



Certificate no.:
TAK00002BF

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Protective Coating Systems - Cargo Oil Tanks**

with type designation(s)
BANNOH 500 and BANNOH 500 QD

issued to

Chugoku Marine Paints, Ltd. (Hiroshima Head Office)
Otake, Hiroshima Pref., Japan

is found to comply with

DNV class programme DNV-CP-0139 – Type approval – Protective coating systems for cargo oil tanks
IMO Resolution MSC.288(87) Performance Standard for Protective Coatings (PSPC)
IACS Unified Interpretations SC259. For Application of SOLAS Regulation II-1/3-11 Performance Standard for
Protective Coatings for Cargo Oil Tanks of Crude Oil Tankers (PSPC-COT), adopted by Resolution
MSC.288(87).

Application:

For use in cargo oil tanks of crude oil tankers. Surface preparation and coating application as per PSPC or manufacturer's recommendations, whichever is stricter.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2024-01-30**

This Certificate is valid until **2029-01-29**.

for **DNV**

DNV local unit: **Japan CMC**

Approval Engineer: **Gisle Hersvik**

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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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2023-09

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Product description

BANNOH 500 and **BANNOH 500 QD**, 2-component epoxy-based coating for corrosion protection of steel surfaces.

BANNOH 500: M2-41000A (ref. TDS No. 5055, Rev. 005, 2017-12-27)
BANNOH 500 QD: M2-41010A (ref. TDS No. 5056, Rev. 005, 2017-12-27)

Manufactured by

Chugoku Marine Paints Ltd. (Kyushu Factory), 2783 Tade, Yoshinogaricho, Kanzakigun. Saga, 842-0035, Japan

DNV local station: Hiroshima

Responsibility

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.

Application/Limitation

This approval is solely connected to the corrosion prevention properties of the coating material. The approval does not include any evaluation of toxicity, contamination, pollution, or fire technical properties.

BANNOH 500 and **BANNOH 500 QD** are approved for application on blast cleaned surfaces and on shop primed surfaces. The following shop primers are prequalified:

- | | |
|---------------------|---------------------------------|
| - CERABOND 2000 | [Chugoku Marine Paints] |
| - SD ZINC 1000HA(S) | [Kansai Paint Marine Co., Ltd.] |
| - CERAZINC | [Kobe Paints Ltd.] |

Surface preparation and coating application as per PSPC or manufacturer's recommendations, whichever is stricter.

The durability of the applied coating system will depend on the steel surface preparation, coating application and the environmental conditions.

The Type Approval Certificate is invalid if the formulation of the epoxy coatings **BANNOH 500** and **BANNOH 500 QD** are changed to a degree deemed significant by DNV. If the formulation of any of the listed pre-qualified shop primers is changed to a degree deemed significant by DNV that shop primer cannot be used as part of the Protective Coating System.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation** and in accordance with DNV-CP-0139. The tests are carried out in accordance with the procedures in IMO Resolution MSC.288(87) Performance Standard for Protective Coatings (PSPC), ref. IACS UI SC259:

- JPIA Technical Report No. 112521, "Cargo Oil Tank Test of 2x160µm BANNOH 500 on CERABOND 2000 Shop Primer" of 2012-03-30.
- JPIA Technical Report No. 112522, "Cargo Oil Tank Test of 2x160µm BANNOH 500 QD on CERABOND 2000 Shop Primer" of 2012-03-30.
- JPIA Technical Report No. 101381, "Ballast Tank Test of 2x160µm BANNOH 500 on SD ZINC 1000HA(S) Shop Primer" of 2010-12-17.
- JPIA Technical Report No. 122379, "Ballast Tank Test of 2x160µm BANNOH 500 QD on SD ZINC 1000HA(S) Shop Primer" of 2013-03-19.

Marking of product

Product/package shall be marked with *manufacturer's name and address*: **Chugoku Marine Paints, Ltd.**, *place of production*, and *type designation*: **BANNOH 500** or **BANNOH 500 QD**, and *date of production/batch number*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV Type Approval Certificate.



Job ID: **262.1-040734-1**
Certificate no.: **TAK00002BF**

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 assessments (for Certificate Retention / Certificate Renewal) shall be performed according to DNV-CP-0338.

This certificate is only valid if required Periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE