



# Standard Specification for Welded Wire Mesh Fence Fabric (Metallic-Coated or Polymer Coated) with Variable Mesh Patterns or Meshes Greater than 6 in.<sup>2</sup> [3871 mm<sup>2</sup>] in Panels<sup>1</sup>

This standard is issued under the fixed designation F2919/F2919M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers welded wire mesh fence fabric produced from steel wire or metallic-coated steel wire. The metallic-coated fabric may be polymer coated after fabrication.

1.2 Welded wire mesh fence fabric is produced in four types, based on the kind of coating, as described in Section 4.

1.3 This specification is applicable to orders in either inch-pound units or SI units. Values stated in either inch-pound or SI units are to be regarded separately as the standard. Within the text, the SI units are shown in brackets. The values in the two systems are not exact equivalents; therefore, each system shall be used independent of the other, without combining values in any way.

1.4 This specification references notes and footnotes, which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of this specification.

1.5 The following safety hazards caveat pertains only to the test methods portion, 13.4, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

[A82/A82M Specification for Steel Wire, Plain, for Concrete Reinforcement](#) (Withdrawn 2013)<sup>3</sup>

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.35 on Architectural Metal Fence Systems.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

[A90/A90M Test Method for Weight \[Mass\] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings](#)

[A123/A123M Specification for Zinc \(Hot-Dip Galvanized\) Coatings on Iron and Steel Products](#)

[A185/A185M Specification for Steel Welded Wire Reinforcement, Plain, for Concrete](#) (Withdrawn 2013)<sup>3</sup>

[A641/A641M Specification for Zinc-Coated \(Galvanized\) Carbon Steel Wire](#)

[A853 Specification for Steel Wire, Carbon, for General Use](#)

[A856/A856M Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Carbon Steel Wire](#)

[A902 Terminology Relating to Metallic Coated Steel Products](#)

[A1064/A1064M Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete](#)

[B117 Practice for Operating Salt Spray \(Fog\) Apparatus](#)

[D1499 Practice for Filtered Open-Flame Carbon-Arc Exposures of Plastics](#)

[F934 Specification for Colors for Polymer-Coated Chain Link Fence Materials](#)

### 2.2 ISO Standard:

[ISO 2178 Non-Magnetic Coatings on Magnetic Substrates—Measurement of Coating Thickness—Magnetic](#)<sup>4</sup>

## 3. Terminology

3.1 *Definitions*—Refer to Terminology [A902](#) for general terminology relating to metallic-coated steel products.

### 3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *welded wire mesh fence fabric*—material composed of a series of longitudinal and transverse steel wires arranged substantially at right angles to each other, and welded together at the points of intersection by electrical resistance welding to form fabricated panels.

NOTE 1—See [Tables 1-3](#) for a list of typical standard mesh sizes. This list does not cover all options that may be available.

<sup>4</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

**TABLE 1 Panel Sizes Model A—Single wire in each direction with horizontal reinforcing folds (or beams). (See Fig. 1, Model A)**

NOTE 1—These are examples—Other meshes and wire diameters are available. These are acceptable providing they meet all the requirements of this ASTM specification and are acceptable to the purchaser and client. Not all panels have horizontal reinforcing folds (beams) as shown in Fig. 1, Model A, if mounted within a frame.

Vertical Wire Spacing (nominal)	Horizontal Wire Spacing (nominal) <sup>A</sup>	Wire Diameter (Metallic-coated core: nominal)				Panel Height	
		Vertical		Horizontal		in. (approx.)	mm (approx.)
		Gage	in. [mm]	Gage	in. [mm]		
2 [50]	6 [150]	6.0	0.192 [4.88]	6.0	0.192 [4.88]	48–60–72–96	1200–1500–1800–2400
2 [50]	4 [100]	7.0	0.177 [4.50]	7.0	0.177 [4.50]	42–48–60–72–84	1050–1200–1500–1800–2100
2 [50]	8 [200]	5.75	0.196 [4.98]	5.75	0.196 [4.98]	42–48–60–72–84–96	1050–1200–1500–1800–2100–2400
2 [50]	8 [200]	6.25	0.188 [4.80]	6.25	0.189 [4.80]	39–60–78–96	1000–1500–2000–2400

<sup>A</sup>Where panels have horizontal folds (beams) small spacing of horizontal wires may apply.

**TABLE 2 Panel Sizes Model B—Single vertical wire. Double horizontal wire. (See Fig. 1, Model B)**

NOTE 1—These are examples—Other meshes and wire diameters are available. These are acceptable providing they meet all the requirements of this ASTM specification and are acceptable by the purchaser and client.

Vertical Wire Spacing (nominal)	Horizontal Wires Spacing (nominal)	Wire Diameter (Metallic-coated core: nominal)				Panel Height	
		Vertical One (1) Wire		Horizontal Two (2) Wire		in. (approx.)	mm (approx.)
		Gage	in. [mm]	Gage	in. [mm]		
2 [50]	8 [200]	4.0	0.225 [5.72]	4.0	0.225 [5.72]	48–72–96	1200–1800–2400
2 [50]	8 [200]	4.0	0.225 [5.72]	0.0	0.303 [7.70]	48–72–96	1200–1800–2400
2 [50]	8 [200]	5.75	0.196 [4.98]	3.5	0.236 [6.00]	42–48–54–66–72–84	1000–1200–1450–1650–1800–2000
2 [50]	8 [200]	3.5	0.236 [6.00]	00.75	0.315 [8.00]	42–48–54–66–72–96	1000–1200–1450–1650–1800–2400

**TABLE 3 Panel Sizes Model C—Single wire in each direction. Flat construction and variable wire spacing in panel height. (See Fig. 1, Model C)**

NOTE 1—These are examples—Other meshes and wire diameters are available. These are acceptable providing they meet all the requirements of this ASTM specification and are acceptable by the purchaser and client.

Vertical Wire Clear Mesh Spacing (nominal)	Horizontal Wire Spacing (nominal)	Wire Diameter (Metallic-coated core: nominal)				Panel Height	
		Vertical		Horizontal		in. (approx.)	mm (approx.)
		Gage	in. [mm]	Gage	in. [mm]		
1.75 [45]	Variable	9.0	0.148 [3.77]	9.0	0.148 [3.77]	48–60–72	1200–1500–1800
1.75 [45]	Variable	6.0	0.192 [4.88]	6.0	0.192 [4.88]	48–60–72	1200–1500–1800
3.50 [45]	Variable	4.0	0.255 [5.72]	6.0	0.192 [4.88]	48–60–72	1200–1500–1800
3.50 [45]	Variable	2.0	0.262 [6.67]	6.0	0.192 [4.88]	48–60–72	1200–1500–1800

3.2.2 *wire*—referred to as plain wire and welded plain wire used in the fabrication of the fence panels.

#### 4. Classification

4.1 Welded wire mesh fence fabric is classified according to coating as follows:

4.1.1 *Type 1*, consists of welded wire fabric made from wire which is zinc-coated, in accordance with **A641/A641M**, Class 3 minimum, before being welded into fabric, known as galvanized before welding.

4.1.2 *Type 2*, consists of welded wire fabric which is made from uncoated wire and the fabric is subsequently zinc-coated

after fabrication, in accordance with Specification **A123/A123M**, Coating Grade 35, known as galvanized after welding.

4.1.3 *Type 3*, consists of welded wire fabric made from wire which is coated with zinc-5 % aluminum mischmetal alloy (Zn-5Al-MM), in accordance with Specification **A856/A856M**, before being welded into fabric, known as zinc 5 % aluminum mischmetal alloy-coated steel before welding.

4.1.4 *Type 4*, consists of welded wire fabric made from wire which is zinc-coated, in accordance with Specification **A641/A641M**, 0.3 oz/ft<sup>2</sup> minimum, before being welded into fabric, known as galvanized before welding, and subsequently polymer coated.

4.1.5 In agreement between buyer and supplier Types 1, 2, 3, or 4 can be subsequently polymer coated to produce polymer coated welded wire fabric.

4.2 Welded wire mesh fence fabric is classified in accordance with the method of fabrication, as follows:

4.2.1 *Model A*: Panels fabricated with single wires in horizontal and vertical direction. With horizontal reinforcing folds (beams). (See [Table 1](#) and [Fig. 1](#)).

4.2.2 *Model B*: Panels fabricated with two horizontal wires with a vertical wire placed between them. (See [Table 2](#) and [Fig. 1](#)).

4.2.3 *Model C*: Panels fabricated with single wires in horizontal and vertical direction—flat in structure. (See [Table 3](#) and [Fig. 1](#)).

4.2.4 *Models A and B*: Panels may be bent along the length to form a bent section at 45 degrees. (See [Fig. 2](#)).

4.2.5 All panels have to be fabricated so that they do not exceed 4 in. on centers in one dimension (length, width, or height) so they meet the maximum permitted dimension between wires in one direction which is 4 in. on centers.

4.2.6 All panels have to be fabricated from wire with a minimum diameter of 9.0 gage (0.148 in. [3.76 mm] metallic coated core).

**5. Ordering Information**

5.1 Orders for material purchased under this specification shall include the following information:

- 5.1.1 *Quantity* (number of panels).
- 5.1.2 *Mesh Description*: Mesh spacing(s) and wire sizes (gages) in metallic core diameter for polymer coated panels.
- 5.1.3 *Panel size* (height by width).
- 5.1.4 *Type of coating* (Section 4), including the specific type to be furnished.

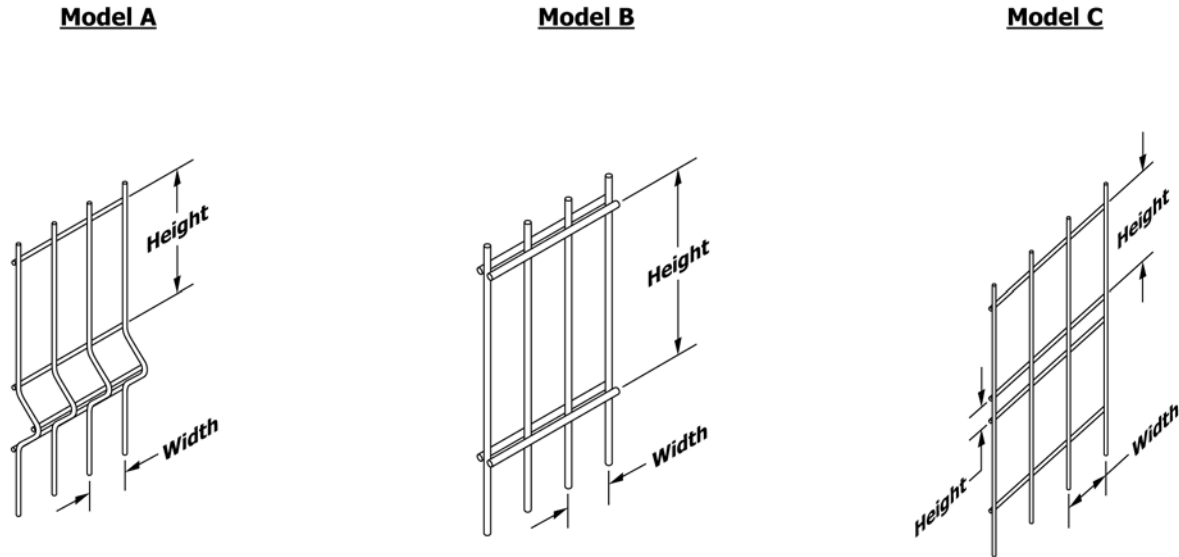
- 5.1.5 ASTM designation and year of issue.
- 5.1.6 *Any special requirements* (see Section 8).
- 5.1.7 *Certification*, if required (see 15.1).

NOTE 2—A typical ordering description, with single wires in vertical and horizontal direction, would be as follows: 500 panels Model A: 6 in. by 2 in. mesh by 6 gage horizontal and vertical wires, then height by width (length) conforming to F2919-XX. Where single wires with different gage in vertical and horizontal direction, then as follows: 500 panels Model A: 6 in by 2 in. mesh by 4 gage horizontal and 6 gage vertical wires; then height by width (length) conforming to F2919-XX. Where panels with double horizontal wires are required it would be: 500 panels Model B: 8 in. by 2 in. mesh, 2 by 0 gage horizontal wires with 4 gage vertical wires welded between them conforming to F2919-XX. Where panels with variable openings in height are required, it would be: 500 panels Model C: Variable mesh by 3.5 in. clear mesh, 4 gage horizontal, and 7 gage vertical wires conforming to F2919-XX. In each case the vertical mesh opening (height measured from top to bottom) is designated first, followed by the horizontal mesh opening (width measured from left to right).

**6. Material and Manufacture**

6.1 The wire used in the manufacture of welded wire mesh fence fabric shall conform to the specifications in 6.1.1 as appropriate for the type ordered, except the tensile strength shall conform to 7.1. The wire may be produced from any grade of steel listed in Specification A1064/A1064M or A853.

6.1.1 Type 1 welded wire fabric shall be manufactured from zinc-coated steel wire conforming to Specification A641/A641M, Class 3 coating (minimum). Type 2 welded wire fabric shall be manufactured from uncoated steel wire conforming to Specification A82/A82M or A853, and the fabric subsequently zinc-coated by the hot-dip process, conforming to Specification A123/A123M, Coating Grade 35 (minimum). Type 3 welded wire fabric shall be manufactured from zinc-5 % aluminum-mischmetal coated steel wire conforming to Specification A856/A856M, Class 80 coating (minimum).



NOTE 1—Model A panels normally have horizontal reinforcing folds (or beams) to increase horizontal rigidity. Number of folds (beams) increase with the height of the panel. Generally two folds for panels shorter than 5 ft [1525 mm], three folds if shorter than 6 ft 6 in. [1980 mm] and four folds for taller panels up to 8 ft [2430 mm].

NOTE 2—Model B panels have vertical wires sandwiched between two (2) horizontal wires.

NOTE 3—Model C panels have straight wire in both directions. Panels have variable wire spacing in panel height.

**FIG. 1 Examples of Model A, B, and C Panels**

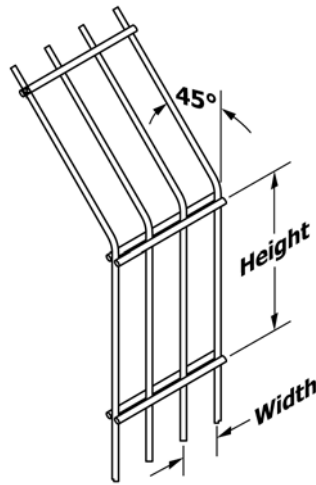


FIG. 2 Model A and Model B Panels May Be Available Bent Over

Type 4 welded wire fabric shall be manufactured from zinc-coated steel wire conforming to Specification **A641/A641M**—0.3 oz/ft<sup>2</sup>, minimum weight coat.

6.2 Wire for welded wire mesh fence fabric shall be assembled by automatic machines or other suitable mechanical means that will ensure accurate spacing and alignment of all members of the finished fabric. Longitudinal and transverse members of the welded wire fabric shall be connected at every intersection in accordance with the requirements of 13.4 by the process of electric resistance welding, which employs the principle of fusion combined with pressure.

6.3 Horizontal reinforcing folds (beams) may be incorporated into Model A panels. Sufficient folds (beams) shall be incorporated in the panel to ensure straightness and less flexibility, if panel is not used within frame. (See recommendation table in Fig. 1).

6.4 Model C type panels should be fitted to steel framework to ensure rigidity in the panel length (width).

6.5 The polymer coating used in the manufacture of polymer-coated welded wire mesh fence fabric shall conform to the properties in 8.2 and 8.3.

6.5.1 The polymer coated welded wire mesh fence fabric shall have the polymer coating fused and adhered onto the metallic-coated welded wire fabric after fabrication of the mesh.

## 7. Mechanical Properties

7.1 *Tensile Strength*—The tensile strength of the wire used for the welded wire mesh fence fabric shall be soft, medium or hard in accordance with the requirement of Specifications **A641/A641M** (Type 1 and 4), **A856/A856M** (Type 3) and hard drawn in accordance with Specification **A82/A82M** or **A853** (Type 2). The cross-sectional area of the test wire specimen shall be based on the diameter of the metallic coated wire. (See Table 4).

## 8. Physical Properties

8.1 *Metallic Coating*—The minimum metallic coating weight shall conform to the requirements of Specification **A641/A641M**, Class 3 coating for Type 1, Specification **A123/A123M** coating grade 35 (minimum) for Type 2, Specification **A856/A856M** Class 80 coating for Type 3, and 0.3 oz/ft<sup>2</sup> minimum for Type 4.

TABLE 4 Breaking Strength of Wire with Metallic Coating

Specified Diameter of Wire (Metallic Coated)			Minimum Tensile lb in. <sup>2</sup> strength (psi)	Nominal Breaking Strength of wire			Nominal Weld Shear Strength	
gage	in.	[mm]		diameter strength lb	k Newtons cm <sup>2</sup> strength	Diameter Strength Newtons	Strength lb	Strength Newtons
9	0.148	3.77	75 000	1290	51.7	5740	783	3484
8.5	0.155	3.94	75 000	1415	51.7	6295	859	3822
7	0.177	4.50	75 000	1845	51.7	8210	1120	4983
6.25	0.188	4.78	75 000	2105	51.7	9360	1263	5620
6	0.192	4.88	75 000	2170	51.7	9660	1317	5860
5.75	0.196	4.98	75 000	2260	51.7	10 065	1373	6109
4	0.225	5.72	75 000	2982	51.7	13 265	1809	8049
3.5	0.235	5.97	75 000	3280	51.7	14 590	1974	8784
2	0.262	6.67	75 000	4060	51.7	18 060	2453	10 915
0	0.303	7.70	75 000	5405	51.7	24 055	3281	14 599
0.75	0.315	8.00	75 000	5845	51.7	26 000	3546	15 778

8.2 *Polymer Coated*—The minimum coating weight of the metallic coated wire shall conform to the requirements of Specification **A641/A641M**, 0.3 oz/ft<sup>2</sup> minimum for Type 4.

8.3 *Polymer Coating on Wire*—The initial properties of the polymer coating on the wire and welded wire fabric shall have a demonstrated ability to conform to the following requirements:

8.3.1 *Salt Spray Exposure and Ultraviolet Light Exposure:*

8.3.1.1 The polymer coating shall show no effect after 1000 hours of salt spray exposure in accordance with Practice **B117**.

8.3.1.2 The polymer coating shall show no effect of exposure to ultraviolet light with test exposure of 1000 hours using apparatus Type E and 63°C, when tested in accordance with Practice **D1499**.

8.3.1.3 *Evaluation of Coating after Salt Spray and Ultraviolet Exposure Test*—After 1000 hours salt spray test and exposure to ultraviolet light as specified in 8.3.1.1 and 8.3.1.2, the Polymer coating shall not show cracks, blisters or splits. The change in color, measured in terms of ΔE, shall not be more than 10.

8.3.2 *Adhesion*—The polymer coating shall adhere to the wire such that the coating breaks rather than separates from the wire when tested in accordance with **13.3**.

8.3.3 *Mandrel Bend*—The polymer-coated wire when subjected to a single 360° bend at -0°F [-18°C] around a mandrel ten times the diameter of the wire, shall not exhibit breaks or cracks in the polymer coating.

8.3.4 *Color*—Unless otherwise agreed upon between buyer and supplier, the color of the polymercoated wire shall conform to Specification **F934**.

## 9. Dimension and Tolerance

9.1 The diameter of metallic-coated wire shall conform to **Table 4**.

9.2 The minimum thickness of the polymer coating, not to be considered the finished gage, shall be as shown in **Table 5**.

9.3 Welded wire mesh fence fabric shall have mesh openings as designated in **Tables 1-3**, which are presented to show an example of what is available. Other meshes shall be acceptable in agreement with purchaser and supplier as **Tables 1-3** are not complete listings. Mesh opening shall be considered to be center-to-center distance between two consecutive longitudinal or transverse wires as designated in **Fig. 3**. The permissible tolerance is ±<sup>1</sup>/<sub>8</sub> in. [3.2 mm] on meshes 2 in. spacing and above and <sup>1</sup>/<sub>16</sub> in. [1.6 mm] on meshes under 2 in. [50 mm].

9.4 In panels, the permissible tolerance shall not exceed ±<sup>1</sup>/<sub>4</sub> in. [6.3 mm] when measured over a 6-ft [1800-mm] direction. In all cases the mesh count must be correct.

9.5 The flatness of panels shall conform to the following when a panel is laid on a flat surface, such that lift is in the

middle of the panel, the maximum lift shall not exceed 2 in. [50.8 mm]. Where panels have reinforcing folds (beams) dimensional allowance should be made to cover the beam depth.

## 10. Workmanship

10.1 Wire of proper grade and quality, when fabricated in the manner herein required, shall result in a strong, serviceable mesh-type product having substantially square or rectangular openings or a combination of both. It shall be fabricated and finished in a workmanlike manner, as determined by visual inspection, and shall conform to this specification.

## 11. Sampling

11.1 Sampling for determining the mechanical and physical properties of the welded wire fabric shall be obtained by cutting from the finished fabric a full-width section of sufficient length to perform testing.

## 12. Number of Tests

12.1 One test for conformance to tensile strength of metallic coated wire and one bend test shall be made from each 10 tons [9070 kg] or less of each size of wire or fraction thereof in a lot, or a total of seven samples, whichever is less. A lot shall consist of all the coils of a single size offered for delivery at the same time.

12.2 Perform a minimum of four tests for conformance of weld shear strength, wire and fabric dimensions, metallic coating weight, polymer coating thickness, adhesion of polymer coating, and mandrel bend from each 300 000 ft<sup>2</sup> [27 870 m<sup>2</sup>] of fabric or remaining fraction thereof.

## 13. Test Methods

13.1 *Metallic Coating Weight*—Perform coating weight tests in accordance with Test Methods **A90/A90M**.

13.2 *Polymer Coating Thickness:*

13.2.1 Determine the thickness of the polymer coating on an individual piece of wire removed from the fabric.

13.2.2 Determine the diameter of the metallic coated wire after stripping the polymer coating by chemical means. Determine the thickness of the polymer coating by scraping the coating from one side of the wire and measuring the reduced diameter with a micrometer. The thickness of the coating at this point is the difference between the measurement thus obtained and the measured diameter of the metallic coated wire. Determine the thickness of the coating at right angles to the first determination in a similar manner. When removing the polymer coating by scraping, take care not to remove any of the metallic surfaces. The magnetic method can be applied as a non-destructive measurement of the thickness in accordance with ISO 2178.

13.3 *Polymer Adhesion Test*—Make two cuts parallel to the axis of the wire through the coating, approximately <sup>1</sup>/<sub>16</sub> in. [1.6 mm] apart at least <sup>1</sup>/<sub>2</sub> in. [12.7 mm] long. With a knife, peel back a section of the coating between <sup>1</sup>/<sub>8</sub> in. [3.2 mm] and <sup>1</sup>/<sub>4</sub> in [6.4 mm] long to produce a tab. Attempt to remove the <sup>1</sup>/<sub>16</sub>-in.

**TABLE 5 Thickness of Polymer Coating in Inches**

Minimum Thickness at any Point	
in.	mm
0.004	0.10



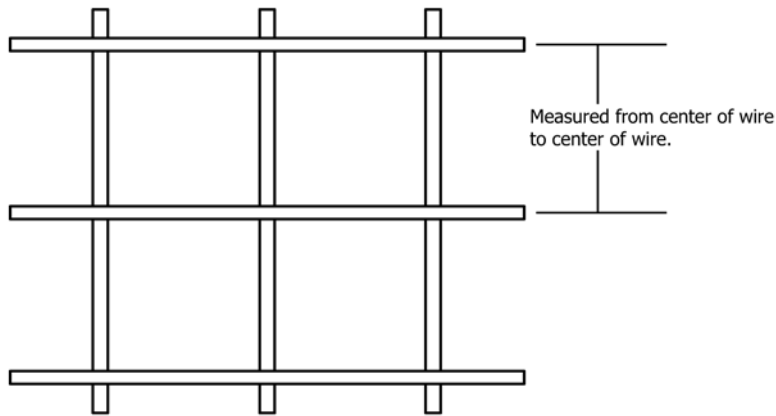


FIG. 3 Wire Mesh Opening Measurement

strip of coating by pulling the tab. The lot shall be acceptable if the coating breaks rather than separates from the core wire on all four specimens.

13.4 Weld Shear Strength of Fabric:

13.4.1 Scope—This test method covers the procedure for determining the strength of welded intersections of welded wire fabric.

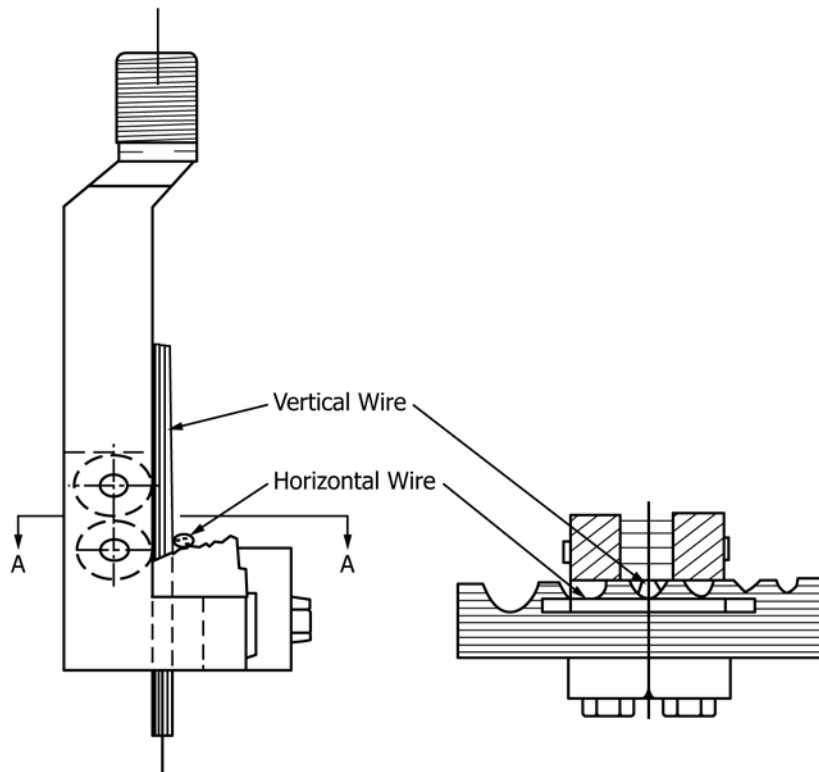
13.4.2 Significance and Use—The weld shear strength is a measure of the ability of welds in wire fabric to resist the forces imposed on the wires tending to pull them apart.

13.4.3 Apparatus—Use a testing fixture such as shown in Fig. 4, which is intended to stress the vertical wire close to its

centerline, and to prevent rotation of the horizontal wire. This fixture can be used in most tensile testing machines and should be hung in a ball and socket arrangement at the center of the machine. This or a similarly effective fixture designed on the same principle, is acceptable (see Specification A185/A185M).

13.4.4 Test Specimens—Test specimens shall be obtained by cutting, from the finished fabric, a fullwidth section including at least two transverse wires.

13.4.4.1 The transverse wire of each specimen shall extend approximately 1 in. [25 mm] on each side of the longitudinal wire. The longitudinal wire of each test specimen shall be of such length below the transverse wire so as to be adequately



NOTE 1—See Specification A185/A185M for additional information on weld shear testing. Always pull on larger wire. A detailed drawing showing complete dimensions of testing fixture may be obtained from ASTM. Order adjunct No. ADJA0185.

FIG. 4 Welded Wire Fabric Weld Tester

engaged by the grips of the testing machine. It shall be of such length above the transverse wire that its end shall be above the centerline of the upper bearing of the testing device.

13.4.4.2 A test specimen shall consist of four welds selected at random from one transverse wire for weld shear strength. If the width of the fabric is such as to not include four welds that are suitable for testing, additional welds shall be taken from a second transverse wire to total four. (Welds at the edge wire are excluded from testing as there is no overhang to permit proper testing). If the average weld shear strength from the four specimens does not conform to the requirement of 13.4.6, test all the welds across the width (excluding edge welds) on one transverse wire, or on two transverse wires if some of the initial specimens were from the second transverse wire.

13.4.5 *Weld Shear Test procedure*—Insert the long end of the vertical wire through the notch in the anvil. The vertical wire shall be in contact with the surface of the free-rotating rollers while the horizontal wires shall be supported by the anvil on each side of the slot. The bottom jaws of the testing machine shall grip the lower end of the vertical wire and the load shall be applied at the rate of stressing not to exceed 100 000 psi/min [689 Mpa/min].

13.4.6 *Weld Shear Strength*—The minimum average shear value in pounds-force of the breaking strength of the welded wire shall be 30 % stronger than the shear breaking strength calculated in accordance with Specification A185/A185M, as indicated in the table as follows, and whichever is greater when tested in accordance with 13.4. Typical nominal average weld shear strengths as shown in Table 4.

13.4.7 *Conformance to Requirement*—The material shall be deemed to conform with the requirements for weld shear strength if the average of the test results of the first four specimens tested complies with the value in 13.4.6, or if the average of the test results for all welds tested complies with the value in 13.4.6.

13.4.8 *Report*—Report the test results to the nearest 5 lbf [25 N] for both individual results and the average of all tests.

13.4.9 *Precision and Bias*—The precision and bias of this test method for measuring weld shear strength are as specified in the test method included in Specification A185/A185M.

## 14. Inspection

14.1 Unless otherwise specified in the contract or purchase order, the producer is responsible for the performance of all inspection and test requirements of this specification. The producer may use his own or any other suitable facilities for the performance of the tests. The purchaser, at their own expense, shall have the right to perform any of the inspections and tests set forth in this specification when such tests are deemed necessary to ensure that the material conforms to the prescribed requirements.

## 15. Certification

15.1 When specified in the purchase order or contract, a producer's or supplier's certification shall be furnished to the purchaser that the material was manufactured, sampled, tested, and inspected in accordance with this specification and has been found to meet the requirements. When specified in the contract or purchase order, a report of the test results shall be furnished.

## 16. Installation

16.1 Panels may be mounted on square, rectangular or round posts. May be attached with a variety of brackets and connectors to resist vertical and lateral loads and withstand security and vandalism attacks.

16.2 Panels may be fixed to the face of the posts or between the posts. Decision on choice to be made by purchaser and client.

16.3 Standard panel widths (lengths) are normally in the region of 96 in. [2440 mm]. Variation of  $\pm 6$  in. [ $\pm 150$  mm] is acceptable.

## 17. Keywords

17.1 galvanized before welding; galvanized after welding; organic polymer coatings.; steel; welded mesh sizes; welded wire mesh fence fabric ; zinc-5 % aluminum-mishmetal alloy coated before welding; zinc and polymer coated

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