

Alusol AU 70 Exceeds Surface Finish Requirements

MACHINERY MANUFACTURING (USA)

Precision Instruments

Castrol Alusol® AU 70

Eliminates Dermatitis and Improves Finish



THE SITUATION

A precision instrument manufacturer for scientific equipment needed better surface finish than the current coolant was providing. The existing fluid also entrained tramp oil to a level that created residues unacceptable to the plant and left some workers with skin irritation.

BEFORE

- Poor surface finish on parts
- Entrained tramp oil into solution
- Residues left on machine and parts
- Dermatitis issues with some operators

AFTER

- Excellent surface finish on all parts
- Better tramp oil rejection
- Eliminated residues in machines and on parts
- Eliminated dermatitis issues in the plant

THE SOLUTION

- This customer machines a large variety of materials including Aluminum, Stainless Steel, Nickel, Copper, Brass, Inconel and Plastic.
- The machining operations include milling, drilling, turning, tapping and polishing.
- Alusol AU 70 produces excellent surface finishes in all cases.
- The Alusol AU 70 has a tight emulsion and rejects tramp oil better than conventional soluble coolants.
- Alusol AU 70 is very clean running and reduces or eliminates residues on parts and in machines.
- Dermal issues are often caused by poor settling of fines and biological growth. The Alusol AU 70 resists the biological growth and has fast settling of fines.

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RECOMMENDATIONS

While this customer handles a number of different metals, their 1100 series Aluminum (nearly pure aluminum) is particularly difficult due to its very gummy nature. Alusol AU 70 has given them the best finish they have ever seen on this material.

Alusol AU 70 is run at 7 to 8% concentration in multiple Fanuc Robodrill and Haas machines. It has achieved excellent surface finish results in all cases.

**“We have never seen our
1100 series Aluminum have
such a nice finish.”**

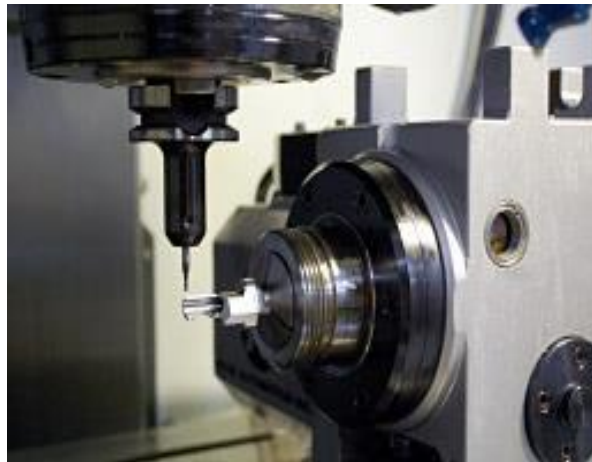
– Plant Owner

CONCLUSION

The Alusol AU 70 exceeded the customer's surface finish expectations and allowed feeds & speeds to be increased in some operations. In addition, it eliminated the operator dermatitis and residues on machines & parts while reducing the coolant usage.



Milling operation



OTHER POTENTIAL APPLICATIONS

Alusol AU 70 was designed to maximize machining performance in a wide variety of different applications and materials. In addition, it was formulated to be clean running, provide low usage, and resist bacterial growth.