

ISO 18154:2017-03 (E)

Ships and marine technology - Safety valve for cargo tanks of LNG carriers - Design and testing requirements

Contents		Page
Foreword		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Main valve components	2
4.1	Body	2
4.2	Nozzle	2
4.3	Disk	2
4.4	Cover	2
4.5	Diaphragm	2
5	Design	3
6	Materials	4
7	Production testing and inspection	4
7.1	Purpose	4
7.2	Impact test	4
7.3	Non-destructive inspection	4
7.4	Pressure test	5
7.4.1	General requirement	5
7.4.2	Fluid	5
7.4.3	Duration	5
7.4.4	Test equipment	5
7.5	Surface inspection	5
7.6	Visual inspection	5
8	Performance test	6
8.1	Performance test in ambient temperature	6
8.1.1	Purpose	6
8.1.2	Number of test times	6
8.1.3	Fluid	6
8.1.4	Acceptance criteria	6
8.2	Leakage test in ambient temperature	6
8.2.1	Purpose	6
8.2.2	Fluid	6
8.2.3	Test pressure	6
8.2.4	Duration	6
8.2.5	Acceptance leakage rate	6
8.2.6	Test equipment	7
8.3	Performance test in low temperature	7
8.3.1	Purpose	7
8.3.2	Number of test times	7
8.3.3	Fluid	7
8.3.4	Acceptance criteria	7
8.4	Preparation for the performance test in low temperature	7
8.4.1	Start temperature for the test	7

8.4.2	Safety requirement	7
8.4.3	Test system	7
8.5	Leakage test in low temperature	8
8.5.1	Purpose	8
8.5.2	Fluid	8
8.5.3	Test pressure	8
8.5.4	Duration	8
8.5.5	Acceptance tolerance	9
8.5.6	Test equipment	9
9	Vacuum test	9
9.1	Purpose	9
9.2	Vacuum condition	9
9.2.1	Test temperature	9
9.2.2	Vacuum set test	9
9.2.3	Number of test times	9
9.2.4	Fluid	9
10	Type test	9
11	Determination of pilot operated safety valve performance	9
12	Sizing of pilot operated safety valves	10
13	Marking and sealing	10
	Bibliography	11