

CONFIRMED  
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Specification for

**Cold drawn 18/10  
chromium-nickel  
corrosion-resisting  
steel tube —**

**(Niobium stabilized: 800 MPa)  
(Weldable)**

UDC 629.7:669.15'26'24-194-124.2-462:669.14.018.8:621.791.011

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**Summary of pages**

This document comprises a front cover, an inside front cover, pages i and ii, page 1 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

**Amendments issued since publication**

Amd. No.	Date of issue	Comments

This British Standard, having been prepared under the direction of the Aerospace Standards Committee, was published under the authority of the Executive Board on 29 February 1980. It comes into effect (see note 1) on 30 May 1980

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The following BSI references relate to the work on this standard:  
Committee reference ACE/15  
Draft for comment 78/77607 DC

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NOTE 1 Attention is drawn to the fact that this British Standard does not come into effect until 3 months after the date of publication. This is to enable users of the standard to obtain copies and make the necessary amendments to their documentation before the effective date.

NOTE 2 Tube of the same composition for use in the softened condition is covered by BS T 66.

## 1 Inspection and testing procedure

**1.1 General.** This British Standard shall be used in conjunction with sections 1 and 3 of the latest issue of BS T 100.

**1.2 Sulphur printing or deep etching tests.** One sample shall be taken from each ingot for deep etching tests.

## 2 Process of manufacture

The steel shall be manufactured by an electric process.

## 3 Chemical composition

The steel shall contain:

Element	%	
	min.	max.
Carbon	—	0.08
Silicon	0.2	1.0
Manganese	0.5	2.0
Phosphorus	—	0.035
Sulphur	—	0.025
Chromium	17.0	19.0
Nickel	9.0	12.0
Niobium	10 × carbon content	1.0

## 4 Surface dressing

The steel shall be overall dressed.

## 5 Condition

The tube shall be supplied in either of the following conditions, at the option of the manufacturer, unless a specific condition is stated on the order:

- a) cold drawn, or
- b) cold drawn and tempered.

## 6 Heat treatment

The tempering treatment shall consist of heating uniformly at a temperature of not more than 550 °C, followed by cooling in a suitable manner.

## 7 Mechanical properties

**7.1 Tensile test.** The mechanical properties obtained from test pieces, selected, prepared and tested in accordance with the relevant requirements of BS T 100, shall be as follows.

0.2 % proof stress	Tensile strength	
	min.	max.
MPa (= N/mm <sup>2</sup> )	MPa (= N/mm <sup>2</sup> )	MPa (= N/mm <sup>2</sup> )
700	800	1 100

NOTE Information on SI units is given in BS 3763 "The International System of units (SI)" and BS 350 "Conversion factors and tables".

**7.2 Flattening test.** The distance between the inner surfaces of the test piece in the direction of flattening shall be  $8T$  or 0.75 internal diameter, whichever is the smaller.

**7.3 Hardness test.** The hardness of the tube shall be:

- 229 min./375 max. HB  
or  
235 min./400 max. HV

## 8 Susceptibility to intercrystalline corrosion

**8.1** The tube shall be subjected to the intercrystalline corrosion test in accordance with the relevant requirements of BS T 100.

**8.2** The distance between the inner surfaces of that part of the test sample that is flattened shall be as specified in 7.2.

**8.3** There shall be no evidence of fissuring or crazing of either of the surfaces of the test sample.

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