

1.0 Scope

1.1 This standard covers carbon steel, cold heading quality, round wire intended for the manufacture of blind rivet mandrels.

1.2 In case of conflict, the requirements in the purchase order, on the drawing, in the purchaser's specification, and in this general standard shall prevail in the sequence named.

1.3 The values stated in inch-pound units are to be regarded as the standard.

2.0 Applicable Documents

2.1 ASTM Standards:

A510 - *Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel*

A700 - *Recommended Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment*

E29 - *Recommended Practice for Indicating Which Places of Figures are to be Considered Significant in Specified Limiting Values*

E112 - *Estimating the Average Grain Size of Metals*

3.0 General Requirements for Delivery

3.1 Material furnished to this standard shall conform to the applicable requirements of the current edition of ASTM A510.

4.0 Ordering Information

4.1 Orders for wire to this standard shall include the following:

4.1.1 Quantity (weight).

4.1.1.1 Total order

4.1.1.2 Weight of individual coil

4.1.2 Name of material (carbon steel cold heading wire for blind rivet mandrels),

4.1.3 Dimensions

4.1.3.1 Wire Diameter (see 9.1),

4.1.3.2 Coil diameter, stating minimum inside diameter and maximum outside diameter.

4.1.4 Thermal treatment (see 5.3),

4.1.5 Steel grade (see Table 1),

4.1.6 Mechanical Requirements (see 8.1),

IFI STANDARD ®	CARBON STEEL WIRE FOR BLIND RIVET MANDRELS	IFI-131 Page 1 of 5
Published and issued by the Industrial Fasteners Institute of Independence, OH		Issued: June 1982 Revised:

All standards and specifications are advisory only. Their use by anyone is entirely voluntary. Reliance thereon for any purpose by anyone is at the sole risk of that person or the user of the product, and the IFI is not responsible for any loss, claim, or damage arising therefrom. In formulating and approving standards and specifications, the IFI has not investigated and will not investigate patents which may apply to the subject matter. Prospective users of the standards and specifications are responsible for advising themselves of and protecting themselves against any patent infringement liability which may arise out of such use. © INDUSTRIAL FASTENERS INSTITUTE 1982

- 4.1.6.1 Tensile strength range (psi)
- 4.1.6.2 Wire break load range (lbs)
- 4.1.7 Coating, type and thickness (see 10.4),
- 4.1.8 Grain size; if desired (see 7.1),
- 4.1.9 Cast or heat analysis, if desired (see 6.2),
- 4.1.10 Packaging (see 11.1),
- 4.1.11 IFI designation and date of issue, and
- 4.1.12 Special requirements, if any.

NOTE: A typical ordering description is as follows: 30,000 lb Round Carbon Steel Wire, Cold Heading Quality, 0.375 in diameter, Annealed in Process, Grade 1038 for Blind Rivet Mandrels, Coils 500 lb, 34 in. O.D., 26 in. 1.D. Furnish analysis for each cast or heat, to IFI-131 dated June 1982.

5.0 Manufacture

- 5.1 **Process.** The steel shall be made by the open-hearth, basic-oxygen, or electric-furnace process.
- 5.2 **Internal Soundness.** Wire shall be free from internal pipe and segregation.
- 5.3 **Thermal Treatment.** Wire may be ordered without specific thermal treatment, however, when required and depending on end use, wire may be ordered as follows:

- 5.3.1 Drawn from normalized rod,
- 5.3.2 Drawn from annealed in process,
- 5.3.3 Drawn from spheroidize annealed in process,
- 5.3.4 Drawn from patented in process,
- 5.3.5 Drawn from controlled cooled rod.

6.0 Chemical Requirements

- 6.1 The steel shall conform to the chemical composition requirements specified in Table 1 for the grade ordered.
- 6.2 **Cast of Heat Analysis (Formerly Ladle Analysis).** Each cast or heat of steel shall be analyzed by the wire manufacturer to determine the percentage of elements prescribed in Table 1. This analysis shall be made from a specimen preferably taken during the pouring of the cast or heat. When requested, this analysis shall be reported to the purchaser (see 4.1.9).

IFI STANDARD ®	CARBON STEEL WIRE FOR BLIND RIVET MANDRELS	IFI-131 Page 2 of 5
Published and issued by the Industrial Fasteners Institute of Independence, OH		Issued: June 1982 Revised:

All standards and specifications are advisory only. Their use by anyone is entirely voluntary. Reliance thereon for any purpose by anyone is at the sole risk of that person or the user of the product, and the IFI is not responsible for any loss, claim, or damage arising therefrom. In formulating and approving standards and specifications, the IFI has not investigated and will not investigate patents which may apply to the subject matter. Prospective users of the standards and specifications are responsible for advising themselves of and protecting themselves against any patent infringement liability which may arise out of such use. © INDUSTRIAL FASTENERS INSTITUTE 1982