Whitepaper

Keep it straight! Belt Positioning Systems can avoid Wear and Material Loss

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Depending on load distribution and running resistances, conveyor belts show a tendency to run off the straight line. This migration causes additional wear and may result in material losses. Please find hereafter examples, how to counter such behaviour.

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Belt positioning systems provide for a straight run of the conveyor belt, thereby ensuring a proper material flow. (Pictures: © Flexco)

An important step in preventing material losses on conveyor belts is correcting the guidance of the conveyor belt. To achieve this, various belt positioning systems are offered on the market. Through the use of sensors, these detect misalignment of the belt and correct its directional precision. This also reduces or

prevents damage to the edges of the conveyor belts. With these positioning systems, operators not only achieve substantial reductions in terms of material losses, they also reduce their maintenance costs.Does the belt always migrate towards the same side, or does it move from one side to the other? Is this misaligned travel a constant feature, or just an occasional occurrence? Does the belt get worn in a corrugated manner, and is the belt tension low, moderate or high? Operators ask themselves questions like these in order to select the most appropriate belt positioning system for their needs. A manufacturer such as Flexco assists them in this process, and will offer appropriate solutions for different belt tensions and belt dimensions that are easy to install.For belts that only migrate to one side, the Flexco belt positioner offers a simple and adaptable system that is easy to install and maintain. The fixed, angled rollers always hold the belt straight. This system is only installed in the subspace. It is suit-able for belts with a maximum tension of 210 N/mm and belt widths of 450 to 2400 mm.

Tension-adapted Systems

The PT Max series uses sensor rollers
to detect whether the belt is starting to
migrate. The belt is then guided back

into its correct position. Depending on
the application, the operator can install
these systems either at the carrying…

Flexco recommends the PT Smart series whenever belts are exposed to moderate
tensions of no more than 280 N/mm maximum. Sensor rollers detect whenever
the belt starts to move out of alignment. The unique pivot-and-tilt movement then
returns the belt to its correct alignment position. PT Smart can be installed in
standard size for belt widths of 400 to 1800 and up to a thickness of 25 mm. Such
positioning systems are also offered specifically for use in underground mining
applications. These are made of materials and components that have been
specially adapted to withstand the unusual temperature and application
conditions that exist in these harsh environments.

Higher Belt Tensions

… or at the return strand of the belt.

In case tensions are higher, i.e. up to 525 N/mm and where belts are concave, the
PT Max range is suitable. This also uses sensor rollers to detect whether the belt
is starting to migrate. The belt is then guided back into its correct position.
Depending on the application, the operator can install these systems either at the
carrying or the returning strand of the belt. They can be used in humid as well as
in dry environments The standard sizes of this series are suitable for belt widths
of 650 to 1400 mm. The return side version is suitable for thicknesses of up to 25
mm, while the top-mounted version is suitable for thicknesses of up to 19 mm.

Heavy Duty Operations

Operators of heavy belts that are under great tension of up to max. 1060 N/mm rely on HD PT Max. This series works like its PT Smart and Max counterparts. Depending on the application, it can also be mounted at the carrying or the return strand of the belt. It is designed for belt widths of 1200 mm and up.

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