



Document Title:
Galvanized Guy Wire/Static Wire

Document Type: **Specification** Engineering Type: **Material Specification** Document No.: **4350.127**

Department
Distribution

Version:
06

Effective Date:
Dec 11, 2024

Shared document with: Transmission & Distribution

**Select the Departments impacted by the document*

For others, specify here

Author

Miguel J. Rios López, PE (Lic. 16636)
General Engineer, Distribution Standards & Materials

Signature and Date

Dec 6, 2024

Reviewer

Oscar Venegas, PE (Lic. 23125)
Supervisor, Line Engineering Standards

Signature and Date

Dec 11, 2024

Oscar Venegas (Dec 11, 2024 13:22 AST)

Reviewer

Rodolfo A. Flores Ortiz, PE (Lic. 27131)
Senior Engineer, Distribution Standards & Materials

Signature and Date

Dec 11, 2024

Approver

Ricardo Castro Gómez, PE (Lic. 12135)
Manager, Distribution Standards & Materials

Signature and Date

Dec 11, 2024

Management Approval (If apply)

Approver

Name
Position

Signature and Date

N/A

Related/Referenced Documents

N/A

Version History

Version	Date	Revision Comments
01	Dec. 16, 2021	Initial Release.
02	Dec. 15, 2022	Cover page and signatures added.
03	Jan. 30, 2023	Breaking strength requirement modified for Item 046-00219.
04	Apr. 05, 2023	Description Section (Zinc Coating Class) and Table of Compliance (TOC) modified. Note on Jan. 30, 2023, corrected (strength modification was for item 046-00086 not for 046-00219).
05	Dec. 08, 2023	General format modifications. Document changed as shared between T&D for item 046-00219.
06	Dec. 06, 2024	General format modifications, TOC update, Section 4 modified, and sections order rearranged. Header for pages 2 to 7 was corrected from 4350.070 to 4350.127. Breaking strength for Item 046-00086 modified.



Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
046-00086	53699	12	12/06/2024
046-00219	53700	7	12/06/2024



1. Introduction

This specification describes the minimum requirements for the galvanized guy wire/static wire to be used in the distribution and transmission system in Puerto Rico. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site specific conditions, quantity, and other requirements. This document includes the general electrical and mechanical characteristics of the equipment/material.

2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this equipment/material to LUMA on previous orders will not have to furnish samples at bid opening. The equipment/material will be received at LUMA's general warehouse (011) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

3. Literature

- 3.1. Descriptive and technical literature must be supplied by the vendor at time of bidding. This literature must include, but is not limited to details of material, drawings, documented testing, and instructions for use and installation. **The literature must be an official document from and certified by the manufacturer.** Failure to submit documents on time and duly certified by the manufacturer will cause bidder disqualification.
- 3.2. If required by LUMA, final drawings and documentation shall be submitted by the vendor before the manufacturing and shipping process for approval.

4. Compatible with

For compatible manufacturer and model see Table 1. These models are examples of the equipment/material described in this document and do not represent a preference. LUMA will evaluate equally any model not listed here during any acquisition event.

5. Markings

- 5.1. Coils shall be marked outside with LUMA Energy's purchase order and warehouse catalog number.
- 5.2. Individual package(s) shall be clearly marked with manufacturer name and item information (part number, serial number, quantity, etc.).
- 5.3. Packaging labels and tags shall be waterproof.

6. Packaging

All equipment/material shall be packaged and marked in such a way as to facilitate handling and protection from damage and that the receiving warehouse can readily identify it and send it, in one complete unit, to a field location without opening crates or boxes to sort items and/or parts.

7. Number Per Package (Logistics)

Each coil shall contain 500 ft (152.4 m) of guy strand or as requested by LUMA Energy.

8. Acceptance Criteria

- 8.1. Test required: certified by external laboratories.
- 8.2. Product shall be manufactured in accordance with the latest issue below (section 8.3). When conflicts occur between purchaser's specifications and the latest issue below, the purchaser's specification shall prevail.
- 8.3. Latest applicable codes, standards, and other regulations:
 - a. ASTM A363: Standard specification for zinc-coated (galvanized) steel overhead ground wire strand.
 - b. ASTM A475: Standard specification for coated steel wire strand.
 - c. ASTM A640: Standard specification for zinc-coated steel strand for messenger support of figure 8 cable.
 - d. ASTM A855: Standard specification for Zinc-5% aluminum-mischmetal alloy-coated steel wire strand.
 - e. ASTM A925: Standard specification for zinc-5% aluminum-mischmetal alloy-coated steel overhead ground wire strand.
- 8.4. If any other standards different from the ones indicated in this document are used, the supplier must provide information showing compatibility with the required ones.

9. Description

- 9.1. For supporting poles and/or structures in the distribution and transmission system.
- 9.2. Shall be seven (7) galvanized steel wires per guy strand (guy wire).
- 9.3. Must be specified as high-strength or extra high-strength grade depending on the strand diameter (see Table 1).
- 9.4. Must have a Class C-zinc coating.
- 9.5. Bezinal corrosive coating made of 5% aluminum 95% zinc, may be considered.

10. Inspection

The acceptance of any equipment/material shall in no way relieve the vendor from his responsibility to meet all the requirements of this specification, and it would not prevent subsequent rejection if such equipment/materials were found later to be defective.

11. Proposal Information

11.1. Submitted proposals must include:

- a. Technical information, tests, and drawings.
- b. Table of Compliance completed by the bidder with reference (see Appendix 1).

12. Table 1: Warehouse and Asset Suite Identification Number

Warehouse Catalog #	Asset Suite #	Strand Diameter	Wires per Strand & Diameter	Grade	Breaking Strength (Min.)	Compatible Supplier & Model
046-00086	53699	3/8" (9.5 mm)	7 0.12" (3 mm)	High-Strength	10,800 lbf. (48 kN)	AWG (GW12-3/8-120)
* 046-00219	53700	1/2" (12.7 mm)	7 0.165" (4 mm)	Extra High-Strength	26,900 lbf. (120 kN)	AWG (GW14-1/2-165)

* Item 046-00219 is also used in the 38kV transmission system.

— End of Specification —



Appendix



Appendix 1: Table of Compliance

Line	Description	Pass/Fail (P / F)	Comments
1	Complies with the specification document 4350.127.		
2	Industry Standards: ASTM (A363, A475, A640, A855, A925).		
3	Tech. info. and drawings provided.		
4	Seven (7) galvanized steel wire per guy strand.		
5	Class C-zinc coating or Bezinol corrosive coating made of 5% aluminum 95% zinc.		
6	Strand Size	046-00086: 3/8"	
		046-00219: 1/2"	
7	Breaking Strength	046-00086: 10,800 lbf. (High-Strength)	
		046-00219: 26,900 lbf. (Extra High-Strength)	
8	Package: 500' per coil.		

NOTE: This table is only a checklist for reference. The compliance must be with the complete document. Filling out the table with "PASS" won't be accepted as a compliance without the technical information required to certify it.











4350.127 Galvanized Guy Wire-Static Wire (12-6-24)


Final Audit Report

2024-12-11


Created:	2024-12-06
By:	Miguel Rios (miguel.rioslopez@lumapr.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA05AQfrfQkjobBvUJW8ZFxFtg7rBmzsHW-

"4350.127 Galvanized Guy Wire-Static Wire (12-6-24)" History

-  Document created by Miguel Rios (miguel.rioslopez@lumapr.com)
2024-12-06 - 12:28:23 PM GMT
-  Document emailed to Miguel Rios (miguel.rioslopez@lumapr.com) for signature
2024-12-06 - 12:28:27 PM GMT
-  Document e-signed by Miguel Rios (miguel.rioslopez@lumapr.com)
Signature Date: 2024-12-06 - 12:29:05 PM GMT - Time Source: server
-  Document emailed to Oscar Venegas (oscar.venegas@lumapr.com) for signature
2024-12-06 - 12:29:08 PM GMT
-  Email viewed by Oscar Venegas (oscar.venegas@lumapr.com)
2024-12-11 - 5:21:28 PM GMT
-  Document e-signed by Oscar Venegas (oscar.venegas@lumapr.com)
Signature Date: 2024-12-11 - 5:22:39 PM GMT - Time Source: server
-  Document emailed to Rodolfo Flores (rodolfo.floresortiz@lumapr.com) for signature
2024-12-11 - 5:22:41 PM GMT
-  Email viewed by Rodolfo Flores (rodolfo.floresortiz@lumapr.com)
2024-12-11 - 6:19:27 PM GMT
-  Document e-signed by Rodolfo Flores (rodolfo.floresortiz@lumapr.com)
Signature Date: 2024-12-11 - 6:19:55 PM GMT - Time Source: server
-  Document emailed to Ricardo Castro (ricardo.castro@lumapr.com) for signature
2024-12-11 - 6:19:56 PM GMT

 Email viewed by Ricardo Castro (ricardo.castro@lumapr.com)

2024-12-11 - 6:34:52 PM GMT

 Document e-signed by Ricardo Castro (ricardo.castro@lumapr.com)

Signature Date: 2024-12-11 - 6:35:05 PM GMT - Time Source: server

 Agreement completed.

2024-12-11 - 6:35:05 PM GMT