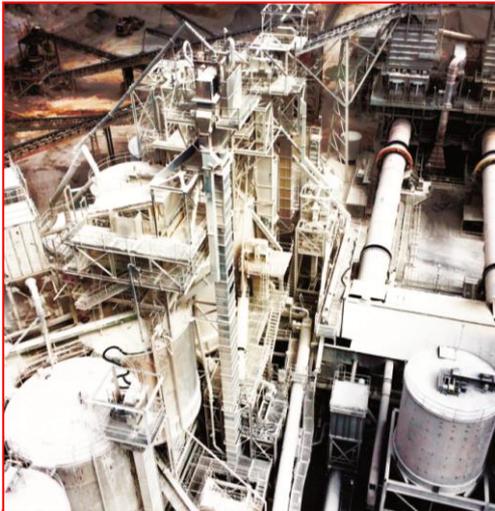


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High-performance chain offers enhanced strength and reliability



The Workhorse elevator series is well suited for use in aggressive bulk material handling environments with harsh fine particulates

To ensure greater strength and durability, engineering consumables and components distributor BMG's range of Tsubaki high-performance product chains now includes the robust Workhorse elevator series.

Designed to resist the abrasive and demanding forces of aggregate elevators, the Workhorse elevator series is well suited for use in aggressive bulk material handling environments with harsh fine particulates like cement, lime, gypsum, coal, fertiliser, grain and sugar, notes BMG power transmission GM **Carlo Beukes**. "This is because the high-strength steels advanced manufacturing processes and refined heat treatments ensure maximum fatigue strength and protection against failure – even when the chains are used in severe applications."

The Workhorse 5800 and 5900 series, with average tensile strength ratings (ATS) of between 65 909 kg and 129 545 kg, can be upgraded using various plated pins, bushings and joint seals – individually or in combination – to ensure dependability and enhanced wear resistance in specific applications.

Workhorse Chain Features

An important feature of this series is that the extended bushing barrier seals prevent abrasive materials from entering and attacking chain joints, which impacts on the rate of mechanical wear, Beukes avers.

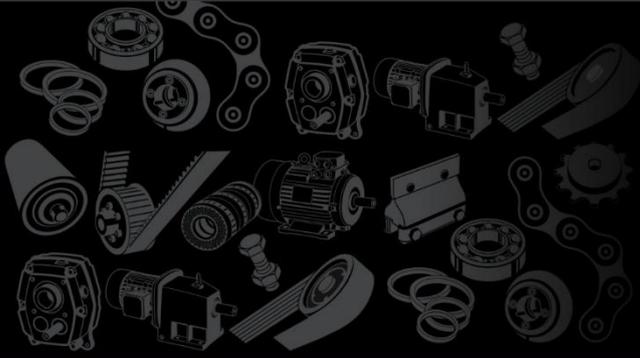
He explains that the chain bushings are extended beyond the inside sidebars to minimise the clearance between the outside bars and the bushings. This, in turn, creates a solid barrier that inhibits abrasive material from entering the pin/bushing joint.

The face seal, which is manufactured from a high-temperature-engineered polymer, encircles the extended bushing and provides an additional particulate resistant barrier to help protect the joint, thereby minimising contamination.

A patented stainless steel internal ring seal holds tight onto the pin and rotates within a groove in the bushing to create a labyrinth to prevent debris from getting into the pin/bushing area. This is because the debris can be abrasive and negatively impact on the performance and life of the chain.

Debris often packets joints, attacks bearing surfaces and, in turn, accelerates wear, Beukes notes.

He says reduced maintenance is another important feature of the BS-HS series: "Special heat-resistant grease is packed into the unit as standard and only minimal maintenance for the lubricant is required since this makes maintenance easier and significantly reduces operational costs."



Additional Offering

The Tsubaki standard backstops – which are designed for safety in normal low-speed conveyor applications – offer a cost-effective means to protect capital equipment, including inclined conveyors and bucket elevators.

“These backstop cam clutches prevent reverse rotation of, for instance, the head pulley of an incline conveyor, thereby acting as critical safety equipment and preventing damage to machinery and expensive equipment.”

Old grease can be flushed out and changed while the unit is in operation – there is no need to remove the backstop from the shaft, Beukes notes.

For long overland conveyors, he explains that Tsubaki’s BS-HS backstop cam clutch series has many critical features not found in conventional models. This range, he further notes, has an upgraded cam cage and bearing-supported design, which provides much higher torque and speed capacity than other cam clutches.

Other advantages include using a smaller clutch, which provides cost savings and high-quality clutch component parts made from heat-treated alloy steel that provides wear resistance and extended life performance.

These backstop cam clutches also have an anti-roll-over cam design that ensures durability against heavy shock load in back stopping. The dustproof construction of this series, with the combination of a double lip oil seal and dust-protective plate, keeps grease in and dust out.

Tsubaki’s complete range of cam clutches are available from BMG in different capacities and styles designed to provide the best functional characteristics for three basic modes of operation – overrunning, indexing and backstopping.

The complete range of Tsubaki power transmission components is available from BMG’s national branch network, which offers a technical advisory and 24-hour backup service.

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