CASE STUDY. GEN3SYS®

PROJECT PROFILE: Mild Steel Industrial Valves

The end-user is machining valves made from mild steel using a Trevisan Horizontal Milling machine, with 100 PSI through-tool coolant.

LOWER COST PER HOLE

+ CHALLENGE:

Previously the customer was using a Sandvik 880 Drill, running at the following parameters: 2500 RPM, 0.003 IPR, (0,08 mm/rev) which resulted in 7.5 IPM (190,5 mm/min). The tool drilled a 0.750" (19,05 mm) diameter thru hole to a depth of 1.5 inches (38,1 mm). The tool had a cycle time of 13 seconds and a tool life of 120 holes.
The customer was not pleased with the cost per hole or the cycle time. Allied was called in to investigate, and accepted the challenge of providing a better tool.

+ OUR SOLUTION:

Allied recommended the GEN3SYS® High Penetration Drilling System using insert item 5C129H-0108 and holder 60329S-125F. The tooling ran at a speed of 2037 RPM, 0.015 IPR (0,38 mm/rev) which resulted in 30.5 IPM (774,7 mm/min). The tool had a cycle time of 4 seconds and a tool life of 800 holes. The outcome met the customer's goals of a decreased cost per hole and reduction in the cycle time.

+ PROJECT DATA:

GEN3SYS made a significant difference for the customer as the cost per hole was reduced from $0.382 to $0.198 resulting in a cost savings of over 48%. While the cycle time fell from 13 seconds to just 4 seconds, tool life jumped significantly from the previous 120 holes to 800 holes.
That's over 6X the tool life!