

Improvement of tapped threads with Micro-Drop dispensing

In conventional stand alone tapping applications, there are 3 common methods of lubricating-cooling:

1. Water soluble coolants are used to cool and lubricate the tool and work piece. They are sprayed or flooded over the part to be tapped. This method is effective for cooling, but does very little for lubrication which tapping usually demands.
2. Applying "tapping fluid" to the tap and/or work piece from a can, bottle or with a brush. This method works much better than the water soluble coolants as it supplies the necessary lubrication tapping requires, but is quite messy and costly as the fluid is usually dispensed by hand, unmeasured.
3. Tapping dry, using no lubricants or coolants.

Micro-Drop dispensing can be a very effective alternative to these cooling and lubricating methods for tapping. Small amounts of high efficiency lubricants are dispensed to the cutting tool. This dramatically reduces friction & heat at the cutting tool-chip interface.

This technique is also very effective when form tapping as the extreme pressure additive in the fluid does not permit fluid breakdown from the pressure of forming. **Forming requires approximately 30% more torque or horsepower at the spindle, and Trico Micro-Drop dispensing fluids reduce this requirement.** How much reduction is dependent on each application and would net slightly different results.

Micro-Drop dispensing for tapping purposes is extremely cost effective. Because the fluid is uniformly dispensed, fluid cost is kept to a minimum. This makes micro dispensing a better choice for tapping than manual applications from a can, bottle or with a brush.

Tool life is increased by as much as 5 times over tapping applications run dry.

Trico Micro-Drop dispensers can be electrically interfaced with machine controls or mechanical switches. This allows dispensing of fluid only during the cutting cycle.

