

Challenge

Background

A major pulp and paper mill in Brazil had installed single point lubricator with OEM recommended polyurea grease for electric motor with incorrect viscosity (as most of the polyurea greases come only in one viscosity ~ 100 cSt at 40°C). Due to lack of shear stability of polyurea grease, the bearings frequently overheated and showed signs of grease running out.

The maintenance manager wanted to increase pulp pump motor life and reduce bearing replacement frequency.



Pulp and Paper Mill looking to enhance reliability of pump motor.

Solution

Product

A Chesterton® specialist conducted a grease survey to determine RPM, bearing specs, temperature, vibration and contamination levels. Data was inputted to the Chesterton Precision Lubrication Tool (PLT). A precise grease dosing rate as well as correct grease base oil viscosity were determined. **Chesterton 638 EMG 46** was recommended.

Chesterton 638 EMG grease has a high shear stability and very low oil separation. As a result, **Chesterton 638 EMG** can survive in heavy load applications and lubricate bearings for longer time without failure.



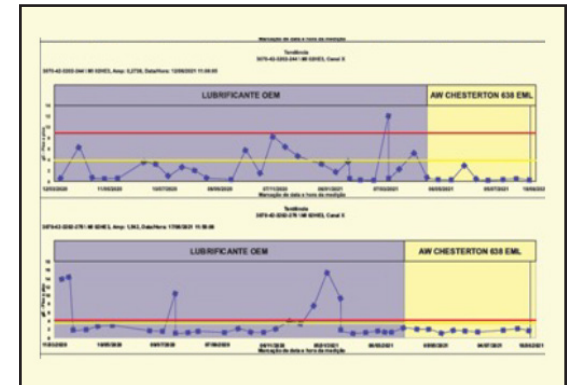
Chesterton 638 EMG 46 used in the single point auto-lubricator.

Results

Feedback

The results from bearing vibration analysis were compared for polyurea and **Chesterton 638 EMG** grease. When polyurea grease was used, the motor bearings produced avg 3 – 5 excess vibration readings, which triggered alarms. Moreover, the baseline vibrations were of higher amplitude.

Chesterton 638 EMG 46 demonstrated immediate reduction in base line readings by 15% – 20%. The motor did not experience any excess vibrations and alarms. This would increase the life of the grease and motor bearings, significantly.



Virtually immediate impact on bearing running conditions.