Certificate No:
TAK000027B

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Protective Coating Systems - Cargo Oil Tanks

with type designation(s)
SD Zinc 100QD + Jotacote Universal S120

Issued to
Jotun A/S
SANDEFJORD, **Norway**

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 **Hamburg** on **2023-03-06**
This Certificate is valid until **2028-03-05**.
DNV local unit: **Sandefjord**

Approval Engineer: **Gisle Hersvik**

for **DNV**

Thorsten Lohmann
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.

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.

Product description

SD Zinc 100QD (1 x 50 µm) **+ Jotacote Universal S120** (1 x 320 µm): zinc-rich epoxy primer plus 2-component epoxy-based coating for corrosion protection of steel surfaces.

Manufactured by

Jotun Coatings (ZJG) Co. Ltd., No. 39 Nanhai Road, Jiangsu Yangtze River International Chemical Industry Park, Zhangjiagang Free Trade Zone, Jiangsu 215634, People's Republic of China

DNV local station: Nanjing

The zinc-rich epoxy primer SD Zinc 100QD is manufactured by Kansai Paint Protective Coatings.

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.

SD Zinc 100QD (1 x 50 µm) **+ Jotacote Universal S120** (1 x 320 µm) is approved for application on blast cleaned surfaces and on shop primed surfaces. The following shop primers are prequalified:

- MUKI Z 2008 [Jotun A/S]
- SD Zinc Primer 1000HA(S) [Kansai Paint Protective Coatings]

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 coating **SD Zinc 100QD** (manufactured by Kansai Paint Protective Coatings) and **Jotacote Universal S120** is 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 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 SC 259:

- Marine Coatings Quality Supervision and Test Center of Chemical Industry Test Report No. TW 190316-26, "Jotacote Universal S120(1x320um) / SD Zinc 100 QD on Muki Z 2008" of 2020-12-24.
- Test and Verifying Center for Ship Materials on Coatings and Paintings Test Report No. TW 190316-23, "Jotacote Universal S120 (1x320um) / SD Zinc 100 QD on SD Zinc Primer 1000HA(S)" of 2020-12-24.

Marking of product

Product/package shall be marked with *manufacturer's name and address*; **Jotun Coatings (ZJG) Co. Ltd., China**, *type designation*; **Jotacote Universal S120**, 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.

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