Certificate No: LR25241734TA
Issue Date: 11/09/2025
Expiry Date: 10/09/2030

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	**Cangzhou Longtaidi Pipe Technology Co., Ltd.**
Address	No.33 Huanghe East Road, Economic Development Zone, Cangzhou, 061000, China
Place of Production	Cangzhou Longtaidi Pipe Technology Co., Ltd. No.33 Huanghe East Road, Economic Development Zone, Cangzhou, 061000, China
Type	Elbow, Tee, Reducer
Description	Wrought steel butt-welded pipe fittings
Trade Name	Longtaidi
Application	Marine Piping Systems
Specified Standard	LR Rules and Regulations for the Classification of Ships, July 2025 Lloyd's Register Type Approval System Test Specification Number 2, October 2024, Chapter 6, Appendix 5 – Metallic Formed Pipe Pieces ASMEB16.9 - 2024

Downloaded Copy

Prathamesh Pawshe
Engineering Piping - Specialist to Lloyd's Register Marine and Offshore India LLP
A member of the Lloyd's Register group

Units 1702-1704, 17th Floor (Level-13), Building Q2, Aurum Q Parc; Gen 4/1 TTC, Thane-Belapur Road, Ghansoli, Navi Mumbai, 400710, India

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Certificate No: LR25241734TA
Issue Date: 11/09/2025
Expiry Date: 10/09/2030

Type Approval Certificate

Ratings	Nominal Pipe Diameters (mm):	DN32~DN1200
	Wall Thickness (mm):	Schedule No.5~Schedule No. 120 Schedule No.5S~Schedule No. 80S
	Temperature Range (°C):	-165~+350
	Material:	WP316L(ASTM A403) WP91 (ASTM A234) WPB (ASTM A234) S31803 (ASTM A240) Gr. 60 (ASTM 515)
Additional Tests	Impact test at -196 °C conducted for pipe fittings of material WP316L.	

Other Conditions

1. Materials for pipe fittings of Class I and Class II piping systems are to be produced at a works approved by LR and to be tested in accordance with the Rules for Materials.
2. The minimum thickness of outside diameter for stainless pipe fittings 10 mm &12 mm is to be not less than 1.0 mm as per LR Rules and Regulations, Part 5,Chapter 12, Table 12.10.1. The required thickness of outside diameter for pipefittings is to be determined from the formula given in Pt 5, Ch 12, 2.2 Wrought steel pipes and bends 2.2.1 and either Pt 5, Ch 12, 2.2 Wrought steel pipes and bends 2.2.3 or Pt 5, Ch 12, 2.2 Wrought steel pipes and bends 2.2.4 case by case.

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 Marine and Offshore India LLP of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2022166TA-03

Downloaded Copy

Units 1702-1704, 17th Floor (Level-13), Building Q2, Aurum Q Parc; Gen 4/1 TTC, Thane-Belapur Road, Ghansoli, Navi Mumbai, 400710, India

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Certificate No: LR25241734TA
Issue Date: 11/09/2025
Expiry Date: 10/09/2030

Type Approval Certificate

The Design Appraisal Document LR25241734TA_DAD and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Downloaded Copy

Units 1702-1704, 17th Floor (Level-13), Building Q2, Aurum Q Parc; Gen 4/1 TTC, Thane-Belapur Road, Ghansoli, Navi Mumbai, 400710, India

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.