SKF power transmission solutions for food and beverage processing

Benefits

- **Increased productivity** through transmission system re-engineering and upgrade services
- **Energy savings** created by re-calculation services for the drive system and correct belt alignments
- **Increased service life** and reduced maintenance through efficient mounting, proper alignment and lubrication procedures
- **Single-source supply** for a broad assortment of power transmission systems
- **Compliance** with industry hygiene regulations

Typical applications

- **Conveying systems**
- **Transmission systems in main auxiliary equipment**
- **Pump couplings**
- **Fan and compressor pulleys and belts**

Enhancing service life and energy savings

Food and beverage processing operators are increasingly looking for power transmission systems with more compact drives, highly precise movements and better energy performance. Such systems are usually complex and the many elements are susceptible to wear and contamination.

Often, start/stop operations, heavy/variable loads, excessive heat and vibration result in excess energy usage and reduced service life of the transmission system. In many cases, the need to maintain extremely clean operations makes things even more difficult. There is a continuous threat of corrosion resulting from water and cleaning agents, as well as contamination from grease and oil leaks during equipment lubrication. Downtime to repair one item can easily affect the operation of the total line.

SKF offers a complete range of power transmission products and services designed to reduce maintenance, extend service life, enhance reliability and save energy. These include: belts and pulleys in materials designed for challenging environments; chains and sprockets in a variety of specialized materials and coatings; and specially tapered bushings designed for easier mounting and dismounting of pulleys and couplings.



Correctly fitted SKF belts require low maintenance and reduce energy consumption

Additional value can be achieved through SKF transmission system re-engineering and upgrade services, complemented by a range of maintenance products such as belt tension meters, and laser precision alignment tools for shafts and pulleys. SKF condition monitoring technologies and services enable further improvements in equipment reliability.



A wide assortment of SKF power transmission solutions provide reliable operations

For more information about SKF products and solutions for the food and beverage industries, contact your SKF Authorized Distributor or local SKF representative.



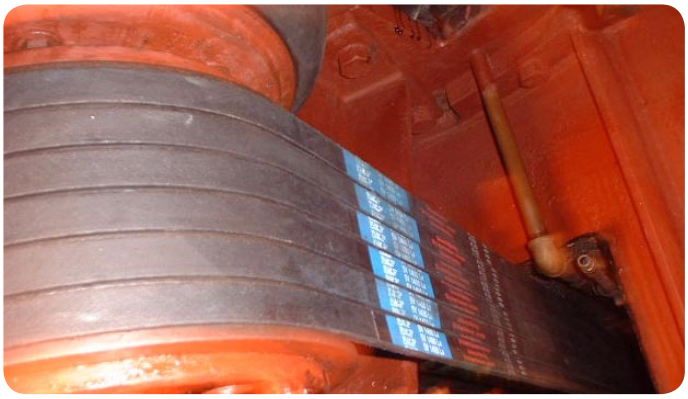
Increase the return on your maintenance investment with SKF

The whole idea behind the SKF 360° Solution programme is to help you get more out of your plant machinery. Whether your goals include lowering maintenance costs, raising productivity, or improving safety, hygiene and sustainability, SKF can assist. Following is an example of the SKF 360° Solution programme at work in the food and beverage industries.

Sugar producer reduces energy consumption and improves centrifuge reliability during season

A sugar producer was looking for a solution to low machine reliability that caused line stoppages during the main production season. The problem was in centrifuges in machines used to separate the sugar crystals from the massecuite. During the operation, the centrifuges suffered from acceleration/deceleration cycles, resulting in increased demands on the power transmission system, and the motor and centrifuge grouting system. The elevated temperatures and highly abrasive conditions of the operating environment added to machine reliability issues. Unplanned stops meant a reduction in productivity and possible negative effects on sugar quality.

SKF engineers performed a transmission system assessment which identified a lack of rigidity in the motor support system. High vibration levels on the motor and misalignment of pulleys were causing excessive energy consumption. The solution recommended was the installation of a new package of SKF belts using appropriate mounting practices to obtain correct alignment and belt tension.



Unplanned downtime during the production season was eliminated after SKF belts were installed

As a result of the SKF solution, the sugar producer achieved an increase in machine reliability. There were no unexpected failures during the season, and belt, bearing and electric motor life all increased. In addition, the producer realized a 6,5% reduction in energy consumption in the centrifuge motor.

Summary*

Through the SKF solution, the sugar producer achieved a number of benefits including:

- Elimination of centrifugal unplanned downtime during the main production season
- Increased power transmission system service life
- Reduced energy consumption: 24 MWh saved per year in the centrifuge motor

* All numbers are rounded off and based on customer estimates. Your particular cost savings may vary.

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