

Metalworking Fluid Performance Test Rig

CAPABILITY SHEET - TAPPING-TORQUE, CORROSION-BREAKPOINT AND STABILITY STATIONS - DELIVERED CLASS

THE SYSTEM

WHAT	Laboratory rigs that rank cutting and grinding fluids by machining performance - tapping torque, corrosion breakpoint, foam and stability.
OUR ROLE	Stations and fixtures, torque metrology, dosing and verification, corrosion and stability benches, DAQ and ranking software, calibration, AMC.
STATUS	Delivered against a won order for an oil-marketing major's laboratory; engineered to order for the class.

THE GOVERNING IDEA

JUDGED AT THE TOOL, NOT IN THE BOTTLE	In the bottle viscosity do not rank a cutting fluid - machining performance does, via the tapping-torque test of ASTM D5619.
EFFICIENCY AGAINST A REFERENCE	Standard tap cuts a standard thread; the candidate is expressed as a torque-efficiency percentage against a reference fluid.
A FEW PERCENT DECIDES	The differences worth money are small - so the rig's whole discipline exists to keep its own noise smaller.

THE MACHINE

THE CONSUMABLES ARE THE CALIBRATION	Calibration plate metallurgy drifts, reference fluid ages - lots tracked, order randomised, reference brackets run.
CONCENTRATION VERIFIED	Every batch mixed to specification, refractometer-checked and temperature-held - the hidden variable made visible.
BREAKPOINT BY CHIP TEST	IP 287 / ASTM D4627 - cast-iron chips at stepped concentrations find the concentration below which rust appears.

DISTINCT & HONEST

SERVICE BEHAVIOUR ON THE BENCH	Fluid and emulsion stability beside the machining station - a fluid that cuts well and foams in the sump fails in service.
UNCERTAINTY WITH EVERY RANKING	Rates and brackets reported - a ranking without an uncertainty is an anecdote, and formulation decisions get audited.
ENGAGEMENT	Send the methods, the fluid family and the throughput to sales@neometrixgroup.com for a compliance matrix in two working days.

DEFENCE PROGRAMMES DESK

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