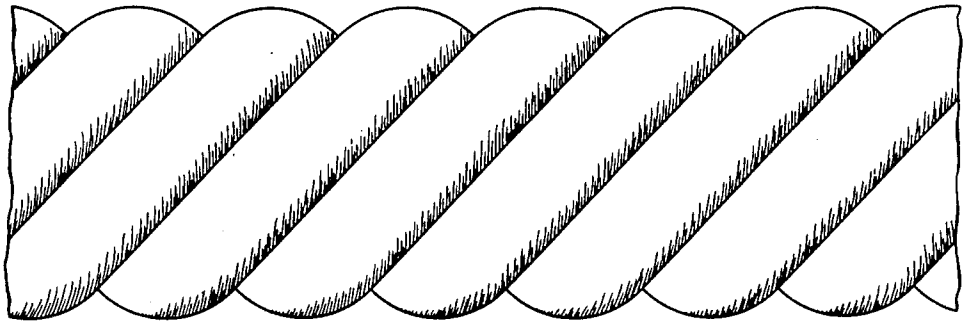
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LUBRICATED CORDAGE

Filed Sept. 17, 1934



Nonabsorbent fibrous rope containing loose absorbent fibrous material and lubricant.

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LUBRICATED CORDAGE

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7 Claims. (Cl. 117—53)

This invention relates to lubricated cordage, and particularly to lubricated cordage composed mainly of relatively unabsorbent fibrous material.

It has heretofore been the practice to lubricate a variety of types of cordage, for example, marine cordage, wire rope cores, and cordage in general, which is likely to be exposed to the atmosphere, particularly to moisture. In general, such lubrication has been by the use of light oils of one type or another which have been directly incorporated into the ropes.

In my co-pending application, Serial No. 637,007, filed October 10, 1932, is described a method of lubricating wire rope cores. This invention is a continuation in part of the invention therein described.

The single figure of the accompanying drawing is illustrative of the invention.

The absorbent fibrous material is loosely permeated throughout the interstices of the rope strands of ropes prepared from the usual relatively non-absorbent vegetable fibres such as manila, hemp or the like. By proper selection of the absorbent fibrous material, an enormously greater lubricant retention may be obtained. Instead of incorporating the fibre and then lubricating the rope, it is preferable to prepare a lubricant comprising the absorbent fibrous material and to force this lubricant into the strands of the rope cordage. The absorbent and lubricant fill the voids and interstices within the rope.

Finely divided asbestos is preferably used as the absorbent material. Properly cleaned, ground and fluffed asbestos will absorb as much as 14 to 16 times its weight of lubricant, whereas manila, hemp and the like will absorb only one-sixth to one-fourth of their weight. Moreover, the asbestos itself acts as a lubricant and prevents wear of the rope fibres upon each other. However, instead of the asbestos, a wide range of other absorbents may be used, such as jute, cotton, linters or the like.

Any suitable lubricant may be used which the absorbent material will suitably absorb. It is preferred to use a grease of high tenacity and viscosity. A grease comprising seventy-two (72) parts of mineral oil, for example, 100 viscosity naphthalene base Smackover oil, and two and one-half (2½) parts of aluminum oleate is satisfactory. It is preferred to incorporate therewith a minor proportion of a preservative such as a petroleum oxidation product such as those prepared by the Alox Chemical Co., degras, creosote, thymol, pine tar or the like. One-half of one (1%) per cent. of Alox material in the above formula is preferred.

The amount of fibrous material to be mixed with the lubricant will, of course, depend upon the absorbing qualities thereof. With a fairly coarsely ground asbestos, three parts of the above mixture may be used with one part of the asbestos. A more carefully prepared asbestos may be incorporated in smaller proportion.

Where it is desired to incorporate the absorbent material without lubricant, the material may be blown in during twisting of the strands, preferably being somewhat coated with a small amount of adhesive in the process.

Instead of aluminum oleate soaps, other aluminum soaps such as aluminum, tungate, or linoleate, may be used, or greases may be employed which have for their base any suitable gelling soap. For example, magnesium, calcium, sodium lead, zinc or other soaps may be used.

In the case of marine cordage or other cordage intended for use in contact with water, it may be desirable to incorporate a waterproofing agent such as casein compounds, tung oil compounds, or stearine pitch.

As described in my co-pending application, Serial No. 744,061, filed Sept. 17, 1934, it is desirable to use both the extremely finely divided asbestos and the relatively coarsely ground asbestos, coarse asbestos acting as a suitable carrier for the fine material.

It is likewise preferred to use an amount of asbestos or other fibrous absorbent material which is in excess of the amount required to absorb the lubricant. This prevents the lubricant from squeezing out under service and results in a much longer life for the rope.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

I claim:

1. Cordage comprising relatively unabsorbent fibrous rope strands having a finely divided fibrous material of markedly higher lubricant-absorbing powers than the rope fibres loosely permeated throughout the interstices of the rope strands and having a lubricant distributed throughout said rope strands and absorbent fibrous material.

2. Cordage comprising rope strands of relatively unabsorbent fibrous material having in-

corporated therein a plastic material comprising a finely divided fibrous material and a grease, said fibrous material having markedly higher lubricant absorbing powers than the rope fibres.

3. Rope as in claim 2 in which the absorbent fibrous material is finely divided asbestos.

4. Cordage as in claim 2 in which the grease comprises heavy mineral oil and aluminum oleate.

5. Cordage as set forth in claim 2 in which the absorbent fibrous material is present in an amount in excess of that required to absorb the lubricant.

6. Cordage as described in claim 2, in which the fibrous material is present in an amount sufficient to substantially fill the interstices of the rope fibres.

7. Cordage as described in claim 2, in which the absorbent fibrous material is finely divided asbestos, and the ratio of asbestos to grease is of the order of 3 parts grease to 1 part asbestos.

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