Certificate No: LR2628637TA
Issue Date: 30/01/2026
Expiry Date: 29/01/2031

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	**Tianjin Tianhai High Pressure Container Co., Ltd.**
Address	No.268 Jinbin Road, Tianjin Free Trade Test Area, (Tianjin Port Free Trade Zone), Tianjin City, 300461, China
Place of Production	Tianjin Tianhai High Pressure Container Co., Ltd. No.268 Jinbin Road, Tianjin Free Trade Test Area, (Tianjin Port Free Trade Zone), Tianjin City, 300461, China
Type	Gas Cylinder
Description	Seamless Steel Gas Cylinder
Trade Name	TTHP-ISO406-CrMo-02
Application	For storage of compressed, liquefied gases exposed to ambient temperatures between -40˚C and +65˚C
Specified Standard	LR Rules and Regulations for the Classification of Ships, July 2025 ISO 9809-1: 2019
Ratings	TTHP-ISO406-CrMo-02 Nominal Outside Diameter (mm): 406 (±1%) Working Pressure (bar): 60 Hydraulic Test Pressure (bar): 90 Burst Test Pressure (bar): ≥1.6 Hydraulic Test Pressure Volumetric (Water) Capacity (Litre): 80~180

Downloaded Copy

Room 02-05, 48F, Raffles City Shanghai Office Tower, No.268 Xi Zang Middle Road, Huangpu District, Shanghai, 200001, China

Qing Dong

Engineering - Machinery - Senior Specialist to Lloyd's Register Classification Society (China) Co., Ltd.

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: LR2628637TA
Issue Date: 30/01/2026
Expiry Date: 29/01/2031

Type Approval Certificate

Length±20 (mm):	625~1650
Materials:	
Body:	34CrMo4
Material Heat Treatment:	Quenched and tempered
Shape of Base:	Concave
Manufactured Process:	Hot forming manufacturing from seamless pipe
Material Properties (MPa):	800~950 (tensile strength) ≥680 (yield strength)

Other Conditions

1. The batch tests, tests/examinations on every cylinder are to be carried out in accordance with Clause 10 and Clause 11 of standard ISO9809-1:2019.
2. Grade of steel used for cylinder manufacture shall be compatible with the intended gas service.
3. Each cylinder shall be permanently marked on the shoulder or on a reinforced part of the cylinder or on a permanently fixed collar or neck ring, in accordance with ISO 13769 or the relevant marking regulations of the countries of use.

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 Classification Society (China) Co., Ltd. of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR21117877TA

The Design Appraisal Document LR2628637TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Downloaded Copy

Room 02-05, 48F, Raffles City Shanghai Office Tower, No.268 Xi Zang Middle Road, Huangpu District, Shanghai, 200001, China

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.