

New entrant to conveyor monitoring market in Australia

Conveyor Belt Gateway (CBG), a German conveyor belting and technology company manufacturing in China, is taking its conveyor monitoring product – CBGuard – global, recently appointing an Australian distributor.



Left: CBGuard system in place on a conveyor.



Report showing steel cord damage.



Belt splice analysis.

CBG seeks to combine German technical prowess with low-cost Chinese manufacture. The company, which offers conveyor belts, monitoring equipment, and vulcanizing machines, emphasises strict quality control of its Chinese output.

According to CBG, it has over 300 of its CBGuard branded monitoring systems in operation in China. In 2016, the company began promoting an upgraded version of the system globally. Closer to home, CBG has appointed Conveyor Belt Monitoring of Mona Vale in Sydney as its exclusive distributor.

“Conveyor Belt Monitoring is going to install the first CBGuard system in Australia soon,” said Bernd Küsel, president of CBG, based in Hamburg.

There is intense market competition in conveyor monitoring, with a wide variety of technologies and systems available from companies like ContiTech, Fenner Dunlop, Beltscan Systems and Phoenix. CBGuard works with x-rays, which immediately differentiates it from most of its competitors, bar Phoenix.

“No other technology can provide such a wealth of information,” said Mr Küsel of the CBGuard technology. “Most other systems on the market only cover certain parts of a conveyor belt, and with poorer quality. The CBGuard system is compact and affordable.”

CBGuard consists of an X-ray generator with tube, a receiver and a control unit. X-rays penetrate a conveyor belt and impinge on the detection board, forming a grey-scale photograph based on different absorptions of the conveyor belt areas. This happens millions of times per second with a running belt.

CBGuard weighs 800 kgs and has a size of 1.9 x 0.7 x 1.1 metres when installed on a 1,200 mm wide belt. It can accommodate belt widths of up to 3,200 mm, belt thicknesses of up to 60 mm and velocities up to 9 m/s.

The system is installed on the bottom part – return run – of the conveyor. The belt needs to run flat through the device. A concrete foundation and a safety fence, at a distance of around two metres, have to be provided.

“The system generates an intelligent, holistic analysis of any kind of threat to the belt,” explained Mr Küsel. “Impending damage, still not visible from the outside – for instance broken or corroded steel cords – trigger an alarm, which advises the belt operator to carry out repairs as soon as possible.

“Irregularities like holes, de-laminations, foreign objects, belt slippage, protruding cords, edge damage, abnormal cover wear, even insufficient belt cleaning, are detected and processed.

“CBGuard measures the belt thickness and yields timely information about the upcoming need for a replacement belt. The system’s software not only generates a live video with marked deficiencies of the belt, but also tells you exactly what kind of damage it is, how severe it is and where it is. No other technology can provide such exact results.

“The radiation source is insulated. Beyond the fence, the radiation is less than 1 microSievert per hour, close to background levels,” concluded Mr Küsel. ■

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