

Cable Lore

ANACONDA 

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CABLE RECOMMENDATIONS SHOULD NEVER BE MADE WITHOUT A THOROUGH KNOWLEDGE OF THE APPLICATION.

The successful design of and consequently successful cable recommendations for a power system requires a thorough knowledge of the application. The physical, chemical and electrical environment will ultimately dictate the choice of materials for reliable performance.

The following, abstracted from IPCEA-NEMA specifications is a good guideline for obtaining pertinent information:

Characteristics of System on Which Cable Is To Be Used

- a. Current - alternating or direct.
- b. Frequency - cycles per second, now called Hertz.
- c. Normal operating voltage between phase or, if direct current, between conductors.
- d. Number of phases and conductors. If series lighting, give open-circuit voltage and state whether system is operated with or without protectors.
- e. Operated with neutral solidly grounded, grounded through resistance, or reactance or ungrounded. If grounded through resistance or reactance, state amount.
- f. Minimum temperature at which cable will be installed
- g. Description of Installation.
 1. In buildings
 2. In underground ducts
 3. Aerial
 - (a) on messenger in metal rings
 - (b) on messenger with marlin ties
 - (c) preassembled
 - (d) field spun
 4. Direct burial in ground
 5. Submarine
 6. Length of run
 7. Descriptions other than foregoing.
- h. Conditions of Installations.
 1. Ambient temperature
 2. Number of loaded cables in duct bank or conduit. If in conduit, give type of conduit (metallic or nonmetallic), number of loaded conduits, enclosed or exposed, and spacing between conduits.
 3. Load factor
 4. Wet or dry location.
- i. Applicable Codes.

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