

innovations

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TITLE: ADAPTIVE PROTECTIVE COVERING FOR A CONDUCTOR

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DESCRIPTION: This invention addresses the problem of abrasion, chafing and/or wear relative to various types of conductors. Currently, after installation of a conductor, vibration, movement and shifting of conductors through fittings, bulkheads and other structures cause harmful wear and abrasion, penetrating the exterior of the conductor and resulting in the failure of the system. The covering of the current invention serves to reduce the chafing, wear and abrasion by using an adaptive design that reacts to wear. This includes an outer moisture-proof flexible outer layer, with an additional layer of soft, flexible material, which further cures, hardens and toughens, in the presence of moisture.

ADVANTAGES: The requirement that conductors be routed through complex geometries dictates that the cables/tubing must be flexible during the installation process. This prohibits the use of very hard, durable coverings. This invention overcomes this limitation, by causing the cable to toughen in a fitting when subject to wear, reducing the chance of failure. However, because the covered cable only responds in the areas of wear, the rest of the cable remains flexible. This “self-healing” nature of the conductor can eliminate the need for bulkhead grommets and other conductor protecting devices. Applications for this technology include automotive, aerospace, construction and military markets.

PATENT STATUS: Provisional Patent

LICENSING STATUS: Worldwide rights available

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