

CHAIN WEAR REDUCTION

Dicronite® was proven to reduce chain wear and extend maintenance intervals

BACKGROUND

A major roller chain manufacturer wanted to reduce chain wear and extend maintenance intervals. They aimed to minimize costly down time caused by the need to frequently re-lubricate equipment.

TESTING

A set of control chains was lubricated with heavy-duty wet lubricant (HD-4); a second set was prepared with Dicronite® dry lubrication and the heavy-duty wet lubricant (Dicronite® + HD-4).

The chains were then tested at:

- ambient temperature,
- a speed of 798 feet per minute, and
- under an applied load of 533 pounds per strand of chain.

Chain elongation measurements were taken at 50 pounds per square inch gauge pressure.

RESULTS

Testing was stopped at 132 hours (versus the planned 150 hours) due to one of the control chains breaking for a second time. Two parameters were measured at the 132-hour mark: the number of dry joints and chain elongation.

On average, the chains with Dicronite® had 42% less elongation than the control group. When comparing the best performing chain from each group, the Dicronite® coated chains displayed 51% less elongation. In addition, the Dicronite® chains averaged fewer dry joints.

Adding Dicronite® resulted in longer chain life, lower operating temperatures, less down time, and extended maintenance intervals.

