

RAW MATERIALS / FERROUS

FNHA-2-A-009.00

HOT ROLLED ABRASION RESISTANT STEEL SHEET**1. SCOPE**

This standard covers the requirements for hot-rolled abrasion resistant steel sheet of commercial quality having specified chemistry and hardness ranges to provide superior wear resistance compared to low carbon and high-strength low-alloy sheet steel. The specified chemistry and hardness ranges will have detrimental effects on formability and weldability when compared to low carbon and high-strength low-alloy sheet steel.

2. APPLICATION

This specification includes material requirements, ordering information and quality requirements to be used by Engineering, Purchasing and Manufacturing.

3. DRAWING SPECIFICATION

HR Sheet AR 185/250 BHN

REFERENCED DOCUMENTS

ASTM A568 - General Requirements for Steel, Carbon and High Strength Low-Alloy Sheet and Cold-Rolled Sheet.

5. ORDERING INFORMATION

5.1 Hot-rolled Sheet, Abrasion Resistant

5.2 Dimensions (Thickness, width, and length)

5.3 Cut Edge

5.4 Condition: Material to this specification is furnished in the hot-rolled condition. Pickled (or blast cleaned) must be specified, if required.

5.5 Cast or heat analysis report (request, if desired)

6. CHEMICAL AND PHYSICAL REQUIREMENTS

6.1 Carbon, % 0.30 to 0.50

6.2 Manganese, % 1.20 to 2.00

6.3 Brinell Hardness aim for 185 / 250 (aim for 20 point BHN range within a sheet). Equivalent hardness on Rockwell B scale is 90 / 101.

7. DIMENSIONS AND TOLERANCES

7.1 Size Limitations:
12 Gage (0.105") 34" maximum width
10 Gage (0.135") 46" maximum width.

7.2 Length Tolerance, see Table 1.

7.3 Camber Tolerance, see Table 2.

7.4 Flatness Tolerance:
Maximum deviation from a horizontal flat surface is 3/4"

7.5 Width Tolerance, see Table 3.

7.6 Thickness Tolerance, see Table 4.

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RAW MATERIALS / FERROUS**FNHA-2-A-009.00****8. INSPECTION REQUIREMENTS**

8.1 Check Brinell hardness. If material is less than 0.25 inches in thickness, use Rockwell B hardness reading instead of Brinell reading. If hardness meets specification per section 6.3 of this standard, accept material. If not, proceed to 8.2.

8.2 Request chemistry certification from supplier. If chemistry certification meets specification and Brinell hardness is within 160 to 250 range, material is acceptable. Equivalent Rockwell B hardness range is 83 to 101.

8.3 If Brinell hardness is less than 160 (83 Rockwell B), deviation is required for acceptance.

8.4 Deviation procedure:
Send sample out for chemical analysis.

8.4.1 If chemistry does not meet specification, material is rejected.

8.4.2 If chemistry meets specification, follow standard deviation request procedure.

TABLE 1. Length Tolerance of Hot-Rolled Abrasion Resistant Steel Sheet

Specified Length, inches	Tolerance Over Specified Length, inches; No Tolerance Under
To 15, inclusive	1/8
Over 15 to 30, incl.	1/4
Over 30 to 60, incl.	1/2
Over 60 to 120, incl.	3/4
Over 120 to 156, incl.	1
Over 156 to 192, incl.	1 1/4

TABLE 2. Camber Tolerances of Hot-Rolled Abrasion Resistant Steel Sheet

Cut Length, feet	Camber Tolerance, inches
To 4, inclusive	1/8
Over 4 to 6, incl.	3/16
Over 6 to 8, incl.	1/4
Over 8 to 10, incl.	5/16
Over 10 to 12, incl.	3/8
Over 12 to 14, incl.	1/2

NOTE: Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straightedge.

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