

# Cross Manufacturing Installs ZGF Systems on Central Coolant System

## Improved Surface Finish & Wheel Life; Reduced Maintenance

The Most Advanced, Automatic,  
Non-Disposable Liquid Filtration System

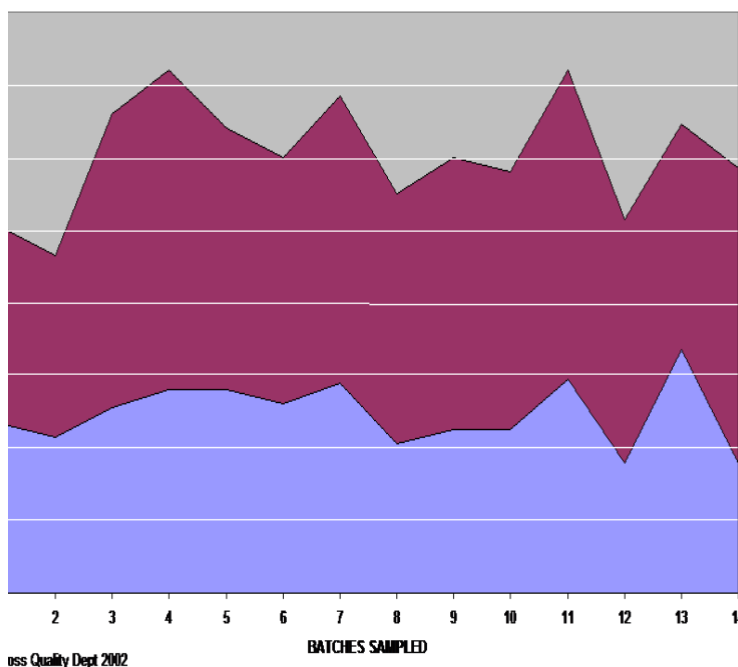


Metalworking



ZGF Maggie and Phoenix Central Coolant System designed to deliver 127 gpm of clean coolant to 11 double disc grinders

SURFACE FINISH DISCRETE MACHINE FILTERS V CENTRAL FILTRATION



oss Quality Dept 2002

The ZGF system is providing significantly cleaner coolant resulting in dramatically better finish quality. Before ZGF implementation the CLA was in the 10 - 14 range. After implementation the CLA was in the 4 - 6 range.

### Customer Challenge

Cross manufactures sealing rings for the aerospace industry. The manufacturing process requires grinding. Filtration systems were installed at each grinder. The existing filtration systems required regular maintenance and the coolant cleanliness was causing quality issues.

### ZGF Solution

Zero Gravity Filters (ZGF) installed a 127 gpm, fully automatic central coolant system that included one Maggie automatic magnetic separator and five Phoenix automatic filters [(1) Phoenix with 35 $\mu$  Spring Filter elements and (4) Phoenix's with 25 $\mu$  Spring Filter elements.]

Dirty coolant is pumped through Maggie into a semi-clean tank. The semi-clean coolant is then pumped through the Phoenix filters and into a clean tank. The clean tank coolant is pumped to the grinders. The ZGF Maggie system is designed to remove scale on a continuous basis from the quench water with virtually no operator involvement.

### Results

- Maggie removes up to 11 pounds of grinding swarf every 12 hours.
- The Phoenix filters remove the residual abrasive / grinding wheel material that passes through Maggie.
- Significant improvement in surface finish. With the old filtration, CLA ranged from 10 to 14. With the ZGF system, CLA is in the 4 to 6 range. (See CLA Chart on left.)
- Eliminated problematic defects termed "swipes" or "flicks" that had been impacting 3 - 5% of the rings.
- Consistent coolant temperatures and pressure
- Increased time between grinding wheel dressings by more than 20%.
- Eliminated weekly and quarterly coolant dumps
- Reclaimed 280 ft<sup>2</sup> of production floor space.
- Implementation of the ZGF Maggie and Phoenix central coolant system has:
  - ✓ Significantly reduced operating costs
    - Virtually eliminated routine maintenance
    - Extended coolant life
    - Extended grinding wheel life.
    - Reduced waste generation and disposal
  - ✓ Improved quality / surface finish
  - ✓ Increased productivity