

Paper Plant: Lower Vibrations in Open Gear

Challenge

December 2007: A Pulp and Paper Mill in Northern Louisiana has lime kiln with substantial wear in the open gear (17' Diameter x 18" Width, Speed: 7 - 8 RPM) with high backlash and running very rough and noisy due to with high vibration level

Plant personnel were unsure that the kiln gear would last until shutdown in 3 months. It was critical to make it to the shutdown and avoid the unscheduled downtime. a solution was needed to make operation reliable.

A decision was made by maintenance to apply the Rewitec Surface Treatment to prevent damage and help the gear last to the planned shutdown in March. Rewitec was applied manually with a pressurized sprayer over a period of several days. Plant personnel were careful to apply at the point of gear mesh, thoroughly coating contact surfaces of pinion and bull gear.

Outcome:

After coating was completed in several days, there was a noticeable difference in the way the gear was running. As reported by maintenance, "The gear set hasn't run this smooth or quiet in several years." Vibration diminished and the gears ran well for several more weeks until the scheduled maintenance shutdown.

Rewitec brought more reliability to the equipment that was operating with vibrations exceeding the safe limits. Vibrations were reduced dramatically at a time where productivity seemed to be compromised.

Results

Avoiding the unscheduled downtime by investing in Rewitec brought potential savings in the order of several hundred thousand dollars.

The plant turned the girth gear and the pinion at their March 2008 shutdown, and applied Rewitec surface treatment of Rewitec for the new surfaces, to protect the long term service.

Reference: IP International Paper. Campti Louisiana Plant. Mr. Eddie Jordan