

RAW MATERIALS / FERROUS

FNHA-2-A-553.00

HIGH STRENGTH ERW ROUND STEEL TUBING**1. SCOPE**

This specification defines the requirements for High Strength Electric Resistance Welded Steel Tubing. Materials that meet this specification are Elyria tubing and ASTM A 500 Gr.C (50000 psi min. yield strength) tubing.

2. APPLICATION

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

3. DRAWING SPECIFICATIONS

New drawings and revisions shall specify the following in the material block:

STD HS RD TUB-ELYRIA 9842935

4. ORDERING INFORMATION

4.1 Elyria tube, or ASTM A 500 Gr.C (modified to meet mechanical property requirements).

4.2 ERW tubing

4.3 Shape

4.3.1 Round

4.4 Dimension

4.4.1 Outside Diameter, inches

4.4.2 Wall Thickness, inches

4.4.3 Length, feet

4.5 Flash Control, if required

5. CHEMICAL COMPOSITION

Carbon, %	0.35 maximum
Manganese, %	1.35 maximum
Phosphorus, %	0.05 maximum
Sulfur, %	0.05 maximum

6. MECHANICAL PROPERTIES

6.1 Round Tubing 1 1/4 " O.D. and smaller
50,000 psi minimum Yield Strength
60,000 psi minimum Tensile Strength
15 % minimum Elongation in 2 "

6.2 Round Tubing 1 5/16 " O.D. and larger
50,000 psi minimum Yield Strength
62,000 psi minimum Tensile Strength
21 % minimum Elongation

7. DIMENSIONAL TOLERANCES

7.1 Elyria Round Tubing

Outside Diameter 0.75" to 1 1/2" +.015"/-.000
1 5/8" to 2 3/8" +.020"/-.000

Wall Thickness +/- 10 %

Maximum Length 22'

Cut Length Tolerance:

Under 3' +/- 1/16"
3' to 12' +/- 3/32"
Over 12' +/- 1/8"

Straightness 1/16" in 3'

I.D. Flash - Welding flash will not exceed wall thickness or 3/32", whichever is less. Closer flash control may be available on a mill inquiry basis.

					NAME	STD HS RD TUB-ELYRIA		
					 NEW HOLLAND		ENGINEERING SPECIFICATION	
							FRAME 1	OF 2
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7.2 ASTM A 500 Gr.C Round Tubing

Outside Diameter up to 1.900 inch nominal
+/- 0.5% rounded to nearest 0.005"

1.901 inch and over
+/- 0.75% rounded to nearest 0.005"

Wall Thickness +/- 10 % ,

Cut Length Tolerance:

Under 3' +/- 1/16"
3' to 12' +/- 3/32"
Over 12' +/- 1/8"

I.D. Flash - Welding flash will not exceed wall thickness or 3/32", whichever is less. Closer flash control may be available on a mill inquiry basis.

7.3 NOTE ON LENGTH TOLERANCE

Length tolerance is intended for tubing bought as raw material, to be cut to size by New Holland, or as blanks (no drawing). If material is purchased to print specifications, either as a semifinished part or a finished part, the print length tolerance supersedes the standard length tolerance.

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