Certificate No: LR26308740TA
Issue Date: 30/06/2026
Expiry Date: 29/06/2031

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer **Liaoning Yidao New Materials Technology Co., Ltd**

Address No.25, North Section, Chuangye Avenue, Dongdaihe New District, Huludao, Liaoning, 125208, China

Type Plastic Pipes

Description YD1.0, YD 1.0C, YD 1.6 and YD 1.6C
Fittings- Equal Tee, Reducing Tee, Reducing Cone, Reducing Eccentric Cone, Elbows, Flanges, Couplings, Double O-ring Expansion joints, Saddles (Bell mouth, Blank, Grounding) and Spools.

Trade Name Fiber Reinforced Thermosetting Resin Pipes and Fittings

Application L3 fire rated Fiber Reinforced Thermosetting Resin Pipes and Fittings for marine applications as per Part 5 Chapter 12 section 5 and table 12.5.1

Specified Standard Lloyd's Register Rules and Regulations for Classification of Ships 2025.
Lloyd's Register Rules and Regulations for Classification of offshore Units 2025.
IMO Resolution 753(18) as amended by MSC 313(88).

Ratings IMO Resolution 753 (18) L3 fire rated plastic piping up to 93 Degree C

Designation	Size in mm	Pressure Rating bars
YD 1.0	25-1200	10
YD 1.0C	25-1200	10
YD 1.6	25-1200	16

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Gopal Nair

Piping & Pressure System Principal Specialist
to Lloyd's Register North America, Inc.
A member of the Lloyd's Register group

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City, Houston, Texas, 77573, United States

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YD 1.6C	25-1200	16

Additional Tests

Serial No.：20260401 - Internal Pressure test- short term
No. 2025(JX)GSYZ48327- Internal Pressure test - long term
Serial No.：20260402- External Pressure test
Serial No.：20260403- External load test
Serial No.：20260404 - Electrical Conductivity test
LF202605003- Impact resistance test & Axial tensile test
No.2026(JX)GSYZB01875-Parallel Board External load performance test.
2026-05-0400- Resin Content test
2026-05-0401- Temperature Limitation test.
2026-05-0405 - Barcole Hardness test
20260405- Fatigue test
2026-05-0404- Fluid absorption test
2026-05-0403 - Material compatible test
20260406- IMO Level 3 Fire endurance test
20260701- IMO Level 3 Fire endurance test with double O ring joint
FT26193 Flame Spread Test
FT26194 Smoke and Toxicity Tests
20260407 Geometric Dimension and inspection reports

Other Conditions

1. Pipes and fittings are to be selected and installed in accordance with the manufacturer's instructions and recommendations, and LR Ship Rules Part 5, Chapter 12, Sections 5 and Table 12.5.1 as applicable.
2. Where the pipes pass through hazardous area the pipes are to be electrically conductive.
3. Installation design, bonding procedure, choice of materials and adhesives are to comply with manufacturer's instructions.
4. For essential services, the bonding procedure is to be in accordance with the manufacturer's recommendations, and the bonders are to be approved by Lloyd's Register for each installation.
5. Where plastic pipes penetrate watertight / fire tight bulkheads, integrity of bulk heads is to be maintained using approved penetrations.

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6. Where nonmetallic piping is installed, remote controlled valves should be provided as required by foot note 1 of Part 5, Chapter 12, table 12.5.1

7. This certificate covers approval as per IMO Resolution 753(18) for marine applications and for other applications such as process facilities of offshore topside systems additional requirement of standards like ISO 14692 should be considered.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register North America, Inc. of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: New

The Design Appraisal Document TSO/25-039463/LR26308740TA/PRJ11100495406/GN and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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