

REPORT OF CABLE SHEATHING TASK GROUP*

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of the Technical Steering Committee

In June, 1955, a committee consisting of

A. A. Smith, Jr. - American Smelting & Refining Co.
J. M. Bouton ----- Bell Telephone Laboratories
W. T. Isbell ----- St. Joseph Lead Co.
C. J. Snyder ----- Anaconda Wire & Cable Co.
R. J. Wiseman ----- The Uconite Co.

was appointed by the Technical Steering Committee of the Lead Industries Association to study the use of lead in cable sheathing and to make suggestions as to possible improvements that could be made either in the alloys used or manufacturing methods. Later Mr. E. J. Merrell of Phelps Dodge Copper Products Corp. was added to the Committee.

Three meetings of the Committee have been held, and the tentative conclusions reached were:

1. that the power cable industry would like to see a better alloy than is currently being used, whether it be for continuous or intermittent extrusion, and
2. that both the power and communications cable industries would be interested in lead alloys with comparable properties to those they are now using on intermittent extrusion for continuous extrusion.

After considerable discussions it was felt that the development of a new alloy with greatly improved properties offered small chance of success considering the large amount of work that has been done over a period of many years. However, this possibility should not be entirely overlooked, and the Committee will keep it in mind.

It was suggested that a co-operative research program on continuous extrusion be considered with Pirelli-Milan and Lead Industries Association contact them with regard to power cable sheathing and to go as far as to offer them sufficient copper bearing and arsenical lead alloys for their experimental work. Mr. Bouton offered to contact them independently with respect to 1% antimonial lead communications cable sheathing alloy.

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Communications with Pirelli-Milan indicated that they have had reasonable success with laboratory extrusion of 1% antimonial lead alloy and hope to run a commercial test in the near future. They also hope to do some laboratory work on the arsenical lead alloys.

Mr. Morrison, chief engineer of the John Robertson Co., joined one of the meetings of the Committee, and he stated it was his belief that lead alloys could be extruded on continuous machines but certain modifications were necessary for each alloy.

It is felt by the Committee that the problem of continuously extruding lead alloys can only be solved on a commercial basis; and, of course, this may involve rather large expenditures. The Committee will give further consideration to the subject to see if a program can be developed which will give the answers with minimum cost.