

Improved Surface Finish, Corrosion Control and Mist

MEDICAL TECHNOLOGY (USA)

Medical Component Manufacturing

Castrol Hysol® MB 50

ANNUAL SAVINGS: \$12,000



THE SITUATION

A medical component manufacturer produces stainless steel (304 & 316) and titanium (6AL4V) medical devices from rod, wire & tube using a centerless grinding process. Machines are Cincinnati-type with limited mist collection and guarding.

The customer was struggling to maintain surface finish on critical parts and additionally was experiencing corrosion of the machines and lots of mist in the environment.

BEFORE

- Coolant M in use, leaving heavy residues and corrosion on machines & measuring devices.
- Operators were struggling to maintain critical surface finishes.
- Mist was very prevalent over all machines, creating low operator moral.

AFTER

- Hysol MB 50 running at 5-6% has completely cleaned up the machines and virtually eliminated the mist and corrosion.
- Operators are happy and we have exceeded the expectations by obtaining 4 RMS finishes.

THE SOLUTION

- Conversion to Hysol MB 50 solved several issues, including mist, corrosion, and quality problems.
- Aesthetics of the finished parts were also noticeably better, as commented by the customer.
- Although not required by this manufacturer, they were comfortable to see the fluid was chlorine-free and had BSE compliance (bovine-free).
- Savings were generated with lower scrap, reduced coolant usage / waste, and greater machine uptime.

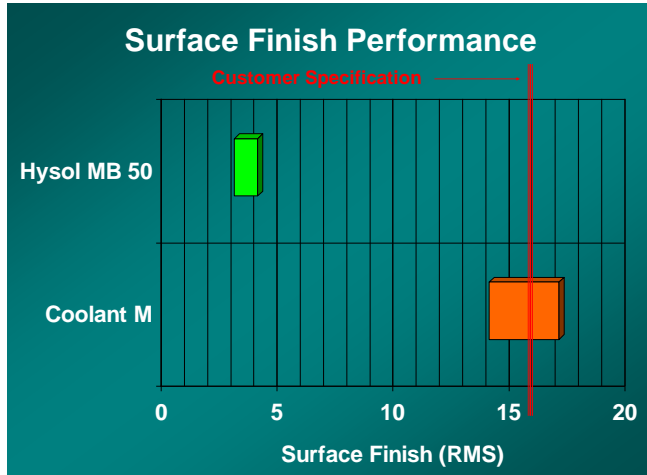
• Due to it's multi-purpose functionality, Hysol MB 50 is a perfect fit for medical device manufacturing.

• BSE compliance provides added 'peace of mind' while obtaining medical approvals.

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RECOMMENDATIONS

Some of the customer's surgical devices require mirror-like finishes and are easily "burned" if the coolant and abrasives are not perfectly suited. Stainless steel catheters had the biggest surface finish problems with the previous coolant. Hysol MB 50 is able to routinely outperform the finish specification by a significant amount.



CONCLUSION

Castrol Hysol MB 50 delivered numerous improvements to the customer's operation including: improved finishes (lower scrap rate), elimination of corrosion, significant reduction in mist, and reduced coolant usage & waste. In addition, the final aesthetics of their parts were noticeably improved.

The results were a worry-free grinding process and \$12,000 in annual savings.

"I was having trouble maintaining 16 RMS surface finishes. Now I am consistently getting 3-4!"

- Machine Operator



OTHER POTENTIAL APPLICATIONS

Hysol MB 50 has excellent performance in multi-metals including difficult materials such as stainless steel, titanium, inconel, and Rene. This makes it suitable for many industries including medical technology and aerospace.