The roll-off trucks that pick up recycling bins, garbage bins and more, rely on a pulley system. Kronos Worldwide Inc. uses similar trucks to transport large containers of titanium dioxide, a fine white powder used in paints, plastics or 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 52 MPa (7,600 psi), from the heavy loads. Operators at Kronos based in Quebec, Canada, found that the pressure was too much for the bronze bearings.

“After just three weeks, the bronze bushing was completely worn,” says Thordon distributor Jasmin Racicot of RMH Industries. This meant that every three weeks, a truck was out of commission and could not carry the materials. The company had to pay mechanics to change the pin and several other parts and repair the housing.

As per Racicot’s recommendation, the customer agreed to try replacing the bronze bearing with a Thordon HPSXL TRAXL bearing.

“After the first three week trial,” Racicot explains, “we anxiously went back to the plant to see how the bearing did. After the inspection, there was no sign of wear on the bearing.”

After six months it was time for routine preventative maintenance. The bearing was replaced as a precaution, though it still showed only moderate signs of wear. “In other applications, changing the bearing twice a year might seem like a lot but for us it is beyond excellent,” says the customer, Francois Chagnon, General Maintenance Foreman for Kronos Canada, Inc. “What is so extraordinary is that just a thin, dry layer of Thordon material can withstand the heavy load whereas the greased, bronze bearing wore out in such a short time. With all of the breakages we have experienced in the past (picture a broken pulley cable!) we have made a giant leap.”

Chagnon adds that the product works so well it has pleasantly surprised the skeptics, and even exceeded the expectations of Thordon representatives themselves.

Racicot has also found that time after time Thordon products can be adapted to almost any industrial application and adds, “it is always satisfying to discover yet another brand new problem and prove that Thordon can fix it.”

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