DNV·GL

Certificate No:
TAK00000RX

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Protective Coating Systems - Seawater Ballast Tanks

with type designation(s)
JOTACOTE 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 :

For use in ballast tanks, double-skin spaces, cofferdams and similar areas. 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 GL.

Issued at **Høvik** on **2017-02-15**
This Certificate is valid until **2022-02-14**.
DNV GL local station: **Sandefjord**

Approval Engineer: **Gisle Hersvik**

for **DNV GL**

Martin Strande
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.

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

Product description

JOTACOTE HF002, 2-component epoxy based, light coloured, coating for corrosion protection of steel surfaces.

Manufactured by

Jotun Coatings (Zhangjiagang) Co. Ltd., No. 15 Zhangjiagang Road, Jiangsu Yangtze River Int., Chemical Industry Park, Zhangjiagang Free Trade Zone, Jiangsu 215634, China.

DNV GL local office: Nanjing

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.

JOTACOTE HF002 is approved for application on blast cleaned surfaces and on shop primed surfaces. The following shop primers are prequalified:

MUKI Z 2001	[Jotun A/S]
MUKI Z 2008	[Jotun A/S]
Galvany Shopprimer IZ182(J)	[KCC Corp.]
SigmaWeld 165 (Sigma Proferral MC)	[PPG / Sigma Coatings]
SigmaWeld 199	[PPG / Sigma Coatings]
Hempel' Shopprimer ZS 1589	[Hempel A/S]
Interplate 937	[International Paint]
SD Zinc 1000	[Kangnam Jevisco Co., Ltd.]
W53-02	[Taicang Lanyan Deck Dressing & Coating Co., 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 coating **JOTACOTE HF002** is changed to a degree deemed significant by DNV GL. If the formulation of any of the listed pre-qualified shop primers is changed to a degree deemed significant by DNV GL that shop primer cannot be used as part of the Protective Coating System.

Type Approval documentation

Tests carried out

Type Testing carried out according to **Type Approval documentation**. The tests reported in the DNV Energy, EXOVA, Test and Verifying Center for Ship Materials on Coatings and Paintings and CCS-DNV Technology Institute Reports are carried out according to the procedures in IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC), ref. IACS UI SC223;

— DNV Energy Report No. 128OB65-8 / 2009-5731, Rev. 00, "Ballast Tank Coating Test of JOTACOTE HF002 on MUKI Z 2001", of 2010-01-22.

- EXOVA Report No. N950122, Issue 03, "Ballast Tank Coating Test of JOTACOTE HF 002 on HEMPEL's SHOPPRIMER 1589", of 2010-02-25.
- EXOVA Report No. N950125, Issue 04, "Ballast Tank Coating Test of JOTACOTE HF 002 on INTERPLATE 937", of 2010-02-25.
- EXOVA Report No. N950134, Issue 02, "Ballast Tank Coating Test of JOTACOTE HF 002 on SIGMAWELD 165", of 2010-02-18.
- EXOVA Report No. N950136, Issue 03, "Ballast Tank Coating Test of JOTACOTE HF 002 on SIGMAWELD 199", of 2010-02-25.
- EXOVA Report No. N951126, Issue 04, "Ballast Tank Coating Test of JOTACOTE HF 002 on GALVANY IZ 182 (J)", of 2010-02-04.
- EXOVA Report No. N951128, Issue 04, "Ballast Tank Coating Test of JOTACOTE HF 002 on SD ZINC 1000", of 2010-02-18.
- Test and Verifying Center for Ship Materials on Coatings and Paintings Report No. JX11026 "Jotacote HF002 (2*160 μm) on W53-02 Inorganic zinc shop primer" of 2011-02-16.
- CCS-DNV Technology Institute Technical Report No. CDTI-CL-10A020, Rev. 03, "Ballast Tank Coating Test of 2x160 μm Epoxy-Based JOTACOTE HF 002 on MUKI Z 2008 Inorganic Zinc Shop Primer", of 2010-08-16.

Marking of product

Product/package shall be marked with *manufacturer's name and address*; **Jotun Coatings (Zhangjiagang) Co. Ltd., Jiangsu, China**, *type designation*; **JOTACOTE 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 to be performed after 2 and 3.5 years (Certificate Retention) and at renewal after 5 years (Certificate Renewal).

The main elements of the Periodical Assessment are to:

- 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 DNV GL Type Approval Certificate.

END OF CERTIFICATE