



Document Title:
1192.5 MCM ACSR Bunting (45/7) Overhead Conductor

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Specification

Engineering Type
 Material Specification

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Author

Guillermo J. Nieves Díaz
 Technical Specialist 1, Transmission Lines Engineering Design & Standards


 Guillermo Nieves (Nov 25, 2024 10:20 AST)

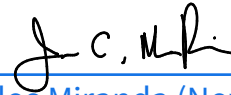
Reviewer 1

Leonardo Montes Sanchez
 Engineer 2, Transmission Lines Engineering Design & Standards


 Leonardo Montes Sanchez (Nov 26, 2024 15:02 AST)

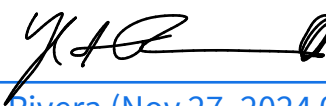
Reviewer 2

Juan C. Miranda Rivera
 Manager, Transmission Lines Engineering Design


 Juan Carlos Miranda (Nov 26, 2024 15:39 AST)

Approver

Yamil I. Rivera Hernández
 Section Manager, Transmission Lines Engineering Design


 Yamil Rivera (Nov 27, 2024 08:11 AST)

Management Approval (If apply)

Approver

N/A
 N/A

Signature and Date

Related/Referenced Documents

Include the applicable document, section, or reference "[add link here](#)".

Version History

Version	Date	Revision
00	Dec 28, 2021	First Issue
01	June 3, 2022	General revision for final approval
02	Nov 27, 2024	Changed cover page and document to new format. Marking, Packaging, and Labeling merged. Equal or approved to changed to Compatible with. Added table of compliance.

1. General

1.1. Purpose

- 1.1.1. This specification describes the requirements for the design, manufacture and delivery of the aluminum conductor steel reinforced to be used in the transmission lines in Puerto Rico.

1.2. Overview

- 1.2.1. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site conditions, quantity, and other requirements.

2. Acceptance Criteria

- 2.1. Test required: certified by external laboratories.
- 2.2. Latest applicable codes, standards, and other regulations: ANSI/ASTM (B230, B231, B232, B498, D2604, D2606), AWPA (C2).

3. Specific Name

- 3.1. 1192.5 MCM ACSR Bunting (45/7).

4. Specific Requirements

- 4.1. They shall be required to show evidence of LUMA's approval of the equipment.
- 4.2. Samples shall be furnished to LUMA.
- 4.3. LUMA requires One (1) unit properly labeled for testing and analysis.
- 4.4. Descriptive and technical literature shall be supplied if requested by LUMA.
- 4.5. Vendors that have supplied this material to PREPA in previous orders, will not have to furnish samples at bid opening.

5. Basic Use

- 5.1. Standard conductor for 115 & 230 kV transmission lines and for upgrades in 38 kV transmission lines.

6. Description

- 6.1. Conductor used for construction and maintenance of electrical transmission lines
- 6.2. Shall consist of a concentric lay stranded aluminum conductor as per ASTM B231 and steel reinforced (ACSR), bare stranded, in accordance with ANSI/ASTM B232.

6.3. Material Specifications

- a. Aluminum alloy 1350 H19 round conductor wire conforming with ANSI/ASTM B230.
- b. Zinc coated, class-A galvanized steel core wire conforming with ANSI/ASTM B498.

7. Marking and Packaging

- 7.1. Cable reels shall be marked outside with LUMA Energy's purchase order, item number, zinc coating class, name & size, net & gross weight of the reel, length of conductor and manufacturer's name & lot number.
- 7.2. All material and equipment 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.
- 7.3. Shall be shipped continuous in a non-returnable new metal reels RM (with flat rim tire).
- 7.4. Reels shall made of steel with a finishing consisting of a high-pressure hot phosphate wash and bonding agent, zinc chromate-iron oxide primer and final enamel coat to provide the necessary extra durability.
- 7.5. The reels shall contain approximately 5,500 lbs of material. The reels will have a maximum of 72 inches and a maximum reel width of 44 inches. The arbor hole diameter should be between 3- 1/16 in and 3-1/2 in.
- 7.6. Each end of the cable shall be firmly and properly secured to reel flange.
- 7.7. Reels shall be protected against damage in ordinary handling and shipping. Manufacturer shall protect the upper layers with pieces of wood along the transverse section of reel for cable protection. Manufacturer shall protect cable ends from water entrance or damage by means of an adequate seal.
- 7.8. The surface of the conductors shall remain smooth, free from points, sharp edges, abrasions or other departures from smoothness that would tend to increase radio interference and corona loss. The conductor shall not deform from the cylindrical form, nor shall longitudinal smoothness be affected by strand movement when subjected to tension. Strands shall be formed so that there is no slack in the outer layer.
- 7.9. The conductor shall be free from excessive amounts of grease, metal particles, dirt or other foreign matter.
- 7.10. On both outside surfaces of the flange of each reel shall be painted arrows to indicates the direction in which the reel will rotate during unreeling of the conductor.
- 7.11. Approximately 5.500 lbs. of material.
- 7.12. Each unit shall be clearly marked, labels and tags shall be waterproof and shall comply with ASTM B232.

8. Compatible with:

- 8.1. Southwire
- 8.2. American Wire Group
- 8.3. Nehring Electrical Works Company
- 8.4. This model is an example 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.

9. Proposal Information

- 9.1. Submitted proposals must include:
 - a. Technical information

b. Table of Compliance completed by the bidder with reference

10. Properties

Code	Conductor Size (kcmil)	Stranding (Al/St)	Strand & Diameters Each	Diameter (in.)	Weight (lbs)	Rated Strength (lbs)
Bunting	1192.5	45/7	45 / 7 0.1628 (in.) / 0.1085 (in.)	1.302	1.342	32,000

11. Inspection

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

Warehouse ID	042-01034
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— End of Specification —

Appendix

Appendix 1. Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4752.205)		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document (ANSI, ASTM, NEMA, AWWA).		
3	Material	1192.5 MCM ACSR Bunting (45/7): <ul style="list-style-type: none"> Aluminum alloy 1350 H19 round conductor wire conforming with ANSI/ASTM B230 Zinc coated, class-A galvanized steel core wire conforming with ANSI/ASTM B498 		
4	Dimensions	Reel Length: 72 in. maximum		
		Reel Width: 44 in. maximum		
		Arbor Hole Diameter: Between 3- 1/16 in and 3-1/2 in.		
5	Requirements	<ul style="list-style-type: none"> Samples shall be furnished to LUMA. LUMA requires One (1) unit properly labeled for testing and analysis. Descriptive and technical literature shall be supplied if requested by LUMA. Vendors that have supplied this material to PREPA in previous orders, will not have to furnish samples at bid opening. They shall be required to show evidence of LUMA's approval of the equipment. Approximately 5.500 lbs. of material per package 		











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Final Audit Report

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