Certificate no.:
TAK00002KW

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Protective Coating Systems - Offshore Structures

with type designation(s)
EP-988AL (1x500 µm) / EP-988 (1x500 µm) / UP-450HS (1x80 µm)

issued to
Yung Chi Paint & Varnish Mfg. Co., Ltd.
Kaohsiung, **Taiwan Region**

is found to comply with
NORSOK Standard M-501 Surface preparation and protective coating, November 2022

Application:

For use in Coating System defined by CSDS No. 7A in accordance with the stated Standard.

Protection of Carbon steel in Splash zone, tidal zone and combined with CP, -50°C to +50°C.

Issued at **Hamburg** on **2025-10-23**
This Certificate is valid until **2030-10-22**.
DNV local unit: **Kaohsiung**

for **DNV**

Approval Engineer: **Gisle Hersvik**

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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

EP-988AL (1x500 µm) / EP-988 (1x500 µm) / UP-450HS (1x80 µm)

Description of the Coating system, tested on bare steel:
- **EP-988AL** Epoxy High Solids Coating for Anti-corrosion (AL)
- **EP-988** Epoxy High Solids Coating for Anti-corrosion
- **UP-450HS** High Build Polyurethane Coating

Coating system is defined by Coating System Data Sheet (CSDS) no. 7A of NORSOK M-501, Surface preparation and protective coating, November 2022, as an epoxy or polyester based coating, a minimum of 2 coats and a total Minimum Dry Film Thickness (MDFT) of 1000 µm.
Note: If a topcoat is required, the selected material shall be pre-qualified. The DFT of topcoat to be added to the total DFT stated.

Corrosivity category:	CX, CX+Im4 ref. NS-EN ISO 12944-2
Items to be coated:	Structures, structural components, equipment items, piping and valves.
Service:	Splash zone, tidal zone in combination with CP
Operating temperature range:	-50°C to +50°C
Surface preparation requirements:	Refer to NORSOK M-501:2022, CSDS no. 7A

The maximum Dry Film Thickness (DFT) for each coat shall be within the limits given in the relevant Coating Application Data Sheet (CADS).

For details on CSDS no. 7A, please refer to Annex A of NORSOK M-501:2022.

Application/Limitation

This approval is solely connected to the corrosion prevention properties of the coating system. The approval does not include any evaluation of toxicity, contamination, pollution, or fire technical aspects.

This Type Approval certificate is not valid for designs, components, equipment, systems or products which are subject to classification by DNV.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**, ref.:
- SGS Taiwan Ltd. Test Report No. KV-24-03753A “Norsok M-501:No.7A EP-988AL + EP-988 + UP-450HS” of 2025-09-26.

Marking of product

Products forming parts of the coating system shall be marked with *manufacturer’s name*: **Yung Chi Paint & Varnish Mfg. Co. Ltd., Taiwan Region**, *type designations, lot no.* and *manufacturing date*.

The marking is to be carried out in such a way that it is visible, legible and indelible.

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