

HOT ROLLED SQUARE AISI 1015**1. SCOPE**

This specification defines the requirements for Hot Rolled Steel Bar conforming to AISI chemistry specifications and ASTM A29 dimensional tolerances.

2. APPLICATION

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

2.2 Pickled and oiled may be substituted for hot-rolled applications. Hot-rolled finish may not be substituted for P&O applications unless signed deviation is obtained.

3. DRAWING SPECIFICATIONS

3.1 H.R. Square Bar AISI 1015

4. RELATED SPECIFICATIONS**4.1 REFERENCE STANDARDS**

ASTM A29 - Standard Specifications for Steel Bar, Carbon and Alloy, Hot Wrought and Cold Finished, General Requirements.

ASTM A108 - Standard Specifications for Steel Bar, Carbon, Cold Finished, Standard Quality.

86050124(FNHA-2-A-027.00) - General Requirements for Carbon and Alloy Steel Bars, Hot Rolled and Cold - Finished

86603434(FNHA-2-A-751.01)

Material List 9842962

WS 50.02 material Ck 15

5. ORDERING INFORMATION

5.1 AISI 1015 Steel.

5.1.1 ASTM A36 may be substituted if it meets requirements for the application.

5.2 Hot Rolled Bar, Standard Quality.

5.3 Dimensions (size, bar length, and whether cut length or random length).

5.4 Condition:

Hot rolled, unless otherwise specified.

Pickled and oiled or blast cleaned may be specified as required.

6. CHEMICAL COMPOSITION FOR AISI 1015 AND CK 15 STEEL, MODIFIED

Carbon, %	0.10 to 0.20
Manganese, %	0.30 to 0.90
Phosphorus, %	0.040 maximum
Sulfur, %	0.050 maximum
Lead - not permitted	

7. DIMENSIONAL TOLERANCES

7.1 Size tolerances for Hot Rolled Squares - see Table 1.

7.2 Length tolerance for cut lengths + 2" / - 0, unless otherwise specified by part number drawing.

7.3 Straightness tolerances for Hot Rolled Squares - see Table 2.

					NAME	STD AISI 1015 HR SQ	
					 NEW HOLLAND	ENGINEERING SPECIFICATION	
						FRAME 1	OF 2
						PART NUMBER	
ALL	D	RE	114116	11-99			
FRAME NO.	REV	BY	ECN NO.	DATE			
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RAW MATERIALS / FERROUS

FNHA-2-A-751.00

8.0 MECHANICAL PROPERTIES

Tensile Strength, psi, typical	55 000
Yield Strength, psi, typical	35 000
Elongation in 2", typical %	30
Reduction in Area, typical %	55
Rockwell B Hardness, typical	63
Brinell Hardness, typical	120

TABLE 1. Size Tolerance for 1015 H.R. Squares

Size, inches	Hot Rolled Tolerance from Specified Size, Plus and Minus, inches
To 5/16, incl.	0.005
Over 5/16 to 7/16, incl.	0.006
Over 7/16 to 5/8, incl.	0.007
Over 5/8 to 7/8, incl.	0.008
Over 7/8 to 1, incl.	0.009
Over 1 to 1 1/8, incl.	0.010
Over 1 1/8 to 1 1/4, incl.	0.011
Over 1 1/4 to 1 3/8, incl.	0.012
Over 1 3/8 to 1 1/2, incl.	0.014
Over 1 1/2 to 2, incl.	1/64
Over 2 to 2 1/2, incl.	1/32, plus only, no minus

TABLE 2. Straightness Tolerance for 1015 H.R. Squares

Standard tolerance – 1/4" in any 5 ft. length

Special tolerance – 1/8" in any 5 ft. length

 NEW HOLLAND	NAME STD AISI 1015 HR SQ				PART NUMBER 9842962	
	ENGINEERING SPECIFICATION		REV. D	FRAME 2	OF 2	 Documents Document Sharing Hub