

CONFIRMED
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Specification for

Chromium- molybdenum steel tube (1150 MPa) —

(Maximum thickness 8 mm)

UDC 629.7:669.15'26'28-194-462

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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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Contents

	Page	
1	Inspection and testing procedure	1
2	Process of manufacture	1
3	Chemical composition	1
4	Surface dressing	1
5	Condition	1
6	Final heat treatment	1
7	Decarburization	1
8	Mechanical properties	1

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 at lower strength levels is covered by British Standard T 53 (for tube of outside diameter not less than 12.5 mm), T 76 and T 77.

1 Inspection and testing procedure

1.1 General. This British Standard shall be used in conjunction with sections 1 and 2 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 sulphur printing or 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	0.22	0.29
Silicon	0.15	0.35
Manganese	0.5	0.8
Phosphorus	—	0.020
Sulphur	—	0.015
Chromium	0.9	1.2
Molybdenum	0.15	0.25
Nickel	—	0.30

4 Surface dressing

The steel shall be overall dressed.

5 Condition

The tube shall be supplied in the finally heat treated condition.

6 Final heat treatment

The final heat treatment shall consist of the following:

- Hardening.** Heat uniformly at a temperature between 870 °C and 910 °C, followed by quenching in oil or water.
- Tempering.** Heat uniformly at a temperature of not less than 350 °C, followed by cooling in a suitable manner.

7 Decarburization

The depth of decarburization, at either of the surfaces, shall be not greater than 0.1 mm or 2 % of the nominal thickness, whichever is the lesser.

8 Mechanical properties

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

0.2 % proof stress	Tensile strength		Elongation
	min.	max.	
MPa (= N/mm ²)	MPa (= N/mm ²)	MPa (= N/mm ²)	%
1 050	1 150	1 350	6

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

8.2 Hardness test. The hardness of the tube shall be:

341 min./401 max. HB

or

350 min./425 max. HV

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