

# DIN EN 10217-7:2021-06 (E)

## Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7: Stainless steel tubes

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
1	Scope .....	5
2	Normative references .....	5
3	Terms and definitions .....	7
4	Symbols .....	7
5	Classification and designation .....	7
5.1	Classification .....	7
5.2	Designation .....	8
6	Information to be supplied by the purchaser .....	8
6.1	Mandatory information .....	8
6.2	Options .....	8
6.3	Examples of an order .....	9
6.3.1	Example 1 .....	9
6.3.2	Example 2 .....	10
7	Manufacturing process .....	10
7.1	Steelmaking process .....	10
7.2	Tube manufacture and conditions .....	10
8	Requirements .....	13
8.1	General .....	13
8.2	Chemical composition .....	13
8.2.1	Cast analysis .....	13
8.2.2	Product analysis .....	13
8.3	Mechanical properties .....	16
8.3.1	At room temperature .....	16
8.3.2	At elevated temperature .....	17
8.3.3	At low temperature .....	17
8.4	Corrosion resistance .....	23
8.5	Appearance and internal soundness .....	23
8.5.1	Appearance .....	23
8.5.2	Internal soundness .....	24
8.6	Straightness .....	24
8.7	Preparation of ends .....	24
8.8	Dimensions, masses and tolerances .....	25
8.8.1	Outside diameter and wall thickness .....	25
8.8.2	Mass .....	25
8.8.3	Lengths .....	25
8.8.4	Tolerances .....	25
9	Inspection .....	27
9.1	Type of inspection .....	27
9.2	Inspection documents .....	27
9.2.1	Types of inspection documents .....	27
9.2.2	Content of inspection documents .....	28

9.3	Summary of inspection and verification testing .....	28
10	Sampling .....	29
10.1	Test unit .....	29
10.2	Preparation of samples and test pieces .....	30
10.2.1	Selection and preparation of samples for product analysis .....	30
10.2.2	Location, orientation and preparation of samples and test pieces for mechanical tests ...	30
11	Verification test methods .....	32
11.1	Chemical analysis .....	32
11.2	Tensile test on the base material .....	32
11.2.1	At room temperature .....	32
11.2.2	At elevated temperature .....	32
11.3	Transverse tensile test on the weld .....	32
11.4	Technological tests .....	32
11.4.1	General .....	32
11.4.2	Flattening test .....	33
11.4.3	Ring tensile test .....	33
11.4.4	Drift expanding test .....	33
11.4.5	Ring expanding test .....	34
11.5	Weld bend test .....	34
11.6	Impact test .....	34
11.7	Intergranular corrosion test .....	35
11.8	Leak tightness test .....	35
11.8.1	Hydrostatic test .....	35
11.8.2	Eddy current test .....	35
11.9	Dimensional inspection .....	36
11.10	Visual examination .....	36
11.11	Non-destructive testing .....	36
11.12	Material identification .....	37
11.13	Retests, sorting and reprocessing .....	37
12	Marking .....	37
12.1	Marking to be applied .....	37
12.2	Additional marking .....	37
13	Handling and packaging .....	38
Annex A (informative) Technical changes from the previous edition .....		39
A.1	Introduction .....	39
A.2	Technical changes .....	39
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of Directive 2014/68/EU aimed to be covered .....		41
Bibliography .....		42