



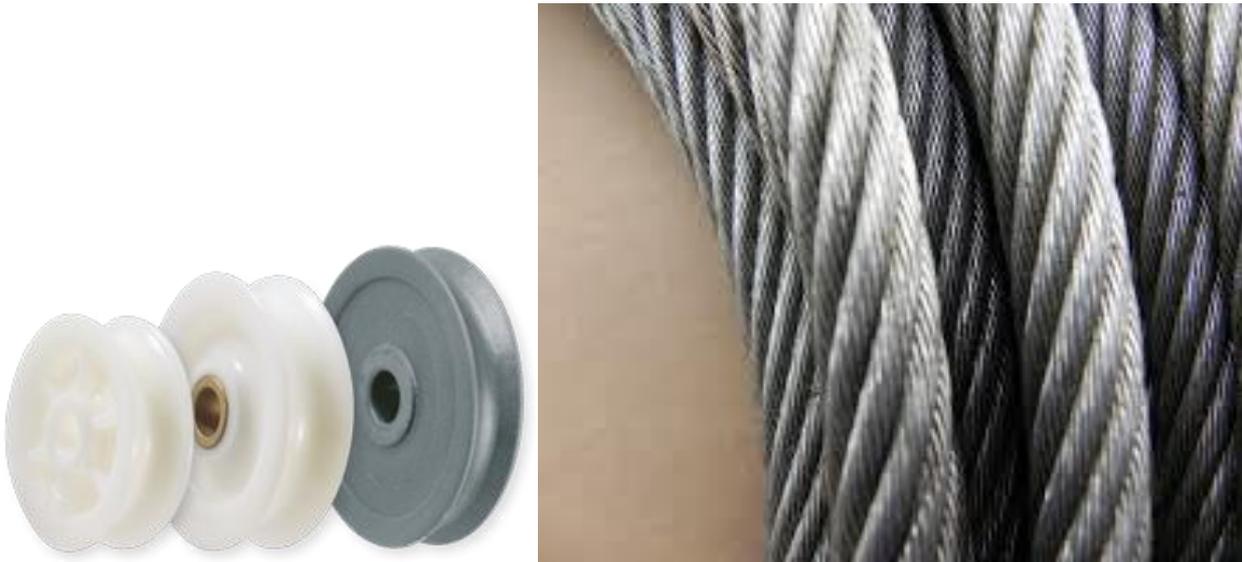
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Media Release – CUT TO SIZE PLASTICS – January 2016

Steel rope lifespan extended in host of industrial equipment by Wearlon family of engineered plastic sheaves



An internationally proven range of hard wearing cast polyamide engineering plastics from the Wearlon range of Cut To Size Plastics is formulated to reduce wear and maintenance and enhance safety in a wide range of machinery and materials handling equipment.

The LiNOTAM range of cast polyamides from international manufacturer and fabricator of engineering plastics Licharz is a member of the Wearlon family of engineered plastics suitable for OEM use and metal replacement in applications involving transmission of mechanical force and minimising friction.

Applications where the Wearlon family offers optimum benefits include cranes and lifting equipment, materials handling machinery including conveyors as well as fixed and mobile plant extending from mineral processing equipment and power generation technology

(including tendons in windmills) through to mining draglines, heavy transport, implements, construction equipment and in food processing and primary product processing equipment including timber and paper.

Available in various grades for different purposes, Wearlon LiNNOTAM metal-replacement materials offer especially long service lives and are easy to machine to custom-fabricated shapes,” says Cut To Size NSW Manager Mr Pat Flood. Cut To Size manufactures components such as sheaves, rollers, gears and wear components for applications across Australasia from its Head office in Sydney, where facilities include CNC machining facilities coupled with GibbsCAM™ and Solidworks™ software.

“Steel wire ropes are important and highly stressed machine elements in force transmission and conveying technology. In many cases, large plants depends on their functioning not only for efficiency but also safety. Wearlon can extend lifespan and enhance safety by reducing maintenance and preserving structural integrity for longer,” said Mr Flood.

Benefits

Engineering plastics such as Wearlon offer:

- Rope-conserving elasticity
- Compression fatigue strength
- High wear resistance
- Toughness, also at low temperatures
- Resistance to lubricants
- High resistance to weathering effects

“Wire ropes are stressed by fluctuating forces, by wear, by corrosion and by extreme forces. Ropes that run over sheaves made from metallic materials are subject to high stress due to the surface pressure that occurs between the rope and the groove. When the rope rolls over the sheave, only the outer strands lie on the groove. The result of this is wear in the form of individual strands breaking or, more serious, rope breakage,” says Mr Flood.

“Sheaves made from Wearlon prevent this due to their elastic behaviour. The pressure between the rope and the roller in the combination steel rope/polyamide roller is around 1:10 compared to steel rope/steel roller. This can be attributed to the visco-elastic behaviour of polyamide. It is not just the outer strands that lie in the groove, but almost the whole projected strand width. This reduces surface pressure between the rope and the roller and considerably extends the life of the rope.”

The cast polyamides of the LiNNOTAM members of the Wearlon family can be produced as semi-finished products or near net shape components and are virtually free of internal stress. Cut To Size offers a large selection of shapes, weights and dimensions.