

Structural Steel Joist Mill Improvements

METALS (USA)

STEEL JOIST MILL

Castrol Iloform® TRS 185

ANNUAL SAVINGS: \$24,000



THE SITUATION

A steel joist mill consists of 2 angle forming lines and 1 channel forming line to produce structural joists and girders. The previous synthetic mill coolant did not drop dirt and mill scale very well and was subject to excessive fluid carry-out and bearing wash out.

BEFORE

- Sump cleanouts every week
- Excessive coolant carry-out caused puddling (safety and housekeeping issues)
- 2-3 bearing failures per month
- Due to roll wear, mill form tooling was replaced each year (\$40,000)

AFTER

- Coolant running cleaner. Sump cleanouts extended to every 3 weeks. Reduced fluid usage.
- Coolant carry-out virtually eliminated
- 1 bearing failure in 6 months operation
- Reduced roll wear. Tooling life doubled, replaced every 2 years

THE SOLUTION

- A cleaner running coolant was needed to reduce fluid usage and mill scale build-up.
- Because of its unique lubrication package and ability to quickly settle out particulate, Castrol Iloform TRS 185 synthetic forming fluid was introduced.

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RECOMMENDATIONS

Castrol Iloform TRS 185 has performed very well in various steel mill applications. For this steel joist mill, a concentration level of 4-5% was recommended.

“I am very pleased with the results from Iloform TRS 185. Our parts wear and downtime have been greatly reduced!”

– Brian F, Maintenance Supervisor

CONCLUSION

Castrol Iloform TRS 185 has exceeded the customer's expectations and quickly gained acceptance from the mill operators.

Even with lower fluid usage, roll wear and bearing failures were reduced. Because dirt and mill scale are dropped out more readily, the coolant runs cleaner and the mill stands have less build-up. Issues with fluid carry-out and puddling as the parts exit the mill have been eliminated, creating a cleaner and safer workplace.

The results were:

- **\$24,000 annual savings**
- **Cleaner and safer work environment**
- **Downtime greatly reduced**



OTHER POTENTIAL APPLICATIONS

Castrol Iloform TRS 185 synthetic forming fluid reduces mill scale build-up, readily separates from tramp oil, and exhibits superior resistance to microbial attack, making it an ideal, low maintenance tube mill and steel forming coolant.