

### Challenges

A hot mill customer was experiencing problems with its current operations and was looking for improvement in the following areas:

- **Electrical power**
- **Productivity**
- **Work roll wear**
- **Strip quality**

To help improve their operations, Quaker proposed introducing a roll-bite lubrication system including a product from its QUAKER QUAKEROL<sup>®</sup> HB Series of hot mill lubricants. The application system included separate wipers, headers and control equipment to assure proper application of the lubricant.

### Providing Solutions

The introduction of a back-up lubrication system and the QUAKER QUAKEROL<sup>®</sup> HB Series resulted in the following benefits:

- **Fewer cold mill defects**
- **Easy operator acceptance**
- **Higher quality strip**

#### Additional Savings Replacing Competitive Technology

Lubricant Cost Savings	\$1,000,000
Waste Treatment Savings	\$ 648,000
<b>Total Gross Savings</b>	<b>\$1,648,000</b>
<b>Total Savings Per Ton</b>	<b>\$0.43</b>

Composite Average Annual Savings: Integrated Mill	
Electrical Power	\$320,816 (10-20% reduction)
Work Roll Life	\$366,277 (if practices are modified)
Back-up Roll Live	\$878,182 (if practices are modified)
Grinding Shop	\$1,363
HSM Productivity	\$2,432,000 (roll change delay savings)
Pickle Line Productivity	\$4,983,000 (elimination of wear scale)
Pickle Line Acid	\$453,000 (if practices are modified)
<b>Total Gross Savings</b>	<b>\$9,434,638</b>
<b>Gross Savings per Ton</b>	<b>\$2.69</b>

### Product Description

The QUAKER QUAKEROL<sup>®</sup> HB Series of products utilize a unique and proprietary chemistry that relies on highly effective surface active components that provide a sacrificial conforming layer on work rolls and back-up rolls that significantly extend roll surface life.

### Process & Equipment

#### HOT MILL

<b>Operation:</b>	7 Stand Finishing Mill
<b>Capacity:</b>	6,800,000 metric tons per year
<b>Lubrication:</b>	Lubricant Applied on three Stands (F2-F4) and on 50% of production
<b>Application:</b>	Dedicated Wiper and Header System

### Product & Process Expertise

When applied properly, roll-bite lubricants represent a very minor part of the costs in the steel making 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.