

Ref: MAST\115

Date of issue:

FOAMING PROBLEMS OVERCOME BY MASTER CHEMICAL SOLUTION

Problems associated with coolant foaming during high pressure waterjet deburring operations have been overcome in the manufacturing plant of a leading ABS component producer thanks to TRIM® 9106 synthetic coolant supplied by Master Chemical Europe Limited.

In the German based plant, drilled aluminium blocks are deburred by the waterjet process but as the operation is undertaken at 350 bar (5000psi), traditional coolants added to the water were creating foam. This was becoming a major problem.

Foam was overflowing from the coolant tanks and plant management was concerned by potential environmental problems within the factory and with operator safety during cleaning operations.

Although the coolant plays no cutting role in the deburring operation, it is necessary to provide machine protection, maintain a good surface finish on the components and protect against corrosion.

All foaming problems are now overcome in the operation having converted from conventional cutting and grinding fluids to TRIM® 9106 used at a 2% dilution. The deburring water was also changed to mineral-free water from the plant's existing D.I. source with product finish unimpaired and a high level of operator acceptance.

Contd./...

MAST\115 Page 2

As Ray Weaver from Master Chemical's European HQ in Suffolk explains, in overcoming foaming at such high pressures, TRIM® 9106 has created a unique solution.

"Traditionally, overcoming foaming problems would simply involve adding an anti-foaming agent. However, this tends to remain on metal surfaces and its efficiency would soon diminish as the high efficiency de-burring plant filter systems

would effectively 'plate out' the anti-foaming agent with its long-chain molecular formulation.

"This is a most demanding operation but the synthetic composition of TRIM® 9106 has overcome all of the previous problems while maintaining full machine protection and an excellent surface finish on the components."

Concluding, Ray explains that even in general metal cutting operations, problems associated with foaming are on the increase.

"Typically, machine tool coolant pumps operate at around 2 bar but on many new machines it is not uncommon for the pressure to be around 50 bar. Coupled with high efficiency filters that capture the anti-foaming agents, this is a recipe for generating considerable amounts of foam - in effect when you buy a new machine you buy a new problem.

"As in the high pressure de-burring operation, converting to Master Chemical TRIM® 9106 has produced a cost effective solution in a growing number of applications."

-ENDS-

<p>Press enquiries: New River Industrial Communications Tel: 01920 468443 Fax: 01920 460528</p>

E-Mail: nric@compuserve.com