



Improving the bond between steel and synthetic cable (MUCAS)

Introduction

The use of synthetic cable among companies involved in timber harvesting and associated services is very low in Catalonia, as a result of the high abrasion suffered by the cable, which reduces its useful life and its high acquisition cost, up to 2 or 3 times higher than steel. The feedback we have from the sector is that this abrasion and subsequent breakage occurs mainly in the last few metres of the synthetic cable, so the hypothesis put forward is that if wear can be reduced only in these last few metres, this would increase its useful life. To make this possible, a synthetic-steel bond is proposed, with the steel located in the last few metres of the cable. In this way the abrasion would be concentrated to a large extent on the steel and not on the synthetic part. The difficulty lies in creating a bond that is effective during timber harvesting work. It must be able to withstand the stresses applied, be adaptable to the machinery used, and be relatively easy to implement. The aim is to enhance synthetic cable by implementing new tools and techniques to improve its use.

Lessons learned

The aim is to promote synthetic cable and its advantages that go beyond both its technical and economic limitations and to obtain positive results that ensure the synthetic-steel connection increases the service life of synthetic cable, further reducing the aforementioned limitations.

Pictures

Figure 1: "Synthetic cable"

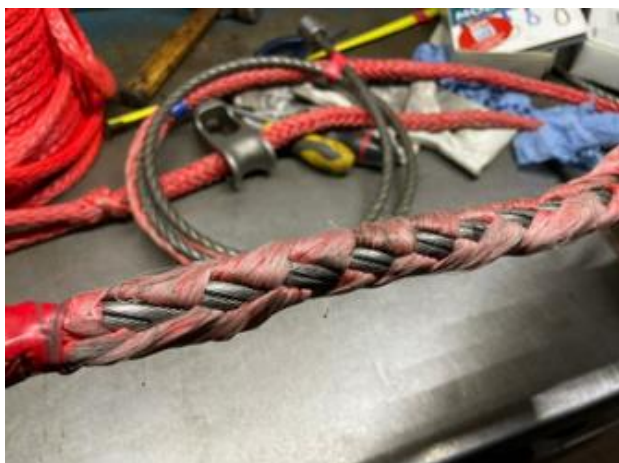


Figure 2: "Use of synthetic cable in forestry"



For further information contact

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Further information

<https://www.grupboix.com/en/cooperation-for-innovation-improving-the-union-between-steel-wire-rope-and-synthetic-wire-rope-mucas/>





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