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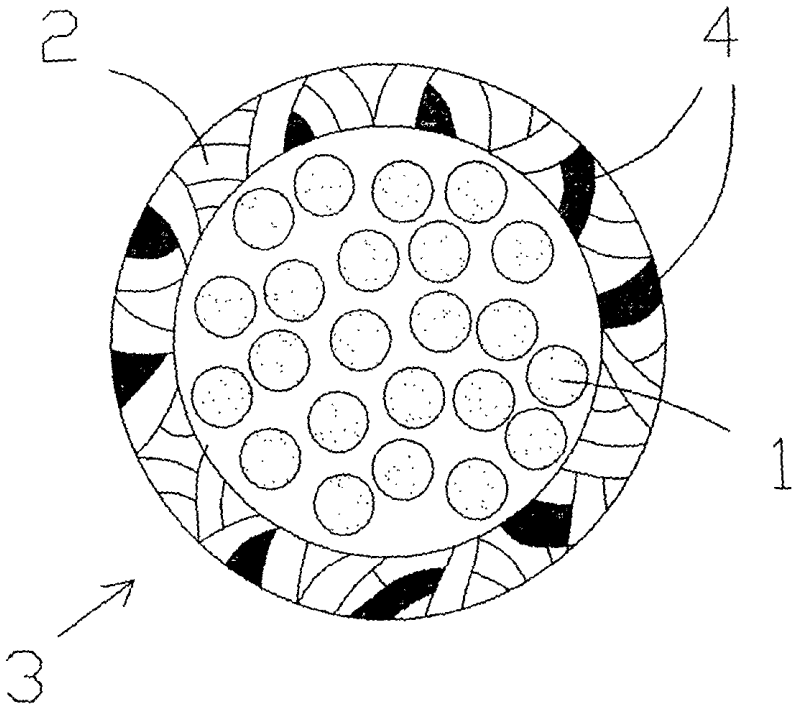
(54) Rope for individual safety devices

(57) A rope for individual safety devices, being made up with a central core (1) and a sleeve or covering (2) around the core made up of a multitude of threads helicoidally braided in two directions, having the sleeve or cover (2) an internal reinforcement (4) to the braiding made up from a multitude of longitudinally arranged threads throughout the length of the rope (3) that form a path that is substantially sinusoidal which depends on the relationship of the tensions between the threads making the internal reinforcement (4) and the threads making up the braiding of the sleeve or cover (2).

Fig. 2



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Description

OBJECT OF THE INVENTION

[0001] The object of the present Invention is a rope for individual safety devices that includes significant innovations and advantages compared to other ropes currently in use for the same purpose.

[0002] More specifically the rope of this present invention has an internal reinforcement of the sleeve or cover that prevents the tearing of same and provides the rope with a high degree of resistance.

BACKGROUND TO THE INVENTION

[0003] There are rope arrangements known at the present time that are used in those activities in which they function as individual safety devices, such as in mountain climbing, rock climbing, working above ground level, etc. where the sleeve has a limited slip resistance.

[0004] Specifically the ropes used in these types of activities are made up from a central core and a sleeve or cover made up from a multitude of threads helicoidally braided in two directions, forming cycles. Half of the threads making a clockwise helicoid and the other half making an anti-clockwise helicoid.

[0005] With the stated arrangement, if the rope cover suffers any type of external aggression, such as a cut, abrasion, etc., and said aggression affects the entire length of the braided cycle, the damaged cover will give way and will slip over the core with the consequent danger for the safety of the user.

DESCRIPTION OF THE INVENTION

[0006] The rope for individual safety devices object of this present registration solves the previously stated disadvantages, moreover providing other additional advantages that will be clear from the description which is attached below.

[0007] In order to do this and more specifically the rope of this invention is made up with a central core and a sleeve or covering around the core made up of a multitude of threads helicoidally braided in both directions, and is characterised because the sleeve has an internal reinforcement to the braiding made up from a multitude of longitudinally arranged threads throughout the length of the rope making an appreciably sinusoidal arrangement along the length.

[0008] The amplitude of said sinusoid depends on the relationship of the tensions between said threads and the components of the braiding same being able to be regulated at will. Hence, if the tension of the reinforcing threads is sufficient, a reduction to almost zero could be achieved, leaving them arranged in a straight line.

[0009] Advantageously and thanks to the characteristics describe the rope of the invention prevents the rope sleeve or cover from tearing, as the two parts of the sleeve resulting from a longitudinal cut or tear of same will remain connected by means of the multitude of threads making up the internal reinforcement.

[0010] Likewise, said arrangement provides the rope of the invention with a high degree of resistance, in addition to a better control of the rope's elasticity.

[0011] The fields of application for the rope described as an individual safety device are varied; it could be used in pot holing, rock climbing, mountaineering, all types of working above ground level, equipment and safety devices against falls from heights, etc.

[0012] In order to complete the description that is going to be made next and for the purpose of making the characteristics easier to understand, attached to this present document is a set of drawings in which, by way of being illustrative but not limiting, the most significant details of the invention have been represented.

BRIEF DESCRIPTION OF THE DESIGNS

[0013] Figure 1 shows a perspective view of the rope of the invention.

[0014] Figure 2 shows a transversal and section view of the above rope.

DESCRIPTION OF A PREFERRED EMBODIMENT

[0015] In view of the figures commented on, and in accordance with the numbering adopted, a preferred embodiment of the invention can be seen in same that is not by way of limitation. These consist of a rope for individual safety devices.

[0016] As and how shown in figures 1 and 2, the rope (3) of the invention is made up of a core (1) formed by a multitude of parallel cords and a sleeve or covering (2) made up of a multitude of threads helicoidally braided in two directions, being characterised because the sleeve or cover (2) has an internal reinforcement (4) incorporated into the braiding formed with a multitude of longitudinally arranged threads along the length of the rope that have a appreciably sinusoidal path.

[0017] In the event of the sleeve or the cover (2) suffering from a longitudinal cut or aggression, Figure 1, the upper part to the area that has suffered the cut or aggression of the sleeve braiding and the lower part will remain joined by means of a multitude of threads making up the internal reinforcement (4).

[0018] The details, shapes, sizes and other accessorial elements, likewise the materials used for the construction of the rope of the invention can suitably be substituted for others that are technically equivalent and do not deviate from the essentials of the invention or the scope defined by the claims which are included below.

Claims

1. A rope for individual safety devices, being made up with a central core (1) and a sleeve or covering (2) around the core made up of a multitude of threads helicoidally braided in two directions, **characterised in that** the sleeve or cover (2) has an internal reinforcement (4) to the braiding made up from a multitude of longitudinally arranged threads throughout the length of the rope (3).

2. A rope for individual safety devices, according to the above claim, **characterised in that** the threads making up the internal reinforcement (4) of the sleeve or cover (2) form a path that is substantially sinusoidal.

3. A rope for individual safety devices, according to the second claim, **characterised in that** the substantially sinusoidal path depends on the relationship of the tensions between the threads making the internal reinforcement (4) and the threads making up the braiding of the sleeve or cover (2).

Fig. 1

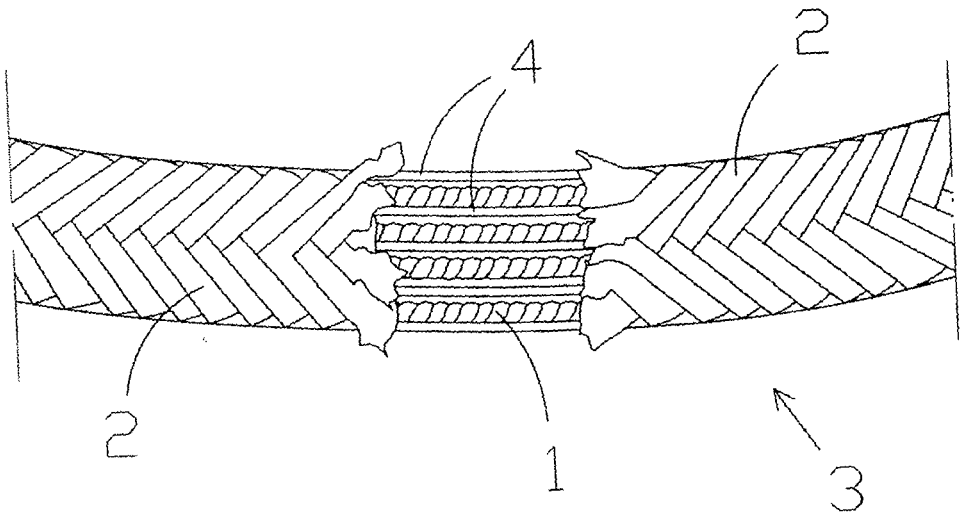

Fig. 2