

DIN EN 12735-2:2016-11 (E)

Copper and copper alloys - Seamless, round tubes for air conditioning and refrigeration - Part 2: Tubes for equipment

Contents	Page
European foreword	4
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 Designations	8
4.1 Material	8
4.2 Material condition	9
4.3 Product	9
5 Ordering information	10
6 Requirements	11
6.1 Composition	11
6.2 Mechanical properties and grain size	11
6.3 Dimensions and tolerances for smooth tubes	11
6.4 Dimensions and tolerances for inner finned tubes	17
6.5 Drift expanding (for smooth tubes)	18
6.6 Freedom from defects	18
6.7 Surface quality	19
7 Sampling	19
8 Test methods	20
8.1 Analysis	20
8.2 Tensile test	20
8.3 Hardness test	20
8.4 Estimation of average grain size	20
8.5 Drift expanding test	20
8.6 Carbon content test	20
8.7 Freedom from defects test	20
8.8 Retests	21
9 Declaration of conformity and inspection documentation	21
9.1 Declaration of conformity	21
9.2 Inspection documentation	21
10 Packaging, marking and form of delivery	21
10.1 Packaging and marking	21
10.2 Form of delivery	22
Annex A (normative) Freedom from defects test	23
A.1 Eddy current test	23
A.1.1 General	23
A.1.2 Detection for non-local defects on coiled tubes	23

A.2	Hydrostatic test	24
A.3	Pneumatic test	24
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of Directive 2014/68/EU aimed to be covered		25
Bibliography		26
Tables Table 1 -- Mechanical properties and grain size		11
Table 2 -- Nominal outside diameters and wall thicknesses for smooth tubes		13
Table 3 -- Tolerances on outside diameter for smooth tubes in straight length		14
Table 4 -- Tolerances on mean outside diameter for smooth tubes in coils		14
Table 5 -- Tolerances on wall thickness for smooth tubes		15
Table 6 -- Tolerances on wall thickness		15
Table 7 -- Tolerances on length for tubes supplied in straight lengths		16
Table 8 -- Maximum deviation from circular form expressed as percentage of the nominal outside diameter		16
Table 9 -- Recommended nominal outside diameters for inner finned tubes		17
Table 10 -- Testing of drift expanding		18
Table 11 -- Permissible number of defects for coils		19
Table 12 -- Coil and reel dimensions		22
Table A.1 -- Maximum drill diameters for reference standard tube		23
Table A.2 -- Hydrostatic pressure test		24
Table ZA.1 -- Correspondence between this European Standard and Annex I of Directive 2014/68/EU		25