

**Client:** Parts Manufacturer

**Location:** NC

**Report:** C-215

**How KPI driven execution translates into increased OEE and overall cost reduction**

**Background:**

With over 40 CNC machining sumps, our client had used a chemical management company to take care of all their coolant sumps, coolant recycling and machine PM clean outs. The program relied primarily on Time-Based checks and corrective actions to keep the fluids operating. Their goal was to move to a more data driven program where analysing process KPI's allowed for tighter process controls while identifying opportunities for continual process improvement. They selected Zimmark's Technical Process Management Service due to our focus on data driven execution as well as the strong compliance systems and specialised expertise we provide for Metal working fluid applications.

**Strategy:**

As with every new service, Zimmark's KPI-based programs focus first on measuring the capabilities of the existing process (ie products in use, infra structure in place, control plans being utilized, volatility, waste etc.), to determine where the opportunities are for improvement and cost reduction. Our 1st priority was concentration management.

Upon implementing our service, we identified a significant range in fluid concentration from sump to sump. Though the target concentration was 9%, we found highs of 21% and lows of 4% with an overall range of 17% in the plant. This sump to sump volatility meant that some of the units were at risk due to low concentration (ie rust, bacterial/fungal growth, poor tool life) while others were at risk due to high concentrations (ie waste, dermatitis, poor tool life etc.)

Applying Zimmark's Z-TPM program we focused our efforts on improving process compliance by establishing dynamic control plans that defined the KPI's that needed to be measured and at what frequency. By implementing timely corrective actions and adjusting the infrastructure, process stability improved significantly. Not only did this translate into product savings, but it also significantly reduced the risk associated with fluid related OEE concerns (quality, availability or speed due to poor fluid condition).

**Results:**

After our first three months of service:

Parameter	Jun-17	May-17	Apr-17
Average Concentration	9.5%	10.4%	10.5%
Concentration Range	9.2 %	14.0 %	16.9 %
Control Plan Compliance	94%	90%	88%
Coolant Savings vs. Historical	50%	30%	10%

Despite already having a coolant recycling system in place and relying on a chemical management company to maintain their machining sumps, by applying rigorous KPI-based process controls, we were able to reduce coolant consumption by 50% vs. their historical consumption rates (same coolant, same production levels).

Coolant savings aside, KPI based condition management treats each sump independently allowing us to optimize individual systems and use performance data to continue to improve. OEE improves while overall consumables costs are optimized (by eliminating waste and wasteful activity).

