DNV·GL

Certificate No:
TAK00000BW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Protective Coating Systems - Seawater Ballast Tanks

with type designation(s)
Intershield 300

Issued to
International Paint Saudi Arabia Ltd.
DAMMAM, Saudi Arabia

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.

This Certificate is valid until **2021-06-06**.

Issued at **Høvik** on **2016-06-07**

for **DNV GL**

DNV GL local station: **Bahrain**

Approval Engineer: **Gisle Hersvik**

Arnstein Gloppen
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.

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Product description

Intershield 300, 2-component epoxy based, light coloured, aluminium containing coating for corrosion protection of steel surfaces.

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.

Intershield 300 is approved for application on blast cleaned surfaces and on prequalified shop primed surfaces. The following shop primers have been prequalified:

Interplate Zero	[International Paint]
Interplate 997	[International Paint]
Interplate 937	[International Paint]
Interplate 855	[International Paint]
Interplate 805	[International Paint]
Interplate 317	[International Paint]
Hempel's Shopprimer ZS 15890	[Hempel A/S]
SigmaWeld 190	[PPG / Sigma Coatings]
SigmaWeld 199	[PPG / Sigma Coatings]
W53-02	[Taicang Lanyan Paint Co.]
SD Zinc 1000 HA (S)	[NOF Kansai Marine Coatings]
Muki Z 2001	[Jotun A/S]
Carboweld 11P	[Carboline]

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 **Intershield 300** 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

1.
2.
3.
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8.

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**. The Marintek test carried out at DNV Bergen is accepted as alternative to the test procedures in IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC), ref. IACS UI SC223.

- DNV Bergen Technical Report No. BGN-R3600487, Rev. 01, "testing and Classification of Coatings Intershield Newbuilding ENA 300/ENA 303 Bronze and ENA 301/ENA 303 Aluminium on Prerusted Panels" of 2001-02-21.
- DNV Bergen Technical Report No. BGN-R2703409, Rev. 02, "Simulated Ballast Tank Test – Intershield 300 on Interplate Zero Shop Primed Steel" of 2004-01-19.

Type Testing carried out in accordance with **Type Approval documentation**. The tests reported in the DNV Energy, STS, Bodycote and EXOVA 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. 2008-5479, Rev. 00, "Crossover test of Intershield 300 on Interplate 855" of 2009-01-23.
- DNV Energy Report No. 2008-5480, Rev. 00, "Ballast Tank Test of Intershield 300 on W53-02 shop primer" of 2009-02-04.
- DNV Energy Report No. 2008-5484, Rev. 00, "Crossover test of Intershield 300 on Interplate 805" of 2009-01-08.
- DNV Energy Report No. 2008-5486, Rev. 00, "Crossover test of Intershield 300 on Interplate 997" of 2009-01-08.
- DNV Energy Report No. 2008-5488, Rev. 00, "Crossover test of Intershield 300 on Sigmaweld 190" of 2009-01-12.
- STS Test Report No. 6909/D5078.D.3 of 2008-02-06 (Intershield 300 over SD Zinc 1000 HA(S)).
- STS Test Report No. 6909/D5078.D.49 of 2008-02-06 (Intershield 300 over Interplate 937).
- STS Test Report No. 6909/D5078.D.52 of 2008-02-06 (Intershield 300 over Sigmaweld 199).
- STS Test Report No. 6909/D5078.D.53 of 2008-02-06 (Intershield 300 over Hempel ZS 15890).
- Bodycote Report No. N 707041, Issue 1, "Ballast Tank Coating Test Intershield® 300 Epoxy Paint over Interplate 805 Zinc Silicate Shop Primer" of 2008-07-21.
- Bodycote Report No. N 802758, Issue 1, "Ballast Tank Coating Test Intershield® 300 Epoxy Paint over Interplate 855 Zinc Silicate Shop Primer" of 2008-11-05.
- Bodycote Report No. N804 800, Issue 1, "Ballast Tank Coating Test Intershield 300 over Carboweld 11P Zinc Silicate Shop Primer" of 2009-01-09.
- EXOVA Report No. N950743, Issue 05, "Ballast Tank Coating Test Intershield 300 on Interplate 317" of 2010-04-19.
- EXOVA Report No. N950744, Issue 2, "Ballast Tank Coating Test of 2 * 160 µm Intershield 300 on Muki Z 2001" of 2010-03-26.
- EXOVA Report No. N9511697 (D5754/D/10), Issue No. 1, "Ballast Tank Coating Test of 2 * 160 µm Intershield 300 on Interplate Zero" of 2010-06-22.

Marking of product

Product/package shall be marked with *manufacturer's name and address*; **International Paint Saudi Arabia Ltd.**, **Saudi Arabia**, and *type designation*; **Intershield 300**, 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 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 the DNV GL Type Approval Certificate.

END OF CERTIFICATE