

# Variocut C Moly Dee Improves Tool Life

## MACHINERY MANUFACTURING (USA)

Control / Sensor Manufacturing

Castrol Variocut® C Moly Dee\*

**ANNUAL SAVINGS: \$3,170**



### THE SITUATION

A Midwest manufacturer making controls for the oil and gas industry was using a chlorinated tapping fluid for drilling and cut tapping their stainless steel blocks. The chlorinated oil worked well, but they were looking to eliminate oils with chlorinated paraffin.

The customer challenged Castrol to offer a chlorine-free option that could handle their difficult-to-machine stainless steel grades (304, 314, 316).

### BEFORE

- Chlorinated neat oil
- Good drill and tap life
- Cleaned with alkaline cleaner
- Drill life: 700 holes average
- Tap life: 350 holes average

### AFTER

- Variocut C Moly Dee, chlorine-free neat oil
- Thread quality as good as the chlorinated fluid
- Cleaned easier than previous oil
- Drill life: 850 holes (**21% increase**)
- Tap life: 500 holes (**43% increase**)

### THE SOLUTION

- Variocut C Moly Dee was used to drill and cut tap holes into 304, 314, and 316 stainless steel.
- Drill life improved by 21% while tap life was increased by 43% on very challenging metallurgies.
- Thread quality was as good as the previous fluid without the use of chlorinated paraffin.
- The parts were easily cleaned in an alkaline cleaner. Operators commented that the Variocut C Moly Dee actually cleaned off better.

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## RECOMMENDATIONS

Variocut C Moly Dee was used to successfully drill and cut tap 304, 314 and 316 stainless steel. The holes range in size from 0.009" to 0.765" in diameter and up to 3.125" in depth. The Variocut C Moly Dee was applied by hand with a squirt bottle, identical to the application method of the previous fluid.

## CONCLUSION

The Variocut C Moly Dee performed very well in drilling and tapping difficult stainless steel alloys. The parts were easily cleaned and significant tool life improvements were generated.

**The customer was very happy with the conversion and realized an annual tooling savings of \$3,170.**



**“Moly Dee CF  
(Variocut C Moly Dee)  
seems to work better  
for us than the old oil”  
– Machine Operator**

*Controls  
and sensors  
are used in  
the oil and  
gas industry*



## OTHER POTENTIAL APPLICATIONS

Variocut C Moly Dee is a tapping fluid that can be used in thread forming or cutting operations. It is typically hand applied and used in small quantities. The Moly-Dee brand name is well recognized as a performance leader in the tapping industry.

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