



BS 1449: Part 1: 1983

UDC 669.14—41 + 669.15'74—194—41

© British Standards Institution. No part of this publication may be photocopied or otherwise reproduced without the prior permission in writing of BSI.

British Standard

Steel plate, sheet and strip

Part 1. Specification for carbon and carbon-manganese plate, sheet and strip

Tôles et feuillards en acier

Partie 1. Tôles et feuillards en aciers au carbone et aciers au carbone-manganèse — Spécifications

Bleche und Bänder aus Stahl

Teil 1. Bleche und Bänder aus Kohlenstoffstahl und Kohlenstoffmanganstahl

British Standards Institution

BS 1449 : Part 1 : 1983

Contents

	Page		Page
Foreword	1	Appendices	
Committees responsible	Back cover	A. Nearest equivalent grades for steels in BS 4360	32
Specification		B. Product analysis and permitted variations	32
Section one. General requirements		C. Stress unit conversions	33
1.0 Introduction	2	D. Determination of 'r' values	34
1.1 Scope	2	Tables	
1.2 Definitions	2	<i>Tables in section one (general)</i>	
1.3 General	6	1. Symbols for material conditions	3
1.4 Steelmaking process	6	2. Symbols for surface finishes and surface inspection	4
1.5 Chemical composition	6	3. Summary of material grades, chemical compositions and types of steel available	5
1.6 Freedom from defects	6	4. Edge conditions	9
1.7 Condition of material on delivery	6	<i>Tables in section two (materials based on formability)</i>	
1.8 Number of tests	6	5. Chemical composition	11
1.9 Tensile test	6	6. Mechanical properties of hot rolled material	11
1.10 Bend test	7	7. Mechanical properties of cold rolled material produced on wide mills (i.e. rolled in widths ≥ 600 mm)	12
1.11 Strain-age-embrittlement test	7	8. Mechanical properties of cold rolled material produced on narrow mills (i.e. rolled in widths < 600 mm and thicknesses ≤ 3 mm)	12
1.12 Test for stabilization	7	9. Conditions and surface finishes	13
1.13 Formability tests	7	<i>Tables in section three (materials based on specified minimum strengths)</i>	
1.14 Hardness test	8	10. Chemical composition: carbon-manganese steels	14
1.15 Decarburization test	8	11. Mechanical properties: carbon-manganese steels	15
1.16 Retests	8	12. Chemical composition: micro-alloyed steels	15
1.17 Surface finish and surface inspection	8	13. Mechanical properties: micro-alloyed steels	16
1.18 Edge conditions	8	14. Minimum internal forming radii	17
1.19 Inspection	8	<i>Tables in section four (narrow strip supplied in a range of conditions for heat treatment and general engineering purposes)</i>	
1.20 Tolerances on dimensions and shape	8	15. Chemical composition	19
1.21 Marking	8	16. Mechanical properties	20
Section two. Specific requirements for materials based on formability		17. Availability of conditions and surface finishes	22
2.1 General	9	<i>Tables in section five (tolerances on dimensions and shape)</i>	
2.2 Information to be supplied by the purchaser	9	18. Details of position for measurement of thickness	23
2.3 Chemical composition	10	19. Tolerance on nominal thickness for hot rolled material produced on wide mills (HR grades), including products slit from wide strip	24
2.4 Mechanical properties	10	20. Tolerance on nominal thickness for hot rolled material produced on narrow mills (HS grades)	24
2.5 Condition of material on delivery	10	21. Tolerance on nominal thickness for cold rolled material produced on wide mills (CR grades), including products slit from wide strip	25
Note to section two. Manipulation	13	22. Tolerance on nominal thickness for cold rolled material produced on narrow mills (CS grades)	25
Section three. Specific requirements for materials based on specified minimum strengths		23. Tolerance on nominal width for hot rolled material produced on wide continuous mills (HR grades)	26
3.1 General	14	24. Tolerance on nominal width for cold rolled material produced on wide continuous mills (CR grades)	26
3.2 Information to be supplied by the purchaser	14		
3.3 Carbon-manganese steels	14		
3.4 Micro-alloyed steels	14		
3.5 Condition of material on delivery	14		
Notes to section three. Manipulation	17		
Section four. Specific requirements for narrow strip supplied in a range of conditions for heat treatment and general engineering purposes			
4.1 General	18		
4.2 Information to be supplied by the purchaser	18		
4.3 Chemical composition	18		
4.4 Mechanical properties	18		
4.5 Condition of the material on delivery	18		
Section five. Tolerances on dimensions and shape			
5.1 General	23		
5.2 Tolerance on thickness	23		
5.3 Tolerance on width	23		
5.4 Tolerance on length	23		
5.5 Maximum edge camber	23		
5.6 Maximum out of squareness	23		
5.7 Maximum deviation from flatness	23		