

RAW MATERIALS / FERROUS

FNHA-2-A-153.00

HOT ROLLED STRIP STEEL A715 HSLA**1. SCOPE**

This specification defines the requirements for Hot Rolled Strip Steel, conforming to ASTM A715 material standards, high-strength low-alloy, with improved formability.

2. APPLICATION

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

3. DRAWING SPECIFICATIONS

H.R.Sheet or Strip ASTM A715,GR 50

4. REFERENCED DOCUMENTS

ASTM A715 - Steel Sheet and Strip, High-strength, Low-alloy, Hot-rolled, with Improved Formability.

ASTM A749 - Specifications for Steel, Strip, Carbon and HSLA, Hot Rolled, General Requirements.

5. ORDERING INFORMATION

5.1 ASTM designation number A715.

5.2 Grade (Grade 50 normally specified; otherwise, see Table 1).

5.3 Hot rolled, high strength, low alloy steel, sheet or strip.

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 Type of edge (see 9.1).

5.6 Specify oiled or not oiled, as required(see 9.2).

5.7 Dimensions (thickness, width, and length for cut lengths or thickness and width for coils).

5.8 Coil size (must include inside diameter, outside diameter, and maximum weight).

5.9 Application (part identification and description, if critical application).

5.10 Cast or heat analysis report (request, if desired)(see 10.1)

6. MATERIALS AND MANUFACTURE

Condition: Unless otherwise specified, the material is furnished in the as-rolled condition (not annealed or pickled).

7. CHEMICAL COMPOSITION

The Cast or Heat Analysis of the steel shall conform to the requirements as to chemical composition shown in Table 2.

8. MECHANICAL PROPERTIES

8.1 Tension Test Requirements: The material as represented by the test specimens shall conform to the requirements as listed in Table 1.

8.2 Bending Properties: The minimum forming radius which steel covered by this specification can be expected to sustain is 1 t for Grade 50, 1.5 t for Grade 60, and 2 t for Grade 70 and 80, where t = material thickness.

9. WORKMANSHIP, FINISH, AND APPEARANCE

					NAME	STD A715 GR 50 HR ST	
					 NEW HOLLAND	ENGINEERING SPECIFICATION	
ALL	E	TH	113175	2-99		FRAME 1 OF 4 PART NUMBER	
ALL	D	RLF	110229	JUL 97			
L	C	RLF	106919	950921			
ALL	B	RE	104739	950123			
FRAME NO.		REV	BY	ECN NO.	DATE	THE INFORMATION HEREON IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF NEW HOLLAND NORTH AMERICA, INC. AND/OR NEW HOLLAND CANADA, LTD. ANY USE, EXCEPT THAT FOR WHICH IT MAY BE LOANED, IS PROHIBITED.	
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9.1 Edges: Strip can be supplied with mill edge or slit (cut) edge.

9.2 Oiling: Hot-rolled, non-pickled material is commonly furnished not oiled while hot-rolled pickled (or blast cleaned) material is commonly furnished oiled. When required, pickled (or blast cleaned) material may be specified to be furnished not oiled, and non-pickled material may be specified to be furnished oiled.

10. CERTIFICATION AND REPORTS

When requested, the producer shall furnish copies of a report showing test results of the cast or heat analysis. The report shall include the purchase order number, the ASTM designation number, and the cast or heat number representing the material.

11. DIMENSIONS, TOLERANCES, ALLOWANCES

Dimensions, tolerances, and allowances applicable to products covered by this specification are contained in Tables 3 through 7.

12. COIL SIZES PERMITTED

12.1 Inside diameter 16" minimum.

12.2 Outside diameter 43" +/- 1".

12.3 Maximum weight 4000 lbs.

TABLE 1 Tensile Requirements

	Grade 50	Grade 60	Grade 70	Grade 80
Yield Strength, minimum, ksi	50	60	70	80
Tensile Strength, minimum, ksi	60	70	80	90
Elongation, minimum % , Over .097" thick	24.0	22.0	20.0	18.0
Elongation, minimum % , Up to .097" thick	22.0	20.0	18.0	16.0

TABLE 2 Chemical Requirements

Element	Composition, %
Carbon, max.	0.15
Manganese, max.	1.65
Phosphorus, max.	0.025
Sulfur, max.	0.035

TABLE 3 Thickness Tolerances of Hot-Rolled Strip Ordered to Nominal Thickness
(Coils and Cut Lengths, Including Pickled)

NAME	STD A715 GR 50 HR ST	REV. E	FRAME 2	OF 4	PART NUMBER 9842892
ENGINEERING SPECIFICATION					