

DIN 7500-1:2009-06 (E)

Thread rolling screws for ISO metric thread - Part 1: Technical delivery conditions for case hardened and tempered screws

Contents		Page
Foreword		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	6
4	Requirements	6
4.1	General requirements	6
4.2	Design and dimensional accuracy	6
4.3	Materials	6
4.4	Mechanical properties	6
4.4.1	Overview	6
4.4.2	Heat treatment	7
4.4.3	Hardness	7
4.4.4	Case depth	8
4.4.5	Breaking torque	8
4.4.6	Ductility	8
4.4.7	Ability to form a mating thread	8
4.4.8	Lubrication of thread rolling screws	9
4.4.9	Embrittlement	9
4.4.10	Core hardness after retempering	9
5	Test method	9
5.1	Core hardness test	9
5.2	Case hardness test	10
5.3	Case depth test	10
5.4	Torsional test	10
5.5	Ductility test	10
5.6	Driveability test	11
5.6.1	Thread rolling capability	11
5.6.2	Test plate	12
5.7	Embrittlement test	12
5.8	Retempering test	12
6	Torque meter	12
7	Acceptance inspection	12
8	Marking	12
8.1	Symbol	12
8.2	Identification	13
8.3	Manufacturer's identification mark	13
9	Types and designation	13
Bibliography		15
Figures Figure 1 -- Length of the thread rolling section		9

Figure 2 -- Points at which the case hardness may be measured	10
Figure 3 -- Points at which the case depth may be measured	10
Figure 4 -- Ductility test	11
Tables Table 1 -- Chemical composition	6
Table 2 -- Mechanical properties	7
Table 3 -- Mechanical and performance requirements	7
Table 4 -- Case depth	8
Table 5 -- Test plate thickness and hole diameter	12
Table 6 -- Screw types and designations	13