

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Protective Coating Systems - Seawater Ballast Tanks**with type designation(s)
Intergard 787

Issued to

International Paint Limited
GATESHEAD, TYNE AND WEAR, United Kingdom

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 **2021-12-08**.Issued at **Høvik** on **2016-12-09**DNV GL local station: **Newcastle-upon-Tyne**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.

Job Id:
Certificate No: **TAK00000K1**

Product description

Intergard 787, 2-component epoxy based, light coloured, aluminium containing coating for corrosion protection of steel surfaces.

Manufactured by

International Paint (Korea) Ltd., 8-6B/L Chilseo Industrial Complex, Kyenae-Ri, Chilseo-Myeon, Haman-Gun, Kyungsangnam-Do, Republic of Korea

DNV GL local station: Pusan

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.

Intergard 787 is approved for application on blast cleaned surfaces and on prequalified shop primed surfaces. The following shop primers have been prequalified:

Interplate 8010	[International Paint]
Interplate 937	[International Paint]
Interplate 11	[International Paint]
SigmaWeld 165 (Sigma Proferral MC)	[PPG / Sigma Coatings]
Cerabond 2000	[Chugoku Marine Paints]
KCI Zinc 1000	[Kangnam Jevisco Co., Ltd.]
Galvany Shopprimer IZ182(J)	[KCC Corp.]
Starzinc® 318	[SKS Paint Co., Ltd.]
TH-2	[Yejian New Material 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 **Intergard 787** 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 EXOVA and KTR Reports are carried out according to the procedures in IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC), ref. IACS UI SC223;

- EXOVA Document Reference No. N951837, Issue No. 3, "Ballast Tank Coating Test of 2* Intergard 787 Epoxy Paint on Interplate 937 Primer" of 2011-01-10.
- KTR Technical Report No. KTR-PSPC-063, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on Sigmaweld 165(Sigma Proferral MC)" of 2010-02-18.

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- KTR Technical Report No. KTR-PSPC-064, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on KCI Zinc 1000" of 2010-02-18.
- KTR Technical Report No. KTR-PSPC-065, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on Galvany Shopprimer IZ182(J)" of 2010-02-18.
- KTR Technical Report No. KTR-PSPC-066, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on Cerabond 2000" of 2010-02-18.
- KTR Technical Report No. KTR-PSPC-067, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on Interplate 11" of 2010-02-18.
- KTR Technical Report No. KTR-PSPC-084, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on Starzinc 318" of 2011-09-30.
- KTR Technical Report No. KTR-PSPC-096, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on TH-2" of 2012-04-09.
- KTR Technical Report No. KTR-PSPC-108, Rev. 00 "Ballast Tank Protective Coating Test of 2 * 160 µm Intergard 787 on Interplate 8010" of 2012-09-13.

Marking of product

Product/package shall be marked with *manufacturer's name and address*; **International Paint (Korea) Ltd., Korea** and *type designation*; **Intergard 787**, 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