FIVE SIMPLE, EFFECTIVE CONVEYOR BELT TRACKING UPGRADES

Achieving perfect conveyor belt alignment is a principle function of good conveyor hardware and structure.

Keeping the conveyed material on the belt and avoiding spillage and leakage is a principle function of plant productivity and efficiency. So achieving perfect conveyor belt alignment under all operating conditions is a principle function of good conveyor hardware and conveyor structure.

In an imperfect plant environment, structures are sometimes damaged. Loads change direction and conveyor belt irregularities creep in over time.

Having the right type of belt tracking components to suit your conveyor belt's speed, trough angle and degree of incline can make the world of difference – and is a site-specific investment that is affordable and will bring immediate results.

Choosing the right type of belt tracking conveyor hardware to correct belt wander can be an educated process but here are five component upgrade choices to consider:

1. The self-centring idler.
As the name suggests, the self-centring idler is designed to promote correct conveyor belt alignment without manual adjustment. The self-centring idler is intended only for the return side of the conveyor belt, which most often has the greatest ability for the carry side to run true. Installation of one or two sets of Kinder's K-Commander self-centring idler is recommended for the return side of the belt approaching the tail pulley.

2. Combined belt cleaner and belt tracking roller.
Another maintenance-free solution on the return belt, this resilient and wear-resistant polyurethane combined belt cleaner and belt tracking roller helps to clean off sticky carryback and assists in evening the conveyor belt. The mining, quarrying and process industries will find this beneficial because build-up on return rollers is the main cause of mistracking. Installation is recommended over the discharge chute or a collection hopper. In addition to its K-Spiral cleaning and tracking roller, Kinder has recommended the K-Vee return spiral cleaning and tracking idler as being suitable for specialised vee-shaped return belt conveyor systems.

3. The heavy-duty side guide roller.
The unique concave design of the polyurethane side guide rollers utilises a triple labyrinth seal to ensure long operational life, even in harsh environments. The polyurethane side guide roller promotes stability for even the highest speed conveyor belt as it helps force a wandering belt back down onto the rollers. Ideal installation is at locations of recurring mistracking. Kinder offers K-HD polyurethane guide rollers as part of its inventory.

4. Safety mistracking switch.
Made for high speed conveyed material applications, this belt tracking component differs from the other device choices because it is a safety switch providing a warning alarm and trip mechanism. Its arm is triggered by contact and stops the belt moving. Kinder's Safe-T-Drift misalignment switch is made with robust, flame-retardant, non-corrosive plastic that complies to ingress protection rating IP67 for long maintenance-free operation. It is also fully sealed with an external dust protecting boot. Installation is required in pairs on either side of the belt but the number of switches recommended is dependent on the length of the conveyor.

5. Side track rollers.
The side track roller is a high performance, economical means to track and align a wandering conveyor belt, suitable for most installations and applications. It fits both flat and vee-return rollers as well as troughing rollers. Ideally side track rollers are located in pairs ahead of the tail pulley to help align the conveyor belt, and so eliminate spillage from tracking belts. They can also be installed after the feed area on the troughing sets to help keep the belt aligned. Kinder's MTD disc tracker is very simple to install and offers high wear resistance, and so will not damage the belt.

With one or a combination of these belt tracking components introduced to a belt conveyor, operators will notice a consistent, sustainable performance improvement from a simple upgrade effort.

Kinder Australia provides belt tracking advice as a learning module as part of its complimentary half-day conveyor safety and maintenance training. If you are interested in one of Kinder's engineers coming to your site to conduct this training for members of your maintenance team, email conveyorsolutions@kinder.com.au •

Source: Kinder Australia