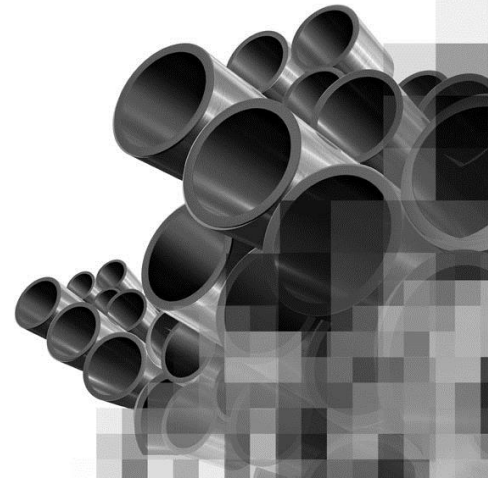


METALS (USA)

WELDED TUBE MILLS

Castrol Iloform® TRS 186

ANNUAL SAVINGS: \$154,003



THE SITUATION

The customer was experiencing excessive coolant usage due to high turn over rates and frequent system dumps in order to maintain the required tube quality. Plant personnel were complaining of bad odor from the tank. The customer was using city water for make-up.

BEFORE

- The rolling fluid system required dumps and recharge every four to five weeks.
- High usage and disposal of the rolling fluids were not acceptable to the customer.
- Customer was continuously adding biocides.

AFTER

- System dumps extended to every 90 weeks.
- Fluid make-up rates went from 272 gallons per month to 45 gallons per month.
- Eliminated the use of tank side additives

THE SOLUTION

- Castrol Iloform TRS 186 was recommended for its excellent detergency, corrosion resistance and bio-resistance.
- Castrol recommended that the customer install a reverse osmosis (RO) water system.
- Castrol provided fluid condition monitoring services to ensure continued excellent fluid performance.

- The right understanding of the Customer's needs
- Providing a solution that comes from an extensive knowledge of the tube manufacturing process
- Ability to solve the root causes of issue related to tube manufacturing

RECOMMENDATIONS

Castrol's offer included the Castrol Iloform TRS 186 which provides excellent detergency to remove mill oil and scale from the tubes and forming rolls as well as exceptional bio-resistance. Castrol's fluid analysis services ensure system stability and prolonged system life. The recommendation of the RO water system helped keep the water conditions under consistent control.

ANNUAL SAVING PROJECTION

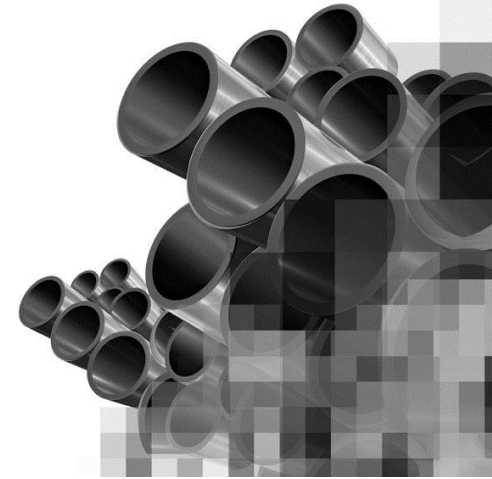
Cost related:	\$147,793
HSE related:	\$146,210
TOTAL SAVINGS:	\$154,003

CONCLUSION

- The customer was able to receive a 78% reduction in their total cost.
- Coolant usage went from 272 gallons per month to 45 gallons per month.
- System dumps went from every 4-5 weeks to every 90 weeks.
- Biocide usage for odor control was eliminated.

IMPACT TO THE CUSTOMER

	BEFORE	AFTER
Coolant make-up	272 gal/mo	45 gal/mo
System dumps	4-5 weeks	90 weeks
Biocide added	Yes	No
Odor issues	Yes	No



OTHER POTENTIAL APPLICATIONS

Castrol has product and service offers for most mechanical, structural and coated welded tube operations including Tube Forming, Corrosion Prevention, Tube Cut Off and Maintenance Lubrication.