

TROMBINI PAPEL E EMBALAGENS S/A (PAPER AND PACKAGING)

TEST REPORT ON THE METAL CONDITIONER MILITEC-1

Curitiba, November 22, 1995

On 15/09/95 four liters of metal conditioner MILITEC-1 were added, at a cost of R\$460.00 (approximately US\$464.00) in a speed reducer SAUER MF 406 SSE, red. 1:5.5833, fabrication year: 1985, capacity: 66 liters of oil, run by a General Electric motor of 400 CV and 1750 RPM.

Since this is a 10-year old machine of continuous use (24 hrs. a day), it presents internal wear, where the idleness causes vibration, noise and oil leaks.

During the period of 15/09/95 to 22/11/95, the speed reducer presented a decrease of the global vibration values according to the norms of ISO 2372, and a consequent noise reduction.

This machine of simple reduction has three bearings, where the vibration is being monitored with a Vibrometer device VIB-10, from SPM, presenting a vibration reduction of 20% horizontally, 32% vertically, and 21% axially.

With the smoother shifting of gears, the load on the bearings is smaller, which benefits the life utility of this machine. The reducer used to consume 10 liters/month of oil, as a result of an oil leak at the shaft output. With the reduced vibration and the machine running smoother, the oil leak disappeared.

With respect to the power consumption, there was an average reduction during this period of 10,044 kWh/month, at a cost of R\$0.07 (approximately US\$ 0.07) kWh/month (11/95), yielding a reduction of R\$703.00/month.

We should emphasize that no more Militec-1 was added until today, however, the evaluation process will continue for an undetermined amount of time.

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