

Cable Lore

ANACONDA 

BY POWER CABLE ENGINEERING AND RESEARCH

Issue No. 7

September 24, 1965

IT IS DIFFICULT TO CHANGE A CUSTOMER'S OPINION WITH RAW TECHNICAL DATA. THE CHANCES ARE GOOD THAT BOTH THE INDIVIDUAL PRESENTING THE DATA AND THE CUSTOMER ARE NOT SUFFICIENTLY ACQUAINTED WITH MATERIALS TO MAKE A SIGNIFICANT EVALUATION.

What is the most effective mechanism or communication for transmitting R & D efforts into ammunition for sales and promotion? This question has been discussed by the hour without a satisfactory solution. Brochures and data sheets aid in filling this void, but response in general indicates that "These are good, but when can we get more data?"

The lukewarm response to most data comes as no surprise. Consider for a moment a rubber chemist, who has spent months developing a new compound. He has mixed approximately 200 experimental recipes, has a notebook full of raw test data, has an excellent feel for this compound, and has become sensitive to even minor changes in test performance. With all of this background and skill, he must still convince himself with cross-checks and most careful analysis that this compound is suitable for recommendation in a wire and cable application. The odds are slight that any two individuals not intimately acquainted with this compound could come up with anything illuminating, even if the whole notebook of data was made available. More desirable would be some technique for transferring some of the rubber chemist's conclusions and enthusiasm to those responsible for promotion and purchasing cable.

One factor that makes comparisons between various cable coverings so unrewarding is the basic fact that chemically we are trying to measure all materials with the same yardstick. We can compare sugar with salt rather easily if we are going to use a few bags in the backend of an automobile as ballast, but we had better be a little careful about using this data in the evaluation of each in flavoring coffee. Everyone would agree there is a difference, but some might even conclude, "So what - neither is necessary."

This is not as facetious as it may sound. One major bit of data being circulated is that cross-linked polyethylene, when exposed to a 7-day oven test at 150°C, retains over 70% of its initial tensile strength and elongation. We all agree this sounds great, but who needs it unless we have in mind a cable application in a 150°C oven for seven days. We can't extrapolate this data too far; some additional evaluation is required.

One technique for communicating data is to take as reference points, factors in cable construction that are fundamental requirements and present substantiating evidence that the material being promoted meets these requirements. A good shuttle car cable, for example, must have the following:

- (1) Flexibility of good fatigue resistance
- (2) Thermal stability (This is why PVC cables had limited success.)
- (3) Good tear resistance
- (4) High degree of protection against mechanical damage
- (5) Flame resistance

These requirements form a sound framework for cable selection. The right technical data puts meat on the framework; a little romance makes it a sales story.

One of the greatest compliments a technical man can receive is when he is told that a paper or article he has written is being used as a reference work or textbook for training other people. This is a solid indication that he has communicated his thoughts successfully. Usually a paper of this type does four things:

1. Established through proper jargon that writer knows the application of product.
2. Confirms much of which the reader already knows.
3. Indicates that he has done some solid work to get answers.
4. Offers a few new wrinkles that offer definite advantages to the reader.

In a sense, every individual must write his own story, R & D can furnish facts and substantiating data. The romance must be based on your own experience and imagination.

Never forget that the best set of data you have to work with is the successful field performance of the standard product line.

Steve Bunish