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FREE PULLEY®

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FREE PULLEY®

In the continuing evolution of the stranding technology, MACCHINE SPECIALI studied, improved and patented a device called "**MULTIPLE DEGREES OF FREEDOM PULLEY**" or "**FREE PULLEY®**". This device applied on the stranding line, allows to run cables with variable untwisting, even in the presence of deviations of the product by 180° on the axis of the line. This opportunity allows you to take advantage of working in stranding avoiding the effect "alternating gravitational summative", thereby increasing the rotational performance of the stranding machines.

PATENT DESCRIPTION

The present invention refers to a device adapted to transform a sliding friction into rolling friction during the step of stranding.

It is known, that the stranding machines with internal collection, "SINGLE TWIST" and "DOUBLE TWIST", engender in a stranding phase a rotation on the product being formed, and on the finished product than on individual elements which go to form the product. It is known, that the rotations about the product are unloaded on the directional referrals (pulleys) creating clutch with sliding friction between the product formation and the pulleys.

It is known, that existing machines do not allow operations requiring absolute untwisting product.

It is also known that the machines of this type, if they

had not this limit would allow the highest production performance. These technological limitations are also reflected on the productive limits forcing us to use techniques and principles studied, cataloged and unchanged from the time of Leonardo da Vinci.

Therefore, purpose of this invention is to overcome these technological limitations that are reflected also in production limits, thus guaranteeing the passage of the residual torsions along the stranding path. It is known, that in the presence of torsional loads on the product, these efforts, it will be discharged on the passages and on referrals through the product in the change of direction.

It is known, that the sliding friction does not allow the passage of the twists.

In stranding machines in internal collection and rotating in the vertical pay-offs, where the product to be stranded is subjected to axial rotation, the device allows degrees of freedom such as to not ruin the product transforming the sliding friction into rolling friction. Therefore, purpose of this invention is to overcome these limitations.



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