



WOLFRAM
MANUFACTURING

CASE STUDY



THE EQUIPMENT



Tool Data Management System

FANUC
ROBO DRILL

Fanuc RoboDrill α-D21MiB5adv

T OnTakt

Production management software
w/ Slack integration

ΩMEGA

TMM
Exactus Pro Tool Presetter

THE CHALLENGE

Recently, on a weekend shift, a machinist noticed a bad surface finish on a high-volume production component. After further inspection of the part, it was determined that the last 6 parts had a poor surface finish. The result after a quality review and disposition was that those 6 parts were not recoverable and ultimately scrapped. Additionally, it took around 4 hours to diagnose and solve the problem with support from the engineering team.

The final diagnosis and fix for the problem was that the tool stick out for the ball end mill surfacing that area was measured to the collet nut on the tool holder. It was supposed to be measured to the face of the collet. The resulting extra stick out length caused the poor surface finish.

Wolfram's OnTakt software makes it easy to manage tool offsets and capture instructions for how to build a tool. But OnTakt's tool management module alone doesn't eliminate all operator error.

How do we make sure this doesn't happen again? ToolConnect from Caron Engineering.

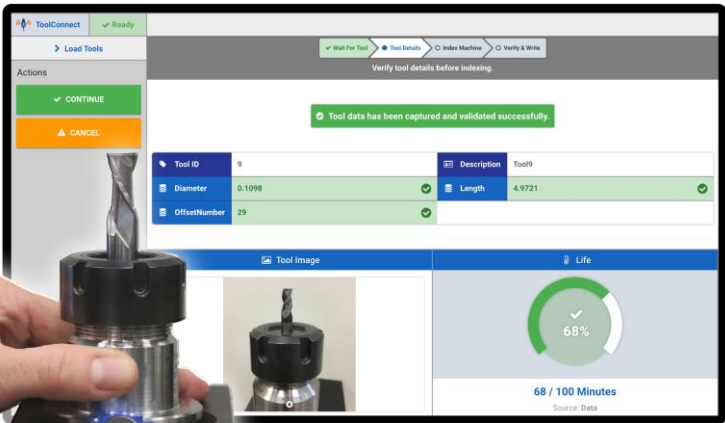


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SCHEDULE A DEMO



THE SOLUTION

ToolConnect allows us to use Omega TMM's Exactus Pro tool presetter to setup tools outside of the machine. The Omega TMM Exactus Pro records the tool offset data and stores the data on an RFID chip inside the tool holder. When the tool is transferred to the RoboDrill for loading, the tool is placed into an RFID reader and Caron Engineering's ToolConnect automatically loads the data into the RoboDrill control offsets. This process workflow eliminates operator errors commonly caused by mis-entering data saving significant time and money.

But more importantly, in our case, ToolConnect can validate the tool length being loaded into the machine. In this example where the tool was longer than it should have been due to a measurement error, ToolConnect would prevent the tool from being registered in the machine and force the operator to intervene.

THE RESULTS

In this one simple instance, this error cost us approximately **\$4,000**.

- Machine downtime was 4 hours for troubleshooting with **lost revenue**
- During the downtime we had **several engineers involved** with solving the issue
- The real savings comes from the scrapped parts. **Scrapping 6 parts** near the end of the manufacturing process is a cost that could have been easily avoided with ToolConnect.

