

# Steel plant / tubing mill USA

## Chain oil lubrication system

### Annual Savings: \$45,685



#### THE SITUATION

Castrol was challenged to reduce chain lubricate consumption while providing maximum protection to the chain links & wear rails.

#### BEFORE

- Three different chains were lubricated by three stand alone systems.
- Drums of oil had to be manually brought in by crane to each chain lubrication system.
- Drops of oil were deposited on the chain with hopes that it would reach the wear rails.
- System consisted of two tubes. One tube per chain for each system.
- An EP gear oil was used for the lubrication of chains.

#### AFTER

- Castrol installed a LubeCon chain lubrication system utilizing Castrol Magna SW D-220.
- A centralized tank was positioned outside of the actual production area. This tank supplies oil to all three chain systems which eliminates the need for craning drums to each chain system.
- Each chain system has three separate lubrication assemblies. One assembly lubricates the chains while the other two systems lubricate the wear rails.
- An ISO 220 way oil was chosen due to the coherent properties of the oil.

#### THE SOLUTION

- **Magna SW D-220 was introduced to minimize wear on the rails and increase chain life due to its extreme pressure additives package and adhesive properties.**
- **The chain lubrication system is monitored by Castrol's LubeCon Technical Sales representative via weekly system inspections.**

CASE STUDY

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**The installation of the Castrol LubeCon chain lubrication system and Castrol Magn SW D-220 contributed to a reduction of 2,776 gallons of oil per month for the lubrication of the three chain systems.**

**Prior conditions**

Shell-inserter chain system used one 55 gallon drum per 8 hour shift.

Bar-inserter chain used one 55 gallon drum per week.

Stripper chain used one 55 gallon drum per week.

Weekly usage was 1,210 gallons or 22 drums.

Monthly usage was 4,840 gallons or 88 drums per month.

**Prior monthly spend on lubrication: \$26,862**

**Current conditions**

Shell-inserter chain is set to lubricate at 1 minute on and 8 minutes off.

Bar-inserter chain is set to lubricate at 1 minute on and 2 hours off.

Stripper chain is set to lubricate at 1 minute on and 32 minutes off.

Weekly usage is 516 gallons or 9.3 drums.

Monthly usage is 2,064 gallons or 37.5 drums.

**Current monthly spend on lubrication: \$23,054**

**Estimated monthly cost savings: \$3,807.12**

**Estimated annual cost savings: \$45,685.44**

**Additional non-measurable savings and cost avoidance**

Less water contamination to treat.

Regular onsite Castrol technical support to ensure control of cost and program success

Elimination of craning drums to each chain system

**CASE STUDY**

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