

ISO 2415:2022-07 (E)

Forged shackles for general lifting purposes - Dee shackles and bow shackles

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Form and dimensions	3
4.1	Dee shackles	3
4.2	Bow shackles	3
4.3	Hole diameter	5
4.4	Types of shackle pin	5
5	Mechanical properties	7
5.1	General	7
5.2	Deformation resistance test	7
5.3	Breaking force	8
5.4	Fatigue resistance	8
6	Material	8
6.1	General	8
6.2	Grade	9
6.3	Specific requirements	9
6.4	Charpy impact test	9
7	Heat treatment	10
7.1	Grades 6, 8 and 10	10
8	Workmanship	10
8.1	Manufacture	10
9	Screw threads	11
10	Type testing	11
10.1	General	11
10.2	Deformation resistance test	12
10.3	Breaking force test	12
10.4	Fatigue test	12
10.5	Charpy impact test	12
10.6	Acceptance criteria for type testing	12
10.6.1	Deformation resistance test	12
10.6.2	Static strength test and fatigue test	12
10.6.3	Charpy impact test	13
11	Manufacturing testing	13
11.1	Visual examination	13
11.2	Proof force test	13
11.3	Hardness testing	13
11.4	Non-destructive testing	13
12	Marking	14

12.1	Shackle body	14
12.2	Shackle pins	14
13	Manufacturer's certificate	14
14	Instructions for use	15
	Annex A (informative) Designation	16
	Annex B (informative) Safe use of shackles	17
	Bibliography	24