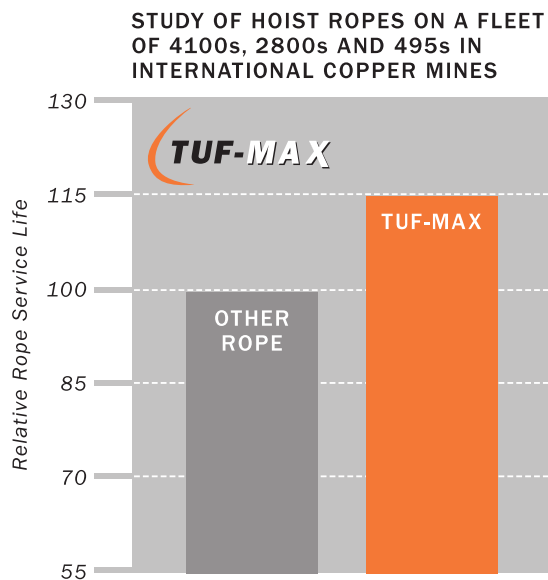


NORTHERN STRANDS

Mining wire ropes.

TUF-MAX® shovel ropes.

TUF-MAX shovel ropes are the latest development in PFV® mining rope technology. These 8-strand ropes utilize improved design and enhanced application and formulation of the polymer plastic to achieve superior performance for shovel hoist applications. Field tests have shown up to 20% or more increases in service life when compared to other premium shovel hoist ropes.



PowerMax™ drag and hoist ropes.

PowerMax is an 8-strand wire rope created to provide operating characteristics essential to drag and hoist ropes. Proprietary WRCA metallurgy was utilized in the development of special rod chemistry requirements to provide optimum wire characteristics for mining ropes.

With eight outer strands, PowerMax is more fatigue resistant than 6-strand ropes of the same diameter, plus, its greater surface area

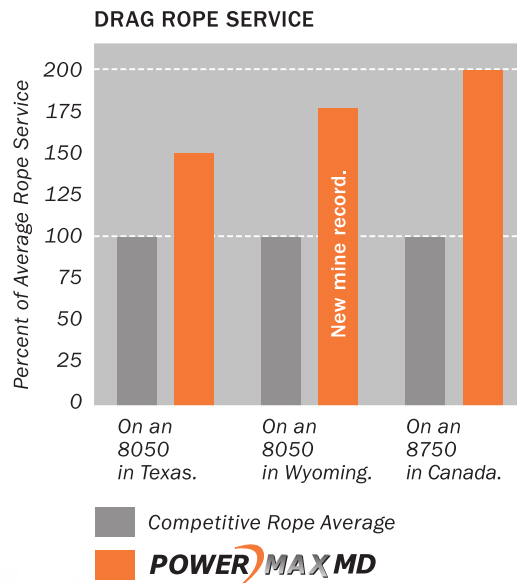
puts more steel in touch with contact surfaces reducing wear and abrasion. Just as importantly, no drag or hoist rope available is subjected to more rigorous standards of manufacturing than PowerMax.

PowerMax is a product of PowerSteel® Technology, a WRCA exclusive. The technology combines all aspects of rope manufacturing in one cohesive process that assures a product that's second to none.

PowerMax MD™ drag ropes.

PowerMax MD is a unique new drag rope, designed specifically for exceptional performance and extended service life on draglines with reverse bend fairlead systems. Built around a plastic-impregnated independent wire rope core (IWRC) are eight compacted strands of cold-drawn, high-carbon steel wires, a construction that delivers the optimal combination of strength and resistance to bending fatigue and abrasion.

With eight outer strands fortifying the compacted-strand design of PowerMax MD, this rope delivers approximately 10% higher minimum breaking strength than the standard 6-strand drag ropes. It also supplies the ability to handle the bending stresses at the fairleads.



WIRE ROPE PRODUCTS