

# Cable Lore

**ANACONDA** 

BY POWER CABLE ENGINEERING AND RESEARCH

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**AS A GENERAL RULE ANY ONE OF SEVERAL CABLE DESIGNS CAN FUNCTION AT A SPECIFIED VOLTAGE. ENVIRONMENT AND APPLICATION AND CODES WILL PINPOINT ONE OR MORE CABLES THAT CAN DO THE JOB RELIABLY. ONCE THIS IS ESTABLISHED PRICE SHOULD THEN BECOME A MAJOR FACTOR IN CABLE SELECTION.**

Severe competition among suppliers of raw materials for our industry, plus an even stiffer competition from wire and cable manufacturers, has produced an amazing procession of materials and cable constructions for practically all applications. Reams of test data, without backup of long-time service data, has produced a fog that is bewildering to consumers and only those with an intimate working knowledge of raw materials can realistically penetrate.

The process of selecting one construction from the half-dozen available is one of elimination. Reference points for this process are existing codes, physical environment, chemical environment, thermal environment, the customer's own preference based on previous experience and cost.

Let's take as an example a 600-volt cable application in a steel mill. No codes apply, the cable will be in conduit, ambient temperatures to 140°F, past experience indicates conduit will occasionally be exposed to heat from welding, no peculiar chemical environment, good flame-resistance required, and the customer prefers thermosetting coverings.

The 600-volt cables to choose from include:

1. Cross-Linked Poly.
2. Durasheath 900.
3. One-Conductor Securityflex.
4. U/L RHH-RHW.
5. THW.
6. Butyl Neoprene.

Through a process of elimination:

1. Has marginal flame-resistance.
3. Would be highest in cost and a high degree of flexibility is not required.
5. THW is a thermoplastic and would be a risk around welding torches.
6. Butyl neoprene is not readily available and would not be the most competitive.

This leaves (2), Durasheath 900, an excellent all-around performer, and (4) U/L RHH-RHW, which fulfills all requirements. This brings it down to a comparison of price and personal preference.

An approach of this type forms a sound framework for cable selection. The right technical data puts meat on this framework; a little romance makes it a sales story.

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