

CASE STUDY

MOVING YOUR WORLD



Optimised, automated titanium machining

Application: ECOCOOL GLOBAL 2500

Location: United Kingdom

Customer

A prominent aerospace and defence component manufacturer, specializes in forging Titanium & Aluminium parts. Precision machining operations play a critical role in delivering high quality components.

Challenge

The customer encountered a persistent issue with excessive foaming while using a competitor's coolant. This foaming led to frequent machining & manufacturing stoppages, resulting in costly downtime. The situation was exacerbated by frustrated operators who had to clean up coolant spills on the shop floor. The customer's CNC machining centre, equipped with robotic automation, could run unmanned for up to 12 hours. However, the foaming coolant cascaded out of the machine coolant sump, creating an unsafe environment for operators when they needed to intervene. Additionally, the high coolant concentration caused residue build-up around the machining centre, affecting overall cleanliness.

Solution

ECOCOOL GLOBAL 2500, a heavy-duty water-miscible cutting and grinding fluid, was specifically designed for challenging aluminium applications however, its effectiveness extends to ferrous and other metal materials as well. It offers significantly improved foam control, eliminating production stoppages.

Results

The absence of coolant foam-overs (No production stoppages due to foaming, resulting in uninterrupted machining) led to a 20% reduction in coolant consumption which translated to significant cost savings. Due to ECOCOOL GLOBAL 2500's high cutting performance the fluid concentration could be safely reduced from 13% to 8%. The machining areas became cleaner, allowing operators to see through the glass and monitor operations effectively. Operators appreciated the near-odourless, low-foaming coolant. FUCHS Smart Service educated the customer's production team on best practice coolant management practices. With proper management, the customer achieved a 12-month sump life or beyond. In summary, ECOCOOL GLOBAL 2500 transformed the machining process, ensuring safety, efficiency, and cost-effectiveness.

Advantages

Improved machine cleanliness

Improved sump life

Reduced foaming

Reduced downtime

Reduced odour

Reduced concentration: 13% to 8%

Reduced consumption by 20%

Best practice training

Cost savings

