

New gear drive solves chip reclaimer problem

A global, multi-billion-dollar manufacturing company with a paper mill facility in southeastern U.S., used the Falk V-Class gear drive, recently launched by Rexnord Industries, to replace a chip reclaimer drive that was near the end of its service life and for which parts were becoming difficult to get.

The site's Maintenance Manager said the facility has two similar chip reclaimers: one for hardwood and one for pine. The drive on the hardwood unit had failed recently, and was replaced with the company's only remaining spare. Because the drives on both reclaimers were of similar age and service history, the Maintenance Manager wanted to replace the old drive on the pine unit with the new Falk V-Class drive to avoid unplanned downtime.

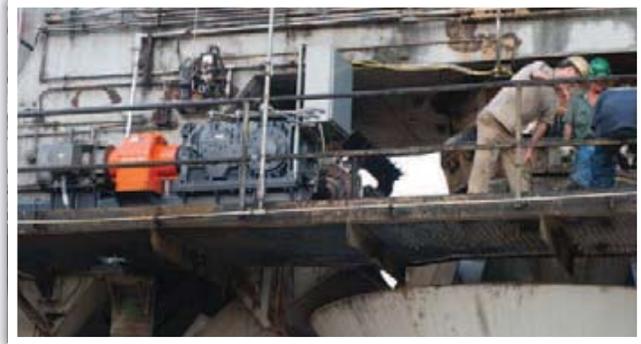
Operating conditions included high vibration and a dusty atmosphere with falling debris. In addition, the climate was humid and hot, with temperatures frequently above 90°F (32°C). Despite these conditions, auxiliary cooling, such as fans or a DuraPlate cooling system, was not needed because of the drive's thermal performance.

Based on the site's experience with the hardwood reclaimer drive, the Maintenance Manager knew that the pine unit would be difficult to remove. It took a crew about four days to pull the old drive. "We had to take the whole headshaft out with the drive and cut them apart, and then we had to replace the damaged shaft," the Maintenance Manager explained.

The drive was replaced with a shaft-mounted 157VRT3-AS Falk V-Class drive, 98.65:1 ratio, rated at 147 hp@1750rpm, which is mounted on a swing base, along with a 100 hp electric motor connected to the drive through a Falk 370HFD20 fluid coupling. An Orange Peel guard protects the coupling and shafting.

To provide the data needed to monitor its performance in the field, this drive was equipped with a special condition monitoring system that provided continuous data on bearing temperatures, oil sump temperature, ambient temperature, drive speed and power input. Also included was a high-viscosity oil sampling port that checks oil condition. Standard condition monitoring packages are available to meet individual customer requirements.

Once the motor was installed and aligned, and special condition monitoring instrumentation was installed, actual installation of the drive package was accomplished easily in less than half a day. The drive and headshaft are connected by a tapered bushing that

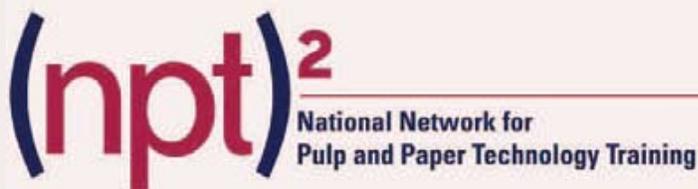


Completed installation shows neat appearance and ease of access for maintenance.



After three months of 24/7 operation with heavy debris buildup, the new drive was running quietly, with excellent gearing contact and sump temperatures in the 140°F (60°C) range, despite high ambient temperature and humidity. The temperature of the drive did not change dramatically from a "clean" housing to the conditions shown above. On one typical day, with the outside temperature at 97°F (36°C), the sump was running at less than 150°F (65°C) degrees, despite a heavy buildup of debris.

ensures they will be easy to separate when necessary, and without damage to the shaft. After seeing the new drive in operation for several months, the Maintenance Manager said, "I don't have to think about it—and that's good."



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