

# **WVU DESIGN GUIDELINES & CONSTRUCTION STANDARDS**

## **DIVISION 26 – ELECTRICAL**

### **SECTION 260524 – MEDIUM VOLTAGE CABLES / SWITCHES**

#### **PART 1 - GENERAL**

- 1.1. Any deviation from the following instructions must be approved during design by WVU Facilities Management Personnel.
- 1.2. DEFINITIONS
  - A. EPR Electron Paramagnetic Resonance
  - B. FM Facilities Management
  - C. IEEE Institute of Electrical and Electronics
  - D. PE Project Engineer
  - E. PM Project Manager
- 1.3. The design engineer's calculations, including but not limited to maximum pulling tension and sidewall pressures, shall be made available to the owner 10 days prior to any medium voltage cable installation.

#### **PART 2 - PRODUCTS**

- 2.1. Accepted manufacturers
  - A. Prysmian
  - B. Okonite
  - C. Kerite
  - D. General Cable
- 2.2. The accepted manufacturer of medium voltage non-fusible switches is G&W.
- 2.3. Termination kits and splices over 600 volts will be supplied by 3M.

#### **PART 3 - EXECUTION**

- 3.1. 5KV distribution will use 15KV cable, and 23KV distribution will be 35KV cable. This is due to improved life of the cable over the long term. All medium voltage cable will be EPR insulation 15KV rated 133%, extruded semi-conducting insulation, copper tape shielding, and other jacket. EPR insulation for 35KV shall be rated at 100%. Each reel of cable shall be factory tested in accordance with manufacturer and UL standards. A certified copy of the test shall be furnished to the University.
- 3.2. High and medium voltage cable will be field tested at manufacturer's voltage specifications and witnessed by a WVU representative. All cables will have a high-pot in accordance with IEEE standards. One week in advance of the test, the contractor will submit the test procedure to the FM Electric Shop Supervisor for approval. Test results shall be plotted and submitted to the University prior to receiving authorization to energize the cable.

END OF SECTION 260524