



## Use of Conductive Components in FR Protective Garments for Electrical Workers

Concerns have been raised about whether the use of conductive components in protective garments for electrical workers, such as metal snap fasteners on shirts or coveralls, diminishes protection from electric arcs.

In general, the concern about conductive components in garments for these workers is a misinterpretation of OSHA 1910.269, *Final Rule on Electrical Protective Clothing*. This rule is designed to prevent the use of items that are expected to contribute to the severity of wearer injury in case of an accident. OSHA had in mind such things as dangling gold chains or bracelets that might contact energized parts.

Mr. Charles Davis, Director of OSHA Compliance Programs, was asked this question: *“Are metal zippers in linemen’s clothing a concern for employers to whom the paragraph 1910.269(l)(iii) applies?”* The reply was: ***“The metal in a metal zipper is not expected to contribute to the severity of injury sustained by an employee in the event an electric arc occurs. Therefore, provided the surrounding material meets the Apparel Standard, the metal zipper will be acceptable under paragraph 1910.269(l)(iii).”***

Similarly, ASTM International Standard F 1506-02a *Performance Specification for Flame Resistant Textile Materials for Wearing Apparel for Use by Electrical Workers Exposed to Momentary Electric Arc and Related Thermal Hazards* states in Note 4 to section 6.1.1, ***“Fasteners or closures used (in a manner in which they can come in contact with the skin) should be covered with a layer of fabric between the fastener or closure and the skin”***. F 1506 is referenced in National Fire Protection Association Standard NFPA 70E (*Standard for Electrical Safety in the Workplace*).

Based on specifications for wearing apparel for electrical workers and interpretations of OSHA rules, conductive components are allowed as long as they are covered so that they cannot contact the wearers’ skin.

Bulwark Protective Apparel