MARSHALLS ENERGY CO, INC.
PO BOX 1439
MAJURO, MH 96960

TRANSMISSION & DISTRIBUTION SPECIFICATION

SPECIFICATION NO.: MEC-Dist-Cable-01

FOR

SECONDARY OVERHEAD CABLE
600V

Revision	Date	Reviewed	Approved
One	Mar 2019	J Pedro	S Wakefield

SECONDARY OVERHEAD CABLE
600V

TABLE OF CONTENTS

SECONDARY OVERHEAD CABLE 600V XLP

1. SCOPE

1.1. This specification covers duplex, triplex or quadraplex assembled secondary overhead conductors rated at 600 volts.

1.2. The cable shall be suitable for use in wet and dry locations in the overhead distribution system of the Marshalls Energy Co, Inc.

1.3. The cable shall be operated at normal conductor temperatures not exceeding 90°C. The emergency rating shall be 130°C for periods which shall not exceed 100 hours per year. For the life of the cable, there shall be no more than five occurrences of 100-hour overload periods.

2. APPLICABLE PUBLICATION

2.1. The cables shall meet the requirements of NEMA Standard Publication for Crosslinked Thermosetting-Polyethylene-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.

2.2. Except as specified herein, the cables shall meet or exceed requirements of all applicable industry conductor, insulation and cable standards and specifications, i.e., ANSI, ASTM, EEI, IPCEA, NEMA and Underwriter's Laboratory.

3. DEVIATIONS AND NON-CONFORMANCE REQUIREMENTS

3.1. Deviations from this specification or changes in the material or design after the purchase order has been placed must be approved by the MEC Technical department and acknowledged by a Purchase Order Amendment issued by MEC.

3.2. Units received with deviations or non-conformances that are not acknowledged per Section 3.1 are subject to rejection. The Supplier of rejected units is responsible for any corrective action including but not limited to materials, labor and transportation necessary to dispose of or make the units conform to the specification.

3.3. Notification of defective units discovered before or after installation that are believed to be inherent to manufacturing problems or workmanship shall be made and forwarded to the Supplier. The description of the item, documentation of the problem and the described information, disposition and/or follow-up (as appropriate) that MEC expects from the Supplier will be specified. The Supplier's response shall be made within thirty (30) days unless an extension is acknowledged and approved in writing by the MEC Procurement Manager.

4. SUBMITTALS

4.1. Shop drawings indicating details of construction shall be submitted to MEC Procurement Manager for review and approval.

4.2. MEC shall be allowed two (2) weeks to review and approve drawings provided in Section 4.1 without affecting the shipping date. Delays in delivery due to drawings that are disapproved during this review period are the responsibility of the Supplier.

4.3. Drawings returned to the Supplier as approved shall be considered authorization to proceed with the work. The approval of MEC shall in no way abrogate the requirements of this specification.

5. CERTIFIED LABORATORY TEST REPORTS

Certified tests shall be conducted in accordance with applicable standards. The Supplier shall furnish two (2) copies of certified test reports for all tests to the MEC Procurement Manager within two (2) weeks of delivery along with a statement certifying that the cable meets all the requirements of the applicable standards and this specification.

6. DESIGN AND CONSTRUCTION

6.1. CONDUCTOR

6.1.1. The cable shall be supplied in accordance with the data shown in the attached Table A.

6.1.2. Insulated conductors shall be soft annealed copper.

6.1.3. The stranding shall be Class B concentric.

6.1.4. The neutral conductor shall be bare, medium-hard drawn copper.

6.1.5. Conductor size shall be in accordance with Table A and shall be as specified on the Purchase Order.

6.2. INSULATION

6.2.1. The insulation shall be high quality, black, extruded thermosetting crosslinked, polyethylene of high dielectric strength and electrical stability. The insulation shall have excellent heat, moisture, ozone, and corona-resistant properties.

6.2.2. The insulation shall he applied in one continuous extrusion and shall be homogenous, solid and applied with good workmanship. It shall be free stripping from the conductor.

6.2.3. If a polyester film or similar thin separator is used between the conductor and insulation, it shall be nonhygroscopic, colored and shall be clearly recognizable.

6.2.4. The thickness of the insulation shall be in accordance with Table A.

6.2.5. Insulation shall not crack when stored outdoors.

6.3. IDENTIFICATION OF CABLE

Each cable shall incorporate a durable lifetime identification which shall include the manufacturer's name, year of manufacture, insulation type, voltage, conductor size, conductor material, and sequential footage marker, all at intervals of not more than two feet printed on the outer surface of the insulation. In addition, if requested, cables shall be marked with the letters "MEC" and purchase order number in the same durable manner, at intervals of not more than two feet printed on the outer surface of the insulation.

6.4. REELS

6.4.1. The inner drum end of the cable, when allowed to project through the flange of the reel shall be protected to avoid injury to the cable or cable seal.

6.4.2. Wooden reels shall have steel collars with an outer flange of at least one half inch to withstand handling. Reels with at least 72-inch flanges shall be four-ply and at least three-ply above 60 inches. The mandrel hole shall have at least two inches of uncut wood all around the hole.

6.4.3. Reels shall be designed to support the weight of the cable and withstand handling in accordance with industry practices.

6.4.4. The mandrel hole size shall be three inches, minimum.

6.4.5. A durable, non-fading label shall be securely attached to a flange of the reel. The label shall plainly indicate the following:

A. MEC Purchase Order number
B. Shipping length in feet of the cable on the reel
C. Beginning and ending sequential footage number
D. Number, type, thickness and size of conductor
E. Thickness and type of insulation
F. Voltage rating
G. Tare weight

6.4.6. Each reel shall be marked with an arrow and suitable stenciled wording, on the flange of the reel, indicating the direction the reel should be rolled.

7. QUALITY CONTROL

The Supplier shall have a quality control program to ensure compliance with the requirements of this specification. The program shall be documented and available for GPA's review if requested.

Documentation of the quality control program shall indicate where in the production and manufacturing process the quality checks are taken, describe the purpose of the checks, and describe the nature of the check, i.e. if check is visual only or if electrical or mechanical testing is used.

8. PACKING AND SHIPPING

8.1. Each end of each length of cable shall be durably sealed before shipment to prevent entrance of moisture. Evidence of water in the cable as received shall be cause for rejection.

8.2. The cable shall be placed on the reels in such a manner that it will be protected from injury during shipment. Care shall be taken to prevent the reeled cable from becoming loose. Each end of the cable shall be firmly and properly secured to the reel.

8.3. The reels shall be lagged or covered with suitable material to provide physical protection for the cables during transit and during ordinary handling operations and storage. MEC Engineering shall approve the materials and system used to accomplish this.

8.4. The reels shall be securely blocked in position so that they will not shift during transit.

8.5. The Supplier shall have adequate work and inspection instructions for handling, interim storage, preservation, packaging, and shipping to protect the quality of the cable and prevent damage, loss and deterioration.

TABLE A – XLP Service Drop/Service Entrance

PHASE CONDUCTOR			NEUTRAL-MESSENGER			WEIGHT PER 1000 FEET (LBS)	AMPACITY (AMPS)	PRODUCT
SIZE AWG	STRANDING	COVER THICK (MILS)	SIZE (AWG)	STRANDING	MIN. ULTIMATE STRENGTH (LBS)	VIP	VIP	Code Word
DUPLEX								
8	7	45	8	7	610	115.8	84	Kappa
6	7	45	6	7	959	179.1	110	Sigma
TRIPLEX								
8	7	45	8	7	610	180.6	84	Garamond
6	7	45	6	7	959	277.2	110	Gothic
4	7	45	4	7	1505	429.6	145	Caslon
2	7	45	4	7	1505	593.7	195	Primer
2	7	45	2	7	2360	669.7	195	Century
1/0	19	60	1/0	7	3705	1070.6	260	Corinthian
2/0	19	60	2/0	7	4765	1338.7	300	Doric
4/0	19	60	4/0	7	7479	2099.4	395	
QUADRUPLEX								
6	7	45	6	7	959	375.3	95	Tallahassee
4	7	45	4	7	1505	580.0	125	Richmond
2	7	45	2	7	2360	902.3	165	Seattle
1/0	19	60	1/0	7	3705	1443.1	225	Nashville
2/0	19	60	2/0	7	4765	1802.7	260	Lincoln

End Of Specification.