Certificate no.:
TAP0000310

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Pressure Vessel

with type designation(s)
Constant pressure tank

issued to
Jingjiang Jiangyang Marine Facilities Co., Ltd.
JINGJIANG, JIANGSU, China

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.7 Pressure equipment

Application:

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

Max. working temp.:	**-20 to 50°C**
Design pressure:	**5.6 bar**
Operating Medium	**Air (including cement ash)**

Issued at **Hamburg** on **2025-05-20**
This Certificate is valid until **2030-05-19**.
DNV local unit: **Jiangyin NB & CMC**

for **DNV**

Approval Engineer: **Le Loi Nguyen**

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 USD 300 000.

Product description
See approved drawing (“Type Approval documentation”) for details (e.g. design data, materials, dimensions and media)

Application/Limitation
The constant pressure tank 2000L is approved according to DNV-RU-SHIP Pt.4 Ch.7 ‘Pressure Equipment’ (Edition July 2021). It is graded as pressure equipment class III (Pt.4 Ch.7 Sec.1 table 2). The joint efficiency is v=0.85, the corrosion allowance is 1 mm.
All material used for pressurized parts shall be delivered with material certificates according to DNV-RU-SHIP Pt.4 Ch.7 Sec.1 Tab.7. The materials used for pressurized parts shall conform DNV-RU-SHIP Pt.2 Ch.2 Sec.3. Manufacturing, workmanship and testing shall be done according to DNV-RU-SHIP Pt.4 Ch.7 Sec.7.

Tests carried out
Each pressure vessel manufactured to this type approval is to be:
- Constructionally checked and hydraulic pressure tested 1.5 x design pressure,
- Certified by DNV and delivered with a product certificate.

Type Approval documentation

Place of Production
Jingjiang Jiangyang Marine Facilities Co., Ltd.
Jiangan town, rugao city, Jiangsu, China

Marking of product
For traceability to this type approval the products are at least to be marked with:
- the name and domicile of the manufacturer,
- the manufacturer's type designation and serial number,
- the year of manufacture,
- the design pressure,
- the design temperature in °C,
- the hydraulic test pressure, and
- DNV 's identifying mark.

Periodical assessment
The objective of the periodical assessment is to verify that the conditions for the type approval (TA) have not been altered.
The main scope of the periodical assessment will normally include:
- verification of the TA applicant’s production and quality system w.r.t. ensuring continued consistent production of the TA products at the TA applicant’s own premises and at other companies that are given the responsibility for manufacturing of the products,
- review of TA documentation and that this is still used as basis for the production,
- review of possible changes in the design, the materials and the performance of the product, and
- verification of the product marking.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.
Unscheduled assessments for retention of the certificate may be carried out when there is reason to believe that the type approval applicant has not adhered to the obligations stipulated in the type approval certificate.

End of Certificate