

## **PART 1 GENERAL**

### **1.1 Summary**

- .1 This section of specification is an integral part of the Contract Documents and shall be read accordingly.
- .2 Comply with general conditions, supplementary conditions of the contract, and section 260100-Electrical General Requirements.
- .3 Furnish all labour, materials, supervision, equipment and services specified, indicated or requested to install the complete Medium-voltage power cables specified herein.
- .4 Perform "locates" of existing site conditions prior to any excavation work.

## **PART 2 PRODUCTS**

### **2.1 Medium-Voltage Power Cables (46kV)**

- .1 Conductors: soft annealed copper conductors, compact uncoated, Class B stranded, with size as indicated on single line diagram.
- .2 Conductor shield: extruded semi-conducting cross-linked polyolefin.
- .3 Insulation: extruded, tree-retardant TR-XLPE 100% insulated level, 90°C, rated 46kV.
- .4 Insulation shield: extruded semi-conducting polyolefin. Covering shall strip freely from insulation, and when removed shall not leave conducting particles, threads, or residue on the surface of the insulation.
- .5 Concentric neutral shield: consists of helically applied annealed solid copper round wire conductors to provide 33% conductivity.
- .6 Jacket: non-conducting, linear low density polyethylene moisture resistant (-40°C), black colour, extruded to fill spaces between neutral wires for a smooth outer surface. Include cable length indications (i.e., flagged) in metres.
- .7 Splices in cables are not acceptable.
- .8 Manufactured and tested to CSA C68.3-97. Each cable must be CSA approved and include a "Certified Test Result" report.
- .9 Acceptable manufacturer: General Cable, Prysmian

### **2.2 Termination Kits (for M.V. Cables)**

- .1 Cold shrink termination kit, non-skirted.
- .2 Cable diameter: to suit cable O.D. as indicated on drawings.

- .3 BIL rating: minimum 250kV rated for maximum 46kV service.
- .4 Acceptable manufacturer: 3M Canada.

### **2.3 Overhead ACSR Bare Conductor (46kV)**

- .1 Used as bare overhead transmission cable and as primary distribution conductor.
- .2 Aluminum alloy 1350-H19 wires, concentrically stranded around a steel core available with Class A galvanizing for corrosion protection.
- .3 Stranding (AL/STL): 6/1.
- .4 Complies with CAN/CSA C61089 standard.

### **2.4 Cable Accessories**

- .1 Wire markers: computer printed, black letters on white background, self-laminating – vinyl markers, number of markers as required.
- .2 Cable markers for cables or conductors greater than 13 mm diameter: strap-on type, rigid PVC, black letters on white background, with PVC covered aluminum straps.
- .3 Cable pulling lubricant: compatible with cable covering and will not cause damage and corrosion to conduits or ducts.
- .4 Provide cable guard over each cable as indicated on drawings.

## **PART 3 EXECUTION**

### **3.1 Installation – General**

- .1 Install cable according to the drawings. Pull cable into ducts and conduits in accordance with the cable manufacturer's recommendations, using patented cable grips suitable for the type of cable or using pulling eyes to be installed directly onto the cable conductors.
- .3 Limit pulling tensions to those recommended by the manufacturer to avoid overstressing cable.
- .4 Utilize adequate lubricant when pulling cables through ducts and conduits to minimize wear on cable jackets. Refer to cable manufacturer's recommendations.
- .5 No splices shall be permitted in cable.
- .6 Identify each cable by attaching a suitable marker, stamped or indelibly marked with the cable phase, at each end of the cable.

**END OF SECTION 26 17 00**