

# Chain Wear Reduction

## Situation:

A major roller chain manufacturer wanted to reduce chain wear and extend the re-lubrication interval.

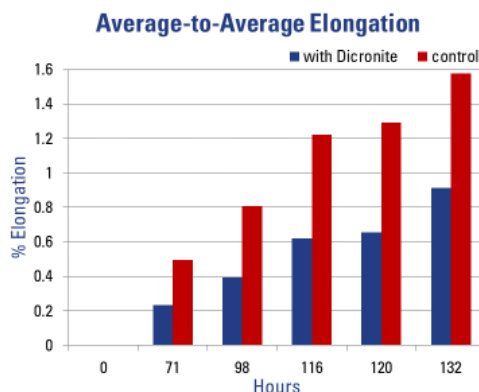
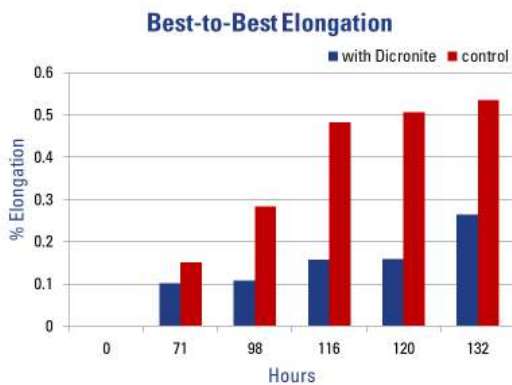
## Testing:

A set of control chains were lubricated with heavy-duty wet lubricant, and a second set were prepared with **DICRONITE<sup>®</sup>** dry lubrication and the heavy-duty wet lubricant.

The chains were then run at:

- ambient temperature,
- 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 a 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<sup>®</sup>** had 42% fewer dry joints versus the control group of only heavy-duty wet lubricant. The **DICRONITE<sup>®</sup>** chains also displayed an average of 42% less elongation, 51% less elongation when comparing best performing from each type, and 90% less chain wear in the best case.

This translated into longer chain life, increased gear life and lower operating temperatures. Adding **DICRONITE<sup>®</sup>** dry lubrication resulted in less down time and extended maintenance intervals, which reduced overall costs for their customers and enabled the manufacturer to charge a premium.