Certificate No: LR24153351TA
Issue Date: 11/10/2024
Expiry Date: 10/10/2029

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	**Dong Yang S & T**
Address	69, Najeon-ro 161beon-gil, Saengnim-myeon, Gimhae-si, Gyeongnam, 50802, South Korea
Type	Rubber Compensator
Description	DYV-W, DYV-WR : Low convolution rubber bellows type pipe compensator with wire braid reinforcement DYV-R, DYV-Y : Low convolution rubber bellows type pipe compensator
Trade Name	DYV-W, DYV-WR, DYV-R, DYV-Y
Application	DYV-W, DYV-WR Marine and Offshore Piping Systems use in Engine lubricating oil systems, Fresh water cooling systems, Fresh water pumping systems, Ballast water lines in closed duct keels, Engine sea water cooling systems, Domestic salt/fresh water pumping systems and Air conditioning systems and similar services DYV-R, DYV-Y Marine, offshore and industrial use in salt water and fresh water piping systems. Bilge water limited to duct keel. In case of sea water in engine room, to be protected against flooding as per paragraph 5.13.2.7.3 of the Rules. Ballast water limited to duct keel or protected in engine room as above
Specified Standard	Part 5, Chapter 12 &13 of Lloyd's Register's Rules and Regulations for the

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Da-Young Kang

Engineering Piping - Senior Specialist to Lloyd's Register Asia
A member of the Lloyd's Register group

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Classification of Ships, July 2024

Ratings

DYV-W, DYV-WR
Working pressure : 16 bar for DN 25 to DN 200
10 bar for DN 250 to DN 400
Temperature (°C) : 0 ~ 100

DYV-R, DYV-Y
Working pressure : 16 bar for DN 25 to DN 150
Temperature (°C) : 90

Additional Tests

DYV-W, DYV-WR
Endurance test, Burst pressure test, Fire test with a steel guard according to ISO 15540 & ISO 15541

DYV-R, DYV-Y
Endurance test, Burst pressure test

Other Conditions

Where the rubber compensators are intended to be installed on a ship classed or intended to be classed with Lloyd's Register (LR),the following conditions and advice are applicable:
1) The positions of compensators are to be clearly shown on any plans of piping systems and arrangements which are required to be submitted for classification approval.
2) It should be noted that it is LR's policy that where the rubber compensators are used in essential systems in the engine room, they are to be held to a minimum.
3) Where necessary, the compensators are to be protected against over extension and compression.

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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 Asia of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2004620TA & 14/40022(E5)

The Design Appraisal Document BTS/ENG/M243816 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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