

# **WESTERN UNDERGROUND COMMITTEE**

## **GUIDE 1.4 (1.4/00/0180)**

### **NONRETURNABLE WOOD CABLE REELS**

NOTE: This "Guide" summarizes the opinions, recommendations, and practices of the Western Underground Committee members and is issued only to assist these members in preparing their own specifications, or in making recommendations to specification agencies. Thus, this "Guide" may not reflect the complete requirements of each individual utility and is not binding upon them.

#### **1.0 SCOPE**

This guide will specify the materials, dimensions and general construction requirements for non-returnable reels built to carry underground conductors. All reels shall be adequately designed and constructed for their intended purpose, as per appropriate sections of this guide.

#### **2.0 DIMENSIONS**

The size and dimensions of reels shall be in accordance with Table 1, NEMA Standards Publication No. WC 21-1967 with the following exceptions:

- 2.1 Reel Codes 2412, 2418, 2718, 3224, 4024, and 4226 are not to be utilized.
- 2.2 Each user will specify maximum acceptable reel size.
- 2.3 Arbor hole diameters must range between a minimum of 2-3/4 inches and a maximum of 3-1/2 inches.
- 2.4 No reel shall have an overall width greater than 54-1/2 inches including protrusions.
- 2.5 The outside drum diameter shall not be less than those specified in IPCEA/NEMA Publication No. A-9-428/WC6-1975.

#### **3.0 MATERIALS**

Reels shall be made of wood. The wood must be finished on four sides (S4S) and be equal to or better than "construction grade" air-dried lumber in accordance with the requirements of the latest edition of the "Grading Rules for Western Lumber" by the Western Wood Products Association.

#### **4.0 FASTENERS AND REINFORCING**

- 4.1 All fastening devices are to be installed so that no sharp edges or protrusions will damage cable or shielding on the reel.
- 4.2 Fasteners are to be of a non-releasing type (pallet nails, cement coated nails, etc.), and shall be driven from the inside of the reel flange. All fasteners shall be countersunk at least 1/8 inch and, if required, clinching is to be done only on the outside of the flanges.
- 4.3 Metal bushings shall be provided in all arbor holes and shall be a minimum thickness of 14 gauge ( $t = 0.075$ "). Heavy-duty metal arbor bushings with a thickness of at least 3/16 inch shall be provided on reels with drum diameters of 36 inches or greater.
- 4.4 Metal cup washers are required under all bolt heads or nuts.

#### **5.0 STRENGTH REQUIREMENTS**

All reels must be rigid enough to adequately meet the reel capacities specified in Table 1 & 4 of NEMA Standard No. WC 21-1967.

#### **6.0 LAGGING OR COVERING**

Cable coverings shall be secured by nailing or banding in accordance with user's specifications.

#### **7.0 INFORMATIONS TAGS OR PLATES**

- 7.1 Type of cable insulation.
- 7.2 Conductor size and material.
- 7.3 Voltage rating of cable.
- 7.4 Number of conductors.
- 7.5 Cable length.
- 7.6 Manufacturer's lot number.
- 7.7 User's material code, if applicable.
- 7.8 Purchase Order number.
- 7.9 Gross weight.
- 7.10 Net weight.