

Hysol MB 10 Eliminates Build-Up on Rolls

METALS (USA)

Tube Manufacturing
Castrol Hysol® MB 10

Clean Rolls When Processing Hot Rolled Steel



THE SITUATION

A West Coast tube mill was having issues with their synthetic tube mill coolant. The coolant was not keeping the rolls clean when the mill ran hot rolled steel. This left roll marks on the tube which interrupted the surface and caused corrosion.

BEFORE

- Synthetic coolant in use
- Build-up on rolls when running hot rolled steel
- Surface defects on the tubes
- Occasional corrosion due to these surface defects

AFTER

- Hysol MB 10 semi-synthetic, bio-resistant coolant
- Eliminated build-up on rolls
- Surface imperfections eliminated from the tube
- Overall mill cleanliness improved

THE SOLUTION

- Hot rolled steel has large amounts of oil and smut from the steel-making operation.
- In order to keep the rolls clean, a high detergent coolant is needed to remove the oil and smut from the rolls.
- Hysol MB 10 has very good detergency to keep rolls clean.
- Hysol MB 10 is a semi-synthetic with good oil rejection properties, so the existing oil skimming equipment continued to work well.
- The tube surface was no longer interrupted, so the inhibiting film left behind protected the tubes from corrosion. No incidences of corrosion have been reported.

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RECOMMENDATIONS

Hysol MB 10 can be used in tube mills processing ferrous and coated metals. When running hot rolled steel through a tube mill, skimming equipment is required to remove the tramp oil and provide long coolant life. Typically, hot rolled steel will have 3 times the volume of oil on the strip as compared to cold rolled steel. This is due to the hot rolling process where a scale layer is formed on the steel surface. This scale will absorb oil into the layers and provide a corrosion film. When processing the hot rolled steel, some of the scale will flake off and release the oil. If a roll is rough due to build-up, it will remove all the scale, leaving the metal surface bare and allowing corrosion to occur. Keeping the scale on the surface of the hot rolled steel is essential in this process.

CONCLUSION

Hysol MB 10 has a high level of detergency to successfully run hot rolled steel in a tube mill. It effectively eliminates the build-up of scale from the hot rolled steel on the roll surface. Hysol MB 10 also provides good biological control where many tube mill coolants lack this property when running hot rolled steel. The coolant needs to be high performance in order to prevent the scale build-up on rolls and to handle the high amount of tramp oil.

The Hysol MB 10 is an excellent fit for the processing of hot rolled steel in a tube mill.



OTHER POTENTIAL APPLICATIONS

Hysol MB 10 has excellent results in tube mill applications across the country. In addition, it can be used as a light to medium duty cutting fluid on ferrous metals. Hysol MB 10 has excellent biological resistance and corrosion inhibition.