

# METALS (USA)

## TUBE MILLS

Castrol Molub-Alloy® 6040/460-1.5

**Annual Savings: \$12,480**



Castrol Molub-Alloy 6040 is used as a shaft lubricant to prevent corrosion to the shaft.

### THE SITUATION

A large Midwest tube mill was having issues with roll shafts corroding while in service. The existing rust preventive in use was difficult to apply and was easily removed by the mill coolant during service.

Castrol was challenged to provide a product that would eliminate the corrosion and significantly reduce the labor time required to deal with this problem.

### BEFORE CASTROL

- Customer using a rust inhibitor as a shaft lubricant.
- Inhibitor was easily removed by the mill coolant
- Shafts rusted and needed an average of 6 man-hrs labor each week to disassemble them and remove the rust.

### AFTER CASTROL

- Molub-Alloy 6040 was used on the shafts to prevent corrosion.
- This grease resists the mill coolant very well.
- Shaft corrosion was eliminated along with the additional labor required to deal with it.

### THE SOLUTION

- Shafts were previously lubricated with a corrosion inhibitor before rolls were placed on them.
- The rolls then corroded to the shafts when tube mill coolant ran over the rolls and shafts.
- Castrol Molub-Alloy 6040 grease was tested as the lubricant on the shafts.
- The Molub-Alloy 6040 eliminated all corrosion and the additional labor time associated with it.
- Rolls were now able to be removed by hand without using a sledge hammer.
- No corrosion was seen on the shafts or rolls after converting to the Molub-Alloy 6040.

## RECOMMENDATIONS

Castrol Molub-Alloy 6040 was recommended because of its excellent water resistance and corrosion protection. A thin film placed on the shafts is enough to prevent corrosion issues and provide ease of disassembly after the rolls have been in service.

## OFFER DETAILS

Castrol Molub-Alloy 6040 is used in many high water contamination areas to prevent wear and corrosion to metal surfaces.

## CONCLUSION

Castrol identified the root cause of the rust problem and provided a solution to eliminate it.

The result is 312 man-hours of reduced labor per year totalling \$12,480 in savings.



## OTHER POTENTIAL APPLICATIONS

Molub-Alloy 6040 is a versatile lubricant that can be used to extend the life of mill stand roller bearings, couplings, and to prevent rust & ease disassembly of roll shafts.



*Typical roll shaft after disassembly, prior to conversion to Molub-Alloy 6040. Corrosion bands can be clearly seen across the shaft.*