

INDUSTRY: POWER GEN

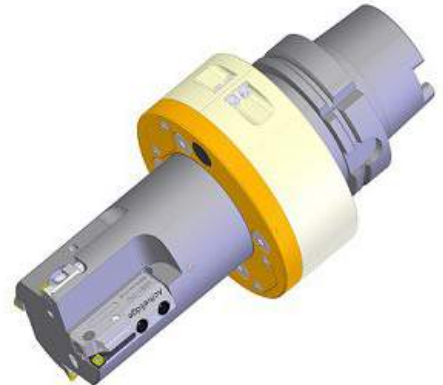
COMPONENT: CONNECTING ROD

ANNUAL PRODUCTION: 2,000,000

CUSTOMER: UNDISCLOSED

MACHINE SPINDLE: HSK100

COMPLETION DATE: MARCH 2012



Tooling Brief:

Automate the compensation of finish boring bars to hold size on two connecting rod bores:

Ø150 ± 0.008mm Steel Crankshaft Bore

Ø83 ± 0.015mm Steel Pin Bore

Process:

The Crankshaft and Pin bores are finish machined with a Rigibore ActiveEdge tool.

An **ABB Robot IRB 6640** unloads the Con Rods from the **Stama 536** machine and places parts into a **Intra gauge** where the critical bore sizes are measured.

The gauge software automatically calculates any required finish tool compensation and stores the value.

This value is relayed to the machine's Fanuc control through the PLC. The running CNC program picks up a requirement to adjust to the tool and makes the adjustment before the tool is needed again by the program. Tool is adjusted in the carousel with no spindle downtime.

Results:

- **>40%** increase in throughput due to increased spindle utilisation
- Standard Deviation = **0.001mm**
- Cpk = **3.04**
- **>90%** of first set-up parts correct



More Information:

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