NASA TECH BRIEF

An Improved Method for Electrical Cable Terminations

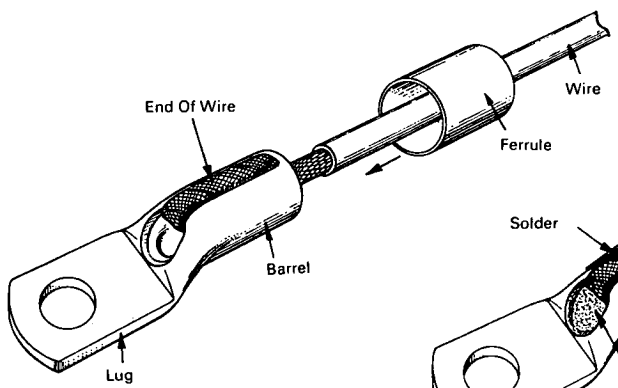

Figure 1

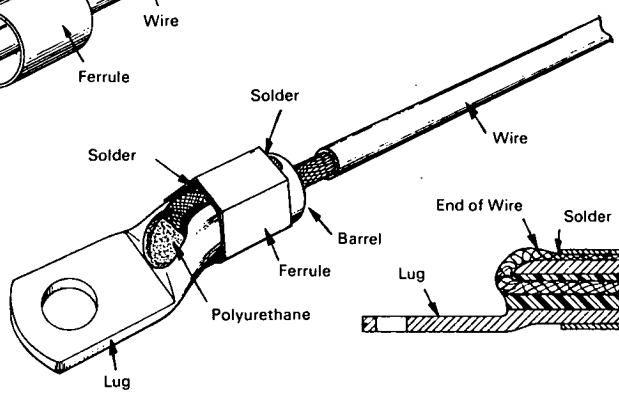

Figure 2

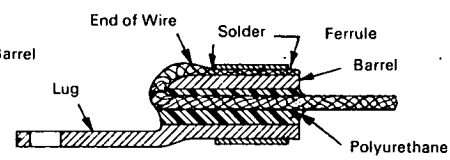

Figure 3

The problem:

To design a method for making electrical connections which can be sterilized and visibly inspected for reliability.

How it's done:

Cable terminations are normally made by crimping the barrel of a lug to clamp the wire cable within the barrel. This method is undesirable because it causes residual strains in the joint, and it is impossible to visually inspect the joint after sterilization. An improved method uses a standard terminal lug with a braided wire passed through the barrel of the lug and lapped over its upper surface. A bushing (ferrule) is passed around the end prior to swaging into a hexagonal shape. This clamps the end of the wire between the surface of the lug and the inner surface of the ferrule. The end of the wire and ferrule are soldered to the barrel of the lug, and the space within the barrel is filled with a polyurethane material.

Notes:

1. This item should be of interest to personnel in the electrical industry.
2. No further documentation is available. Questions concerning this invention may be directed to:
   Technology Utilization Officer
   NASA Pasadena Office
   Pasadena, Calif. 91103
   Reference: B69-10327

Patent status:

This invention is owned by NASA, and a patent application has been filed. Royalty-free nonexclusive licenses for its commercial use will be granted by NASA. Inquiries concerning license rights should be made to NASA, Code GP, Washington, D.C. 20546.

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Category 01