Cable yarding in North America and New Zealand: A review of developments and practices

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Sažetak
Cable yarders have been an integral part of harvesting timber on steep terrain for over 150 years. They have developed from basic labour intensive steam powered winch operations to sophisticated and automated mechanised systems. While European yarder development has focused on relatively small but highly mobile machines operating with standing skyline configurations, the North American and Southern Hemisphere developments have tended towards larger, taller and more powerful machines capable of higher daily production. Two dominant North American brands, Madill and Thunderbird, produced over 3000 yarders and many of their machines continue to work today. Often working with 4 or 5 drums, they were able to develop and utilise an expansive range of rigging configurations to suit different extraction needs. Modern developments continue to focus on increasing production capability and cost-effectiveness suited to clear-cut plantation forestry. With safety becoming more paramount in terms of a licence to operate, a strong preference is given to fully mechanised systems. By definition, these are yarders with rigging systems that support grapple carriages, extracting timber that has been mechanically felled on steep slopes. While mechanical grapple carriages have long been combined with swing yarдер systems, the further development of a motorised grapple carriage allows tower yarders to operate without choker-setters. Ergonomic improvements for the operator, long established in European machinery, are being integrated including cab design with greatly improved visibility and partially automated electric over hydraulic control systems. Logic would suggest that, over time, yarder developments will combine the strength and robustness of North American design and the finesse and automation of European design. However, recent machine sales in North America and New Zealand continue to show a clear difference with the preference of large swing yarders capable of running fully mechanised extraction systems.

Ključne riječi
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