

Truck Carrying Container

Industry:	Transportation
End User:	KRONOS Canada
Application:	Truck Carrying Container Pulleys
Thordon Grade:	HPSXL TRAXL

Challenge

Roll-off trucks are vehicles used to pick up recycling and garbage bins, which rely on a pulley system in order to operate effectively. Kronos Worldwide Inc. uses similar trucks to transport large containers of titanium dioxide, a fine white powder used in paints, plastics and paper to keep the products white and opaque. Each pulley has a wire going through a bed that attaches to the bin and lifts it onto the truck. Inside this advanced mechanism, the bushings in the pulley sustain enormous pressure, up to 7,600 psi, from the heavy loads. Operators at Kronos found that the pressure was too much for the bronze bearings that were currently installed. The bearings were completely worn after just three weeks, causing a truck to be out of commission, unable to carry any material and causing inefficiencies for Kronos Worldwide. They consistently had to pay mechanics to change the pins and repair the housings.



Solution

With Thordon's recommendation, the customer agreed to replace the bronze bearings with Thordon HPSXL TRAXL bearings, which have the following benefits:

- Do not require oil or grease for lubrication
- Maximum dynamic working pressure up to 55.0 MPa (8000 psi)
- High resistance to shock loading and vibration
- Extremely low coefficient of friction

Outcome

After a 3 week trial, the HPSXL TRAXL bearings had no signs of wear. The bearings were replaced as part of routine preventative maintenance after 6 months, with only moderate signs of wear. The HPSXL TRAXL bearings provided an increase in wear life of 8 times compared to bronze.