

# One Coolant for the Entire Shop

## Power Generation (USA)

Multiple Parts and Metals

Castrol Alusol® SL 61 XBB

**Annual Savings: \$37,638**



### THE SITUATION

A customer doing precision machining and grinding for power generation markets was experiencing issues with their coolant. The issues included poor bio-stability, sump life and part quality. The customer was also looking to standardize on one metalworking fluid for the entire shop and possibly improve tooling performance. The metals machined include Inconel, stainless steel, and aluminum.

### BEFORE

- Previous coolant would only last 9 months between changes
- Fluid odor and poor part visibility led to poor operator acceptance
- Part quality issue – copper staining
- Tool life – 1,374 rough end mills used annually

### AFTER

- Improved operator acceptance – no odors & excellent part visibility
- Improved part quality – reduced copper staining
- Tool life – 948 rough end mills used annually (**31% reduction**)
- Sump life improved to **12+ months**

### THE RESULTS

- **Coolant Usage:** We were able to eliminate the use of a chlorinated lubricity additive, which was needed with the previous fluid. Overall usage was reduced by 15%.
- **Operator Acceptance:** Conversion to Alusol SL 61 XBB eliminated sump odors. Cleanliness was drastically improved, so operators can now easily see through the machine windows. Machine cleaning times have been immensely reduced.
- **Part Quality:** Reduction in copper staining.
- **Sump Life:** Sump life has gone from every 9 months to at least 12 months and likely longer. This has eliminated almost 4,000 gallons of diluted coolant from going into the waste stream.

- **Eliminated additive usage**
- **31% improvement in tool life**
- **15% reduction in coolant usage**

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## RECOMMENDATIONS

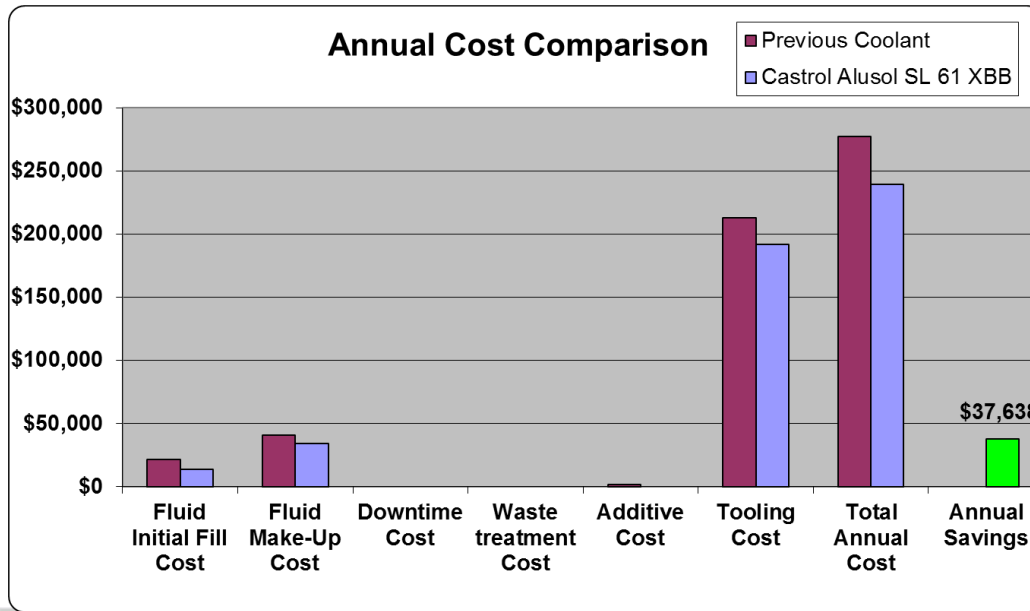
Castrol recommended the use of Alusol SL 61 XBB as a total shop replacement for all the competitor fluids that were previously being used.

Fluid cleanliness and regular concentrate additions were other key elements to extending the sump life. Tools and parts must be kept clean to maintain good part finish. This approach has been successful with regular support and interaction with the customer.

## CONCLUSION

Alusol SL 61 XBB has delivered value across the board from eliminating part quality issues, biological concerns, additive usage, improving tool life, improving sump life and reducing overall coolant usage.

**The result is an annual savings of \$37,638 in coolant and tooling.**



## OTHER POTENTIAL APPLICATIONS

Alusol SL 61 XBB is a high performance semi-synthetic coolant capable of grinding, drilling, tapping, milling, honing, reaming, broaching and other difficult operations on a wide variety of metals.