

Challenges

A customer was planning on implementing new chemistry rolls with expected higher friction in its 7 stand 84" hot mill with 5 roughers. A competitive lubricant had been used in the past but experienced the following problems:

- **Severe slipping**
- **Severe peeling issues with certain lubricants**
- **Significant mill stability issues with little benefit**

To help improve their operations Quaker proposed using QUAKER QUAKEROL® HB-9 a high performance, cationic rolling lubricant.

In addition to the QUAKER QUAKEROL® HB-9 Quaker proposed the use of a back-up roll application for a POP on F2 and Quaker's Mobile Industrial Dispersion Application System (MIDAS) to achieve the full benefits of QUAKER QUAKEROL® HB-9. Quaker wanted to show that by using QUAKER QUAKEROL® HB-9 and installing a MIDAS System there would be visible improvements in the following areas:

- **Load reductions (reduction in oil concentration)**
- **Reduction in roll peeling**
- **Reduction in salt and pepper scaling/defects**



Competitor's
Oil Consumption

Quaker's
QUAKER QUAKEROL® HB-9
Consumption

Providing Solutions

Since switching to QUAKER QUAKEROL® HB-9 and placing a permanent MIDAS system on F1-F3, the hot mill has seen drastic improvements in its operations in the following areas:

- **Significant load reductions**
- **Reduction in peeled rolls**
- **Reduction in scale defects**
- **Reduction of acid concentration on the pickle line without losing quality**

10-V001

Product Description

QUAKER QUAKEROL® HB-9 is a blend of sulfurized esters and petroleum oils. A combination that provides high temperature and extreme pressure lubrication, and anti-wear properties for load reductions and improved roll life in the hot rolling of steel strip and structural shapes. This product exhibits excellent dispersion characteristics in a wide range of water chemistries, and is typically dispersed at 0.3% in water.

The Quaker Mobile Industrial Dispersion Application System (MIDAS) is an extremely accurate, positive displacement pump system which can stand alone or be tied into level two control systems. The system helps hot mills to achieve all the benefits from the QUAKER QUAKEROL® hot rolling lubricants.

Process & Equipment

HOT MILL WITH 5 ROUGHERS

Operation:	7 stand 84" Finishing Mill
Capacity:	3,800,000 tons per year
Lubrication:	Lubricant Applied on three Stands (F1-F3) F4 Being Considered for Expansion
Application:	Mobile Industrial Dispersion Application System (MIDAS)

Product & Process Expertise

When applied properly, roll-bite lubricants represent a very minor part of the costs in the steelmaking process, typically less than 1%. Investment in application and control equipment pays for itself quickly. The impact of roll-bite lubrication is usually a multiple of the fluid and equipment costs making the price virtually irrelevant. That's why Quaker focuses on developing products with the highest performance without compromise. Solutions that sharpen your competitive edge.