CASE STUDY. GEN3SYS®

PROJECT PROFILE: **925 Inconel Oilfield Job Shop**

The end-user is machining seats made from 925 Inconel using a Warner & Swasey CNC lathe, with 90 PSI Semi-Synthetic coolant.

INCREASED PRODUCTION EFFICIENCY

+ CHALLENGE:

Previously the customer was using an Iscar Cham Jet running at the following parameters: 351 RPM, 0.0025 IPR, (0,06 mm/rev) which resulted in 0.88 IPM (22,4 mm/min). The tool drilled a 0.500" (12,7 mm) diameter thru hole to a thickness of 2.5 inches (63,5 mm). The tool had a total cycle time of 3 minutes and 51 seconds and a tool life of 25 holes. They had to drill the hole from both sides to maintain the straightness requirements. The customer asked if Allied had a more economical way to drill the hole.

+ OUR SOLUTION:

Allied recommended the GEN3SYS® High Penetration Drilling System using insert item 5C212H-0016 and holder 60512S-075F. The tooling ran at a speed of 458 RPM, 0.004 IPR (0,10 mm/rev) which resulted in 1.83 IPM (46,5 mm/min). The tool had a cycle time of 1 minute and 22 seconds and a tool life of 75 holes. The outcome met the customer's goals of tool performance improvements and reduced cycle times.

+ PROJECT DATA:

GEN3SYS made a significant difference for the customer by reducing the machine run time from 3 minutes and 51 seconds to 1 minute and 22 seconds. The GEN3SYS tool drilled all the way through, stayed very straight and remained within tolerance allowing the customer to eliminate 2 different operations in the program.

The cost per hole dropped from $19.46 to $5.96, for a considerable cost savings of 69.4%. GEN3SYS was also able to triple the tool life of the Iscar drill.