certificate Renewal Survey).

The main elements of the survey are:

- Ensure that **Type Approval documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with Type Approval documentation and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and the DNV Type Approval Certificate.

END OF CERTIFICATE

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