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Alternately stranded cable

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Brief explanation of the drawings

Figure 1 is a cross section view of one example of the cable of the present invention; Figure 2 is a perspective view of such; Figure 3 is a side view of another working example of core material that is utilized in the present invention.

Detailed Explanation of the Invention

The present invention relates to a favorable alternately stranded cable; more specifically, it relates to an alternately stranded cable that prevents the unraveling of wire twisting. As communications cable, there is a tendency to use a plurality of either insulated element wires or else stranded pairs or stranded quad of such, or otherwise to use so-called alternately stranded cable with which units of the wires are stranded in a manner so that the stranding direction is reversed at points in time within a fixed cycle. However, with such types of cable, in particular when tensile force is applied in the longitudinal direction prior to conducting cable sheathing, a problem occurs in that the stranded cable core becomes unraveled; in order to prevent this, various contrivances have been attempted, but these have all turned out to be problematic from the standpoint of practical application.

This invention has been developed in consideration of these points; its first invention constitutes an alternately stranded cable composed of core material of which a plate body is formed so that the facing of its surface slowly becomes changed into a reciprocatingly twisted state; onto both surfaces of the core material, a plurality of either insulated element wire or else stranded groupings of such are vertically run along the surfaces while being twisted; pressure rolling is then conducted on the outer circumference, and a cable sheath is placed thereon to comprise the cable. Its second invention constitutes an alternately stranded cable wherein a portion of the core material is replaced by a connecting portion.

To explain this by illustrative working examples, reference numeral 1 constitutes an insulated element wire or stranded groupings of such; these are divided and longitudinally run along both surfaces of core material 2; roughly wound thread for applying pressure is then wound around the outer circumference of this, and cable sheath 4 is finally placed around this outer circumference. Core material 2 is most effectively shown in Figure 2; as shown therein, the material is formed into a reciprocatingly twisted state by slowly changing the facing of both surfaces as the material moves in the longitudinal direction. This can be achieved by twisting the facing direction of the plate body to the opposing direction at fixed intervals while maintaining the rigid plastic or other material of the horizontal plate at a prescribed temperature. Proximal to both surfaces of the core material obtained in this manner, in order to longitudinally run the insulated element wire while twisting it in the direction of those surfaces, the core material is caused to be inserted into a guide hole provided in the center of a revolving butt strap, and each group of insulated element wire is caused to be inserted into a guide hole provided on the fringe [of the revolving butt strap]; subsequently, while the tips of these are indexed through dies, reciprocating rotation should be conducted by combining the revolving butt strap with the twisting of the core material. To the outer circumference of the wire obtained in this manner, pressure rolling 3 and cable sheathing 4 are then applied by ordinary methods.

In such alternately stranded cable of the present invention above, because the core material formed in a reciprocatingly twisted shape is caused to be inserted within the insulated element wire, the twist does not become unraveled even when tensile force is applied in the longitudinal direction of the wire. Moreover, because the cable core is caused to be stranded identically with the reciprocatingly twisted shape, or in other words, the alternating twist, that corresponds to the shape of the core material, when connecting or repairing the cable core, etc., by cutting off a fixed length of the core material, the cable core in between will go slack, rendering such operations easy to conduct.

Invention No. 2 of this application is constituted in an identical manner to Invention No. 1, except for the core material.

However, as shown in Figure 3, the core material is constituted so that a plurality of twisting plates 5, the plate bodies of which are formed so that the facing of their surfaces slowly become changed, are connected by connecting rod 6, and these are longitudinally run while being twisted into a reciprocatingly twisted shape onto both surfaces of same core material as with the Invention No. 1. The effects obtained with Invention No. 2 of the present application constituted in this manner are the same as with Invention No. 1.

Claims

1 Alternately stranded cable, comprising core material of which a plate body is formed so that the facing of its surface slowly becomes changed into a reciprocatingly twisted state; onto both surfaces of the core material, a plurality of either insulated element wire or else stranded groupings of such are vertically run along the surfaces of the core material while being twisted; pressure rolling and cable sheathing are then provided to the outer circumference to comprise the cable.

2 Alternately stranded cable, comprising core material of which a plurality of twisting plates, the plate bodies of which are formed so that the facing of their surfaces slowly become changed, are connected by a connecting rod; onto both surfaces of the core material, a plurality of either insulated wire or else stranded groupings of such are

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vertically run along the surfaces of the core material while being twisted; pressure rolling and cable sheathing are then provided to the outer circumference to comprise the cable.

Figure 1

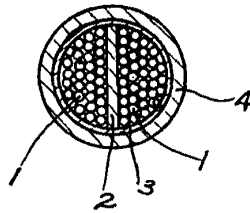


Figure 2

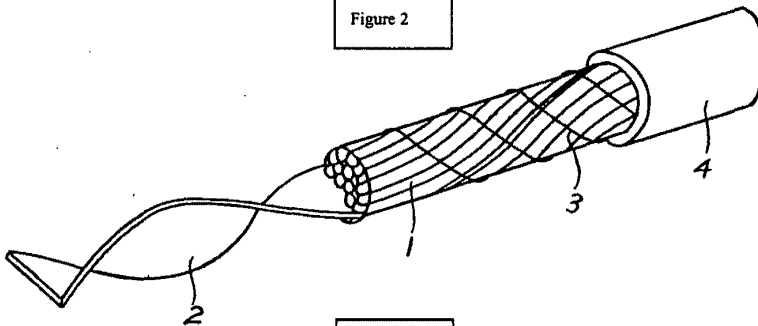


Figure 3

