

Conveyor Uptime Increases at Ireland Quarry



AFTER SWITCHING TO
BALDOR'S DODGE® BRAND
GEARBOXES AND BEARINGS

Corcoran Concrete, located in Westport, County Mayo, Ireland, was eager to find a solution for poorly performing bearings and gearboxes in the quarry's sand production area. Here, bearings were failing as often as three times a year, with gearboxes typically lasting only 12 months. In some cases, products had to be removed by force, causing damage in the process. In these cases, the material costs were dwarfed by the day's downtime needed to make repairs.



Dodge ISN bearings have helped increase reliability by around threefold at Corcoran Concrete's quarry.

Corcoran Concrete discussed the problem with its local power transmission distributor, Central Bearing Supplies, who suggested replacing the Plummer block bearings that came with the original conveyor equipment with Dodge ISN bearings. Designed to perform in harsh conditions, this bearing's combined triple-lip and flinger sealing system prevents contaminants, like sand and stone dust, from entering the bearing. In addition, the Dodge ISN is shaft ready with an adapter mounting system that allows for quick installation and removal.

As bearing failures occurred in the sand production and washing plant, Corcoran Concrete replaced them with the Dodge product and saw reliability increase by around threefold. When a gearbox also went down, the distributor suggested they try a Dodge TORQUE-ARM™ II shaft mounted speed reducer. Not only does this product have a superior sealing system, but its tapered bushing system makes the gearbox easy to install and remove.

Again, reliability improved. So, when Corcoran Concrete recently decided to invest in a new 300 tons per hour plant for stone chip production, it specified that the conveyors must come fitted with Dodge ISN bearings and TORQUE-ARM II speed reducers.

For Corcoran Concrete's Maintenance Manager Ian Duffy, making the switch to Dodge products was the right move. "This is a competitive business, and reliability of production is a critical concern," says Duffy. "The sealing integrity built into these Dodge products has made a significant difference for us."

An additional benefit for Corcoran Concrete is the energy savings achieved through the TORQUE-ARM II speed reducers' use of two-stage helical gearing, making the product 96% efficient. The difference became clear when Duffy decided to make a comparison between old and new conveyors using an ammeter. Drives on the older conveyor systems

tend to draw currents of around 70-75A. The new conveyors in the stone chip area with the Dodge helical gearboxes draw around 40A.

Although this evaluation exercise was not performed under closely controlled conditions, the obvious efficiency of the new gearboxes made it clear that the energy savings would give a fast payback on the investment.

Mike McGrath of Central Bearing Supplies, the distributor who originally came up with the Dodge solutions for Corcoran Concrete, says he couldn't be more pleased with the results.

"Dodge bearings and gearboxes have a formidable durability record on the most aggressive processes," says McGrath. "Compared with the components often fitted on quarry conveyors, the Dodge products can often increase operating lifetimes substantially, as this quarry application demonstrates."



Dodge TORQUE-ARM II speed reducers' use of two-stage helical gearing makes the product 96% efficient, saving Corcoran Concrete energy.