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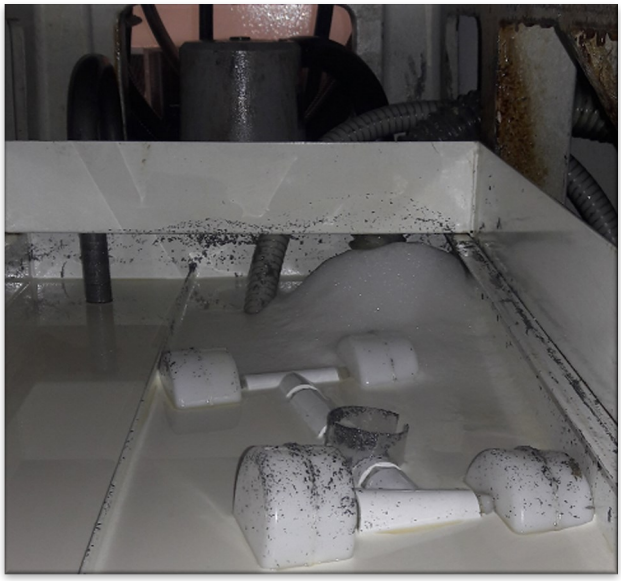
Accelerating Performance

TECH TIPS

Foam Control

Foam in a metalworking fluid system is unconducive to the machining process. First and foremost, air does not provide lubricity or cooling to the workpiece. Additionally, air entrainment can promote premature pump failure and create spills - both of which generate significant downtime. Determining the source of a foam issue can ultimately fix the problem and relieve the headaches in the workplace.



Types of Foam Generation

Foam generation in a coolant system occurs by one of two modes - **chemical or mechanical:**

Chemical Foam Generation

Product Type: Some coolants are inherently more susceptible to foam generation than others. Ask your sales representative to make sure your product meets the needs of your application.

Too High Concentration: If the concentration is too high, foam is likely to develop. Lean out over time and monitor to see if the issue persists.

Water Too Soft: Anions and cations present in hard water help break down foam. If a system is initially charged with deionized water, foam can develop.

Cleaner Contamination: Cleaners contain surfactants that have the tendency to foam up. Make sure residual cleaner is rinsed thoroughly from the machine before charging with coolant.

Mechanical Foam Generation

High-Pressure System: Some fluids are delivered to the tool and workpiece at high pressures. Make sure your fluid does not foam at high pressures.

Low Fluid Level in Sump: The intake line for the recirculation pump must be below the fluid height in the sump to ensure no air is being pumped through the lines.

Small Sump Size: Small sump sizes do not allow foam to completely dissipate in a coolant system. Additionally, heat generated during the machining process does not diminish, which further promotes foam generation.

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