Certificate No: LR2004628TA
Issue Date: 02/07/2020
Expiry Date: 13/04/2025

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	**WuXi YanQiao Bellow Factory**
Address	#586-6, Chunhui Road, Huishan Development Zone, Wuxi, Jiangsu Province, China
Place of Production	WuXi YanQiao Bellow Factory #586-6, Chunhui Road, Huishan Development Zone, Wuxi, Jiangsu Province, China
Type	Expansion Joints
Description	Metallic Bellows Type Expansion Joints GB/T12522-96 Series (unreinforced): - A Type, AS Type and BS Type CB1153-93 Series (2 or 3 Plies, unreinforced): - A Type, B Type, AS Type and BS Type
Trade Name	Yanqiao Bellow
Application	Marine Piping Systems: • Exhaust gas piping systems (GB/T12522-96 Series) • Fresh water(CB1153-93 Series) • Steam pressure piping systems (CB1153-93 B & BS Types only) Oil piping systems (CB1153-93 B & BS Types only)

Downloaded Copy

Xiaodong Zhang

Lead Specialist and Section Leader for Engineering Section to Lloyd's Register Classification Society (China) Co Ltd

19th Floor, 550 Yan An dong Road, Shanghai, Huangpu District, 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.

Type Approval Certificate

Specified Standard

Lloyd's Register Rules and Regulations for the Classification of Ships, July 2019.
Standards of the Expansion Joint Manufacturers Association, Inc.: 7th Edition 1998.

Ratings

GB/T12522-96 Series:
Nominal Pipe Diameter (mm): 65-2000;
Design Pressure (MPa): 0.05 & 0.1
CB1153-93 Series:
Nominal Pipe Diameter (mm): 50-500
Design Pressure (MPa): 0.4, 0.6, 1.0 & 1.6

Other Conditions

Where the expansion joints are intended to be installed on board ships, classed or intended to be classed with Lloyd's Register, the following conditions are applicable: -

1. CB1153-93 Series expansion joints: -

- For the CB1153-93 B & BS Types, an adequate root gap is to be provided for the welding of the bellows to the protection pipe so as to ensure full penetration of welds.
- Where expansion joints are used in Class I and Class II piping system and steam pressure and oil fuel piping systems having a design pressure of more than 0.35MPa (3.6 kgf/cm2), the joints are to be examined, tested by hydraulic pressure and installed on board, to the attending Surveyor's satisfaction.
- Welding and non-destructive testing are to be in accordance with Part 5, Chapter 17 of the Rules, to the attending Surveyor's satisfaction.
- The dimensions and materials of flanges, gaskets and bolting, and the pressure-temperature rating of the bolted flanges in pressure pipelines, in accordance with national or other established standards.
- Expansion joints are to be protected against over extension and compression. The adjoining pipes are to be suitably aligned, supported, guided and anchored.Where necessary, expansion bellows are to be protected against mechanical damage.

Downloaded Copy

19th Floor, 550 Yan An dong Road, Shanghai,
Huangpu District, 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.

Type Approval Certificate

Expansion joints are to be installed according to manufacturer's instructions and to the attending surveyor's satisfaction.

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.

The Design Appraisal Document No. LR2004628TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Downloaded Copy

19th Floor, 550 Yan An dong Road, Shanghai,
Huangpu District, 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.