



CASE STUDY



NORTHERN GEORGIA STAMPING PLANT 50% REDUCTION DOWNTIME & CYCLE TIME

Situation Summary

- This company is using Oemeta Novamet 910 at 10% concentration. They are experiencing foaming issues, which appears to contribute to a reduction in tool life and adding to cycle times. Currently cycle time is 8 hours per die with an added 4 days due to 3rd party heat treating process.
- Test machine is a Haas VF4.
- Metals machined: A2 tool steel, hardened A2 tool steel (58 Rockwell), aluminum

Customer Stated Goal

- Minimization of downtime, currently 4 days due to idle machine during 3rd party heat treat process
- Decrease in cycle time, currently at 12 minutes
- Increase in tool life
- Coolant usage reduction
- Elimination of foam

Steps To Solution

Benz recommended the use of **BENZ KOOL 1300** to accomplish the stated customer goals. **BENZ KOOL 1300** is a high performing semi-synthetic with multi-metal capabilities that is designed to provide optimal tool life and surface finish. The product has shown to be very low foaming in deionized water.

Results

- Downtime decreased to 2 days -- 50% reduction -- allowing production increase due to machine availability. Current cost is ~\$1000/day per press. **BENZ KOOL 1300** reduced the time through an increase in speeds and feeds and reduction in machining time to produce a die.
- Cycle time compressed to 6 minutes per die -- 50% reduction -- due to reduced finish-passes needed. This was accomplished with an escalation of lubricity to the cutting tool allowing for more aggressive cuts and an improvement in surface finish.

- 40% faster runs with better tool life, cutting, and tapping capabilities in A2 tool steel mostly due to cooler tools.
- Potential savings of \$10,000 per 10 business days
- 20% increase in speeds & feeds in hardened A2 tool steel in a post heat treating process.
- **BENZ KOOL 1300** running at 8% versus 10% for the competitor. This leads to less fluid waste and cost to dispose of the fluid.
- Elimination of foam allowing improved visibility of production process
- Drier chips leading to the potential for easier processing and higher value from scrap recyclers

"The coolant has very little foam which allows me to see what material is being removed. My tools run cooler which has allowed me to increase my feeds and speeds by 40%. In a stamping plant, time is money and the reduced machining times for replacement forms is a great help. I can hit part tolerances quicker because now I don't have to run as many finish-passes. My cutters, endmills, and taps now have greater life to them, which reduces tooling cost. It's a great multipurpose coolant. I've ran it with aluminum, brass, copper, 1018lcs, and A2 steel without any problems.

*I highly recommend **BENZ KOOL 1300** for any shop that's looking to save money and reduce cost."*

— Tool & Die Manager