

General Requirements for Rolled Steel Plate

1. SCOPE

1.1 The scope of this standard covers requirements which, unless otherwise specified in an individual specification, apply to rolled steel plate.

1.2 Pickled and oiled (P&O) material may be substituted for material specified as hot-rolled (non-P&O) material. Hot-rolled (non-P&O) material may not be substituted for material specified as P&O material, unless written approval is received through the deviation process.

2. RELATED SPECIFICATIONS

2.1 REFERENCE STANDARD

ASTM A6/A6M—General Requirements for Delivery of Rolled Steel Plates, Shapes, Bars, etc., for Structural Use

2.2 This standard replaces the following company standard:

Versatile

MS-638

2. DESCRIPTION OF TERMS

Flat hot-rolled steel is classified as plates, depending on how it is ordered.

2.1 WHEN ORDERED TO THICKNESS

Over 8 inches in width and 0.230 inches or over in thickness.

Over 48 inches in width and 0.180 inches or over in thickness.

2.2 WHEN ORDERED TO WEIGHT/FT²

Over 8 inches in width and 9.62 lb/ft² or heavier.

Over 48 inches in width and 7.53 lb/ft² or heavier.

2.3 Slabs, sheet bars and skelp, though frequently falling in the foregoing size ranges, are not classed as plates.

3. CHEMICAL ANALYSIS

Product Analysis Tolerances are listed in Table A.

4. VARIATION IN DIMENSIONS AND WEIGHT

The permissible variations for dimensions shall not exceed the applicable limits in Tables 1 to 14, inclusive.

5. QUALITY

The material shall be free from injurious defects and shall have a workmanlike finish.

6. GENERAL PACKING AND DELIVERY REQUIREMENTS

6.1 PACKAGE WEIGHT

6.1.1 The package weight shall be shown on the packing documents.

6.1.2 The maximum package weight shall be 10,000 lbs. (4500 kg.).

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ALL	D	TH	116097	31MAY01	 NEW HOLLAND	ENGINEERING SPECIFICATION		
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ALL	B	ALS	110274	8/97		FRAME	1	OF 13
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6.2 PROTECTION REQUIREMENTS

Unless otherwise specified, plate shall be shipped uncovered.

6.3 TYPE OF DELIVERING CARRIER

6.3.1 Truck shipments shall be flat or stake trailer.

6.3.2 Rail shipments shall be covered gondola.

6.4 PLACEMENT ON DELIVERY CARRIER

6.4.1 Package length shall be parallel to carrier length.

6.4.2 Spacing shall be 6 in. (15.2 cm) lengthwise and crosswise between packages if applicable.

6.4.3 Skids shall be placed lengthwise, and shall have a height of 3 in. (7.6 cm).

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Table A: Product Analysis Tolerances

Element	Upper Limit or Max. of Specified Value, Percent	Tolerances Percent	
		Under Min. Limit	Over Max. Limit
Carbon	to 0.15, incl.	0.02	0.03
	over 0.15 to 0.40, incl.	0.03	0.04
	over 0.40 to 0.75, incl.	0.04	0.05
	over 0.75	0.04	0.06
Manganese(A)	to 0.60, incl.	0.05	0.06
	over 0.60 to 0.90, incl.	0.06	0.08
	over 0.90 to 1.20, incl.	0.08	0.10
	over 1.20 to 1.35, incl.	0.09	0.11
	over 1.35 to 1.65, incl.	0.09	0.12
	over 1.65 to 1.95, incl.	0.11	0.14
	over 1.95	0.12	0.16
Phosphorus	to 0.04, incl.	----	0.010
	over 0.04 to 0.15, incl.	----	NA (B)
Sulfur	to 0.06, incl.	----	0.010
	over 0.06	NA (B)	NA (B)
Silicon	to 0.30, incl.	0.02	0.03
	over 0.30 to 0.40, incl.	0.05	0.05
	over 0.40 to 2.20, incl.	0.06	0.06
Nickel	to 1.00, incl.	0.03	0.03
	over 1.00 to 2.00, incl.	0.05	0.05
	over 2.00 to 3.75, incl.	0.07	0.07
	over 3.75 to 5.30, incl.	0.08	0.08
	over 5.30	0.10	0.10
Chromium	to 0.90, incl.	0.04	0.04
	over 0.90 to 2.00, incl.	0.06	0.06
	over 2.00 to 4.00, incl.	0.10	0.10
Molybdenum	to 0.20, incl.	0.01	0.01
	over 0.20 to 0.40, incl.	0.03	0.03
	over 0.40 to 1.15, incl.	0.04	0.04
Copper	0.20 minimum only	0.02	----
	to 1.00, incl.	0.03	0.03
	over 1.00 to 2.00, incl.	0.05	0.05
Titanium	to 0.10, incl.	0.01 (C)	0.01 (C)
Vanadium	to 0.10, incl.	0.01 (C)	0.01 (C)
	over 0.10 to 0.25, incl.	0.02	0.02
	over 0.25	0.02	0.03
	minimum only specified	0.01	----
Boron	any	NA (B)	NA (B)
Columbium	to 0.10, incl.	0.01 (C)	0.01 (C)
Zirconium	to 0.15, incl.	0.03	0.03
Nitrogen	to 0.030, incl.	0.005	0.005

- A Manganese product analyses tolerances for bars and bar size shapes shall be: to 0.90, incl. ± 0.03 ; over 0.90 to 2.20 incl. ± 0.06 .
- B NA - Product analysis not applicable.
- C If the minimum of the range is 0.01%, the under tolerance is 0.005%.

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TOLERANCES ON DIMENSIONS AND WEIGHTS**Table 1:** Permissible Variation in Thickness for Rectangular, Carbon, High-Strength, Low Alloy and Alloy Steel Plates, 15 In. and Under When Ordered to Thickness**Note 1** Permissible variation under specified thickness, 0.01 in.**Note 2** Thickness to be measured at 3/8 to 3/4 in. from the longitudinal edge.**Note 3** For thickness measured at any location other than that specified in Note 2, the permissible maximum over tolerance shall be increased by 75%, rounded to the nearest 0.01 in.

Tolerance Over Specified Thickness for Widths Given in Inches

Specified Thickness in B.	48 and Under	Over 48 to 60 Excl.	60 to 72 Excl.	72 to 84 Excl.	84 to 96 Excl.	96 to 108 Excl.	108 to 120 Excl.	120 to 132 Excl.	132 to 144 Excl.	144 to 168 Excl.	168 and Over
To 1/4, excl.	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	—	—
1/4 to 5/16, excl.	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	—	—
5/16 to 3/8 excl.	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	—
3/8 to 7/16, excl.	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.06
7/16 to 1/2, excl.	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.06
1/2 to 5/8, excl.	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.07
5/8 to 3/4, excl.	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.06	0.07
3/4 to 1, excl.	0.03	0.03	0.03	0.03	0.4	0.04	0.04	0.05	0.06	0.07	0.08
1 to 2, excl.	0.06	0.06	0.06	0.06	0.06	0.07	0.08	0.10	0.10	0.11	0.13
2 to 3, excl.	0.09	0.09	0.09	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.15
3 to 4, excl.	0.11	0.11	0.11	0.11	0.11	0.13	0.14	0.14	0.14	0.15	0.17
4 to 6, excl.	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.20	0.20
6 to 10 excl.	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.27	0.28
10 to 12, excl.	0.29	0.29	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.35
12 to 15, incl.	0.29	0.29	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35



NAME

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