

ISO 21159:2018 (E)

Ships and marine technology — Butterfly valves for use in low temperature applications — Design and testing requirements

Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Pressure-temperature rating
5	Structure
5.1	General
5.1.1	Structure
5.1.2	Materials
5.2	Design and materials of the body
5.2.1	Design
5.2.2	Materials
5.2.3	Manufacturing
5.3	Design and materials of the extended bonnet
5.3.1	Design
5.3.2	Materials
5.4	Design and materials of the disc
5.4.1	Design
5.4.2	Materials
5.5	Design and materials of the stem
5.5.1	Design
5.5.2	Materials
5.6	Stem sealing
5.7	Design and materials of the seat
5.7.1	Design
5.7.2	Bore materials
5.8	Design and materials of the connection
5.8.1	Design
5.8.2	Materials
5.9	Requirements of operating device and actuators
5.10	Surface treatment
5.11	Welding and heat treatment
5.11.1	Welding
5.11.2	Heat treatment
5.12	Repair welding
6	Test and inspection
6.1	General
6.2	Material test
6.3	Non-destructive inspection
6.3.1	General
6.3.2	Radiographic testing (RT)
6.3.3	Dye penetrant testing (PT)
6.3.4	Ultrasonic Testing (UT)
6.3.5	Retest
6.3.6	Submission of inspection results
6.4	Dimension check
6.5	Visual inspection

- 6.6 Heat treatment inspection
- 6.7 Operating tests
- 6.8 Pressure test
 - 6.8.1 Pressure test in ambient temperature
 - 6.8.2 Test procedure and method
- 6.9 Fire-resistance test (if necessary)
- 6.10 Anti-static testing
- 6.11 Cryogenic tests
 - 6.11.1 General
 - 6.11.2 Scope of tests
 - 6.11.3 Test procedure
 - 6.11.4 Submission of test results

7 Marking

Annex A (informative) Examples of butterfly valve construction

Page count: 14