CASE STUDY

ALUMINUM HOT ROLLING
QUAKEROL® AHR 301

CHALLENGES
A manufacturer of aluminum sheets and coils requires high quality standards at all levels due to a focus on aerospace applications. In the breakdown mill process, a soap based emulsion was causing issues including:

- Stains on the rolled aluminum
- Dirt buildup in the mill
- Tankside additives needed

Additionally, the company did not have any product support from their supplier.

THE SOLUTION
In a trial opportunity, Quaker Chemical Corporation (“Quaker”), proposed the hot rolling oil, QUAKEROL® AHR 301, an ester based product with a reduced amount of soap content, which was specifically formulated to the aluminum manufacturer’s process requirements.

Once implemented, the performance of QUAKEROL® AHR 301 resulted in improvements:

- Better rolled aluminum quality
- No occurrence of staining leading to reduced internal scrap and customer quality rejections
- Cleaner mill which reduced mill cleaning downtime

Quaker was able to offer more extensive support throughout the trial with regular meetings and sample analysis to follow up the situation.

PROCESS AND EQUIPMENT

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THE EXPERTISE
Rolling and casting lubricants represent a very minor part of the costs of producing quality aluminum sheet, typically considerably less than 1%. This case illustrates the importance of using the leverage of advanced lubricant technology to achieve consistent performance while at the same time reducing total applied costs. That is why Quaker focuses on developing products with the highest performance without compromise, products that sharpen your competitive edge.

THE PRODUCT
QUAKEROL® AHR 301 is a rolling oil lubricant with the features of excellent lubrication properties and compatibility with the mechanical parts of the rolling mill and with most standard water treatment processes. It provides benefits including:

- Strong “oil film body” in the roll bite generating an excellent surface quality
- Good “plate-out” assuring the oil film in the roll bite

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