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SAVINGS OF 33,000 EUROS PER YEAR

The need to save costs whilst improving productivity prompted a Norwegian manufacturer's investigations into alternative metalworking fluids. Poor tool life was a primary issue for this tier one automotive producer. But in common with other Scandinavian countries, Norwegian end-users prohibit the use of chlorinated extreme pressure additives that are commonly used to decrease cutting forces, a key factor in extending the service life of tools.

The company's existing coolant naturally complied with this regulation but its chemistry did not provide the performance needed for cost effective drilling and tapping parts made from air-hardened V-2904 steel with a hardness value of 330 Brinell.

The development of high performance coolants without the inclusion of environmentally damaging additives is Master Chemical Europe's stock in trade. It formulates products specifically for the needs of the European market from its research and development base in Needham Market, Suffolk.

Master Chemical's TRIM® E950 was put forward for trial and the results were outstanding. This product has been formulated to deliver unparalleled lubricity. It is a proprietary blend of the company's new vegetable-based technology and premium non-chlorinated and non-sulphurised extreme pressure additives.

These additives effectively control built-up edge in tough operations on materials commonly used in the aerospace and automotive sector. Yet thanks to its mild contact nature this premium emulsion is highly operator friendly. Its superior lubricity provides excellent surface finish and tool life on all manner of difficult-to-machine materials.

These include aluminium alloys, inconel, titanium and the stainless and high tensile strength steels used by the Norwegian automotive subcontractor in the manufacture of its driveline components and interior systems.



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Another major benefit of TRIM® E950, particularly to manufacturers in the very soft water conditions of Norway, is its low foaming quality. This makes it especially suitable for high pressure, through tool operations. The fine emulsion ensures fast wetting to get the fluid to the point of cut and fully coats the work piece to extend tool life and prevent corrosion.

The trial allowed the manufacturer to increase the number of holes drilled and tapped, before tool change, from 1800 to 3000. Estimated tool savings on this achievement were 40%. Total time savings represented 400 Euros per week. Tool breakage decreased from five per week to zero, boosting the savings by a further 625 Euros per week.

The success on the first machine led to TRIM® E950 being run in a second, doing M10 regular threads at a rate of one thread every 6-7 seconds. The change on this machine increased tool life from 210 minutes to 240 minutes.

More machines and applications are now being switched to TRIM® E950 and the company estimates that when the change-over is complete, it will be saving between 32,000 and 33,000 Euros per annum.

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About Master Chemical Corporation: Master Chemical Corporation was founded on November 13, 1951. Since then, working closely with the worldwide metalworking community, Master Chemical Corporation has developed and marketed a full line of specialty cutting and grinding fluids, cutting oils, concentrated washing and cleaning compounds, and rust preventives all under the TRIM® brand trademark. These products are both environmentally sound and when used in conjunction with Master Chemical's XYBEX® Coolant Recycling and Filtration Systems, are the most durable and stable products available anywhere today. Master Chemical has always been committed to the safety of the people who use our products, the protection of our planet, the environment we live in, and the overall impact on our customers' profitability. Master Chemical serves customers globally. For further information please contact a local distributor near you <http://www.2trim.us/distributors.php>, call us at (44) + (0) 1449 726800, or visit our website at www.masterchemical.com

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