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COOLANT SWITCH IMPROVES ODOUR, CLEANLINESS AND USAGE RATES

Since replacing its previous coolant with TRIM® MicroSol® 585XT from Master Fluid Solutions, McAuley Engineering has not only solved previous issues surrounding bad odour and poor cleanliness, but reduced usage considerably. Where a single IBC of the company's previous coolant would only last six weeks, one IBC of Microsol 585XT is lasting for an impressive four months.

McAuley Engineering, which is based in Ballymoney, Northern Ireland, was founded in 1997 and built on a foundation of integrity and product quality. The company has continually invested in equipment, processes and people, and is today one of the largest employers in the region.

"Although we weren't particularly looking to change our coolant, we were aware of the strong odour being created in the machine shop," explains Dale Kirkwood, ISO Co-ordinator at McAuley Engineering. "Furthermore, the coolant was leaving heavy oily residues on the windows of our machine tools, which was making it difficult for operators to see the cutting zone."

With these concerns in mind, the company spoke with its tooling supplier, Advanced Cutting Tools (ACT), which is a premier distributor of Master Fluid Solutions' products, to see if a solution could be found.

"I visit McAuley Engineering approximately twice a week as part of our service supplying cutting tools," says Oral Worthington, Area Sales Manager at ACT. "After speaking with Dale we contacted Master Fluid Solutions and they recommended commencing a trial based on the use of TRIM® MicroSol® 585XT."

Based on this recommendation, McAuley Engineering agreed to switch the coolant in one of its machines to TRIM® MicroSol® 585XT and monitor performance over a four-week period. Materials being machined at the time of the trial included aluminium, steel and some titanium, typically in the form of either billets or castings. The running concentration for TRIM® MicroSol® was 8%, while top up was 2%.

TRIM® MicroSol® 585XT, which holds approvals with major aerospace companies, provides the performance of a premium soluble oil with respect to tool life and minimising residue on machines, parts and workholding equipment. This cutting fluid concentrate is a high lubrication, semi-synthetic micro-emulsion that provides excellent cooling and mechanical lubrication without chlorinated or sulphurised EP additives. In the production of aerospace parts this factor is particularly important as materials such as titanium alloys are poor thermal conductors. The heat generated during the cutting process can therefore dull cutting tools very quickly, so good lubrication is essential to extending tool life and reducing process costs.

Extremely tolerant to hard water, TRIM® MicroSol® 585XT is also low foaming for use in modern, high-pressure CNC machine tools.

“At the end of the trial, we had a meeting with McAuley Engineering and Master Fluid Solutions, and such was the success of the product that it was agreed to convert all 19 machines to TRIM® MicroSol® 585XT,” says Mr Worthington.

Mr Kirkwood adds: “During the trial we noticed a vast improvement - the previous bad odour had gone completely. In addition, the product is so clean that the operator could see clearly through the machine window, which really helps in set-up and operations.”

What McAuley Engineering did not foresee, however, was the dramatic reduction in usage resulting from changing its entire machine shop to TRIM® MicroSol® 585XT. Previously, one IBC of coolant would last approximately six weeks. However, after implementing the change, the machine shop not only remains free from the foul odour, but operators are seeing improved tool life and a reduction of coolant usage to one IBC every four months.

Ultimately, McAuley Engineering is enjoying far better working conditions combined with significant cost savings.

-ENDS-

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