ToolConnect Eliminates Costly Downtime Due to Human Data-Entry Errors

RESULTS - INSTALL 7620

CHALLENGE

A customer in the aerospace industry experienced numerous machine crashes due to machine operators accidentally entering a wear offset in place of a geometry offset. A machine would typically be out of commission for two weeks for repairs, resulting in over $100K in lost production time alone; not including repair costs.

TECHNOLOGY

TOOL CONNECT

SOLUTION

The customer needed a solution to eliminate these costly operator data-entry errors. The customer implemented Caron Engineering's ToolConnect, a RFID tool identification system. ToolConnect works in combination with a tool presetter to automatically transfer tool presetter data to (and from) the CNC control. The tool presetter measures the tool and writes all the tool data to the RFID tag which is embedded in the tool holder. ToolConnect reads the RFID tag at the machine read-station, displays all tool information on the HMI, and guides the user through the customer-defined tool load process.

The operators no longer manually enter the tool data, it happens automatically. ToolConnect reads and updates all geometry and wear offsets to the control. As an added failsafe, if an operator tries to load an incorrect tool, or a tool in the wrong pot, ToolConnect will alert the operator.

RESULTS

- *Instant ROI with ToolConnect*
- *Eliminated machine crashes from tool data-entry errors*
- *Saved 60 seconds per tool (setup) with off-line measurement*
- *Followed up with a 33 unit ToolConnect order*

INDUSTRY

Aerospace

MACHINE TYPE

5 Axis Machining Center

In addition to eliminating excessive costly downtime due to human errors, the customer has also noticed the added benefit of part cycle time savings. They were using in-machine tool setting to measure the tools, which was utilizing valuable spindle time. By employing ToolConnect and a tool presetter, the parts are continuously being cut while the tools are being measured simultaneously offline. They have instantly saved almost 60 seconds per tool (28 tools) by eliminating the initial in-machine tool measurement and manual data entry. In-machine laser tool setting is still used to adjust for tool size after cutting.

The benefits and immediate ROI with ToolConnect surpassed the customer's expectations, and they have since placed an order to outfit 33 of their machine tools with ToolConnect.