DNV·GL

Certificate No:
TAK00001WJ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Protective Coating Systems - Seawater Ballast Tanks

with type designation(s)
Jotacote Universal HF002

Issued to
Jotun A/S
SANDEFJORD, Norway

is found to comply with
DNV GL class programme DNVGL-CP-0108 – Type approval – Protective coating systems for seawater ballast tanks and double-side skin spaces
IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC)
IACS Unified Interpretations SC223. For Application of SOLAS Regulation II-1/3-2 Performance Standard for Protective Coatings (PSPC) for Dedicated Seawater Ballast Tanks in All Types of Ships and Double-side Skin Spaces of Bulk Carriers.

Application :

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

Issued at

Hamburg on **2020-07-07**
This Certificate is valid until **2025-07-0**.
DNV GL local station: **Sandefjord**

Approval Engineer: **Enno Brück**

for **DNV GL**

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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

Jotacote Universale HF002 is a fast drying two component polyamine cured epoxy coating.

Manufactured by

Chokwang Jotun Ltd., 30th Block Jisa Sciense Park, 1202 Jisa-dong, Gangseo-gu, Busan, South Korea

DNV GL local office: Busan

Responsibility

The holder of 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.

Jotacote Universale HF002 is approved for application on blast cleaned surfaces and on prequalified shop primed surfaces. The following shop primer has been prequalified:

- Muki Z 2001 [Jotun A/S]
- Sigmaweld 165 [PGG, Korea]
- Galvany Shopprimer IZ182(S) [KCC Corp.]
- KCl Zinc 1000 [Kangnam Jevisco Co., Ltd.]
- Cerabond 2000 [Chugoku Samhwa Paints Ltd., Korea]

Surface preparation and coating application according to 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 **Jotacote Universale HF002** is changed to a degree deemed significant by DNV GL. If the formulation of the listed pre-qualified shop primer is changed to a degree deemed significant by DNV GL, the shop primer cannot be used as part of the Protective Coating System.

Tests carried out

Type Testing carried out in accordance with DNV GL CP-0108. The tests are carried out according to the procedures in IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC), ref. IACS UI SC223:

- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2020-5014, "Ballast Tank coating test of 2x 160µm Jotacote Universale HF002 on Muki Z 2001 shop primer", dated 2020 05-15.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5340, "Crossover coating test of 2x 160µm Jotacote Universale HF002 on Sigmaweld 165 shop primer", dated 2019 11-07.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5339, "Crossover coating test of 2x 160µm Jotacote Universale HF002 on Galvany IZ 182(S) shop primer", dated 2019 11-07.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5341, "Crossover coating test of 2x 160µm Jotacote Universale HF002 on KCI Zinc 1000 shop primer", dated 2019 11-07.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5342, "Crossover coating test of 2x 160µm Jotacote Universale HF002 on Cerabond 2000 shop primer", dated 2019 11-07.

Marking of product

Product/package shall be marked with *manufacturer's name and address*; **Chokwang Jotun Ltd.,** 30th Block Jisa Sciense Park, 1202 Jisa-dong, Gangseo-gu, Busan, South Korea, *type designation* **Jotacote Universale HF002**, 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 GL 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 Assessment (Certificate Retention) and renewal after 5 years (Certificate Renewal) shall be performed acc. DNV GL CP-0338.

END OF CERTIFICATE