



CASE STUDY.

PROJECT PROFILE:

GEN3SYS[®] 4130 Valves & Wellheads

The end-user is machining gate valves made from 4130 material, 253 Bhn using a Danobat Valve Center machining center, with 300 PSI through-tool coolant.

+ CHALLENGE:

Previously the customer was using an Iscar DR inserted drill, running at the following parameters: 1600 RPM, 0.003 IPR, (0.08 mm/rev) which resulted in 4.8 IPM (121.92 mm/min). The tool drilled a 1.25" (31.75 mm) diameter thru hole to a thickness of 3.5 inches (88.9 mm). The tool had a cycle time of 44 seconds and a tool life of 200 holes.

The customer was unhappy with the hole tolerance as the Iscar drill was drilling oversize by as much as 0.015". The acceptable tolerance was 0.010", and Iscar could not deliver. Looking for performance improvements, the customer asked if Allied could provide a better tool.

+ OUR SOLUTION:

Allied recommended GEN3SYS[®] using insert item 5C129H-0108 and holder 60329H-125F. The tooling ran at a speed of 1100 RPM, 0.012 IPR (0.30 mm/rev) which resulted in 13.2 IPM (335.28 mm/min). GEN3SYS[®] had a cycle time of 16 seconds and an identical tool life of 200 holes. The outcome met the customer's goals of tool performance improvements. Allied was able to drill within the customer's required tolerance of 0.010", while providing an increase in production.

+ PROJECT DATA:

GEN3SYS[®] gave the customer what he was looking for: accuracy and improved productivity. The job went to Allied, based on the overall improved outcome of this head-to-head competition versus Iscar. The cost per hole dropped from \$2.15 to \$1.84, for a cost savings of 14.57%. The reduced cycle time resulted in a time savings of 38%.



*INCREASED
PRODUCTION
EFFICIENCY*