TRAK® MACHINE TOOLS

SOUTHWESTERN INDUSTRIES, INC.

January 03, 2022

White Paper

Rigid Tapping on TRL Lathes

Southwestern Industries officially recommends using a compression tap holder on a TRL Lathe, but when asked “Can a ProtoTRAK perform rigid tapping?” the answer is not simply “no.”

The spindle encoder and the z-axis encoder are in close conjunction making the forces on the tap generally low. When tapping, the spindle can slow, stop, and reverse direction in near complete unison to z-axis travel.

The bottom line? The fact that the encoders are in conjunction makes rigid tapping an attractive possibility. People can and are getting away with it in the field. However, even though the forces on the tap are low, the chance that the customer breaks a tap or worse is a possibility. Keep in mind that many production turning centers, such as the Mazak and Mori Seki machines Southwestern has in the tool room, also require compression tap holders.

Again, SWI does not recommend rigid tapping, but it’s important that the customer should receive this kind of explanation over a “no.”

When is a Compression Tap Holder Required?

A compression tap holder is absolutely required to pick up an existing thread on our lathes, regardless of whether or not the encoders are in conjunction.

It is necessary to use a compression tap holder on our mills, even with the ESC (Electronic Spindle Control Option), as we do not have an encoder on the spindle; it is controlled by the inverter drive only.