

DIN EN 10378:2025-12 (E)

Welded stainless steel square and rectangular tubes for mechanical and structural engineering and decorative use - Technical delivery conditions

Contents		Page
European foreword		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Symbols	6
5	Classification and designation	7
5.1	Grades and qualities	7
5.2	Designation	7
6	Information to be supplied by the purchaser	7
6.1	Mandatory information	7
6.2	Options	7
6.3	Example of an order	8
7	Manufacturing process	8
7.1	Steel making process	8
7.2	Tube manufacturing process	8
7.3	Delivery conditions	8
8	Requirements	10
8.1	General	10
8.2	Chemical composition	10
8.2.1	Cast analysis	10
8.2.2	Product analysis	13
8.3	Mechanical properties	14
8.4	Appearance	15
8.5	Dimensions	15
8.5.1	Outside dimensions and wall thickness	15
8.5.2	Lengths	15
8.5.3	Mass	15
8.6	Tolerances	16
8.6.1	Tolerances on outside dimensions and wall thickness	16
8.6.2	Tolerances on length	16
8.6.3	Tolerances on shape	17
8.6.4	Dimple tolerances	17
8.7	End preparation	17
8.8	Sectional properties	17
9	Inspection and testing	17
9.1	Types of inspection and testing	17
9.2	Inspection documents	18
9.2.1	Types of inspection documents	18
9.2.2	Content of inspection documents	18
9.3	Summary of inspection and testing	19
10	Sampling	19

10.1	Frequency of tests	19
10.1.1	Test unit	19
10.1.2	Number of sample tubes per each test unit	20
10.2	Preparation of samples and test pieces	20
10.2.1	General	20
10.2.2	Test piece for the tensile test at room temperature	20
10.2.3	Test piece for the flattening test	20
10.2.4	Test piece for the product analysis	20
11	Test methods	21
11.1	Chemical analysis	21
11.2	Tensile test at room temperature	21
11.3	Destructive test of weld	21
11.3.1	Flattening test	21
11.3.2	Weld bending test	22
11.4	Dimensional inspection	23
11.4.1	General	23
11.4.2	Measurement of size and shape	23
11.5	Visual examination	28
11.6	Material identification	28
11.7	Tensile test at elevated temperature	28
11.8	Retests, sorting and reprocessing	28
12	Marking	28
12.1	Marking to be applied	28
12.2	Additional marking	29
13	Handling and packaging	29
Annex A (informative)	Applicable roughness for polished square and rectangular tubes according to the requested polished grit number (PGN)	30
Annex B (informative)	Formulae for the calculation of sectional properties	31