



## CASE STUDY.

PROJECT PROFILE:

## GEN3SYS® A516 Grade 70 Tubesheet

The end-user is manufacturing baffles for the Tubesheet industry. The customer is machining parts made out of A516 Grade 70 steel, (four stacked 0.5" plates) using a Quickmill Intimidator Gantry Style Machine with 75 HP, utilizing Water Soluble coolant, running at 700 PSI.

### + CHALLENGE:

Previously the customer was using KSEM1015HP drill running at the following parameters: 800 RPM, 0.012 IPR (0.30mm/rev), resulting in 9.6 IPM (243 mm/min). The tool drilled a 1.015" diameter hole to a depth of 2". The tool had a cycle time of 12.5 seconds per part and an average tool life of 375 holes. Each work piece required a total of 8,508 drilled holes. Looking for improvements in performance, the customer wanted to be able to run the tool at a faster speed.

### + OUR SOLUTION:

Allied recommended the GEN3SYS® High Penetration Drilling System, using insert item #5G124H-1.015 and holder #60324H-100C. The tooling ran at a speed of 945 RPM, 0.0133 IPR (0.338mm/rev), which resulted in 12.6 IPM (320 mm/min). The results were positive, as the tool life increased from 375 to 400 holes while the cycle time dropped to 9.5 seconds per hole, down from 12.5 seconds. This customer wanted a faster tool, and found it with Allied. GEN3SYS® met the customer's goals by delivering 8,508 high quality holes per part, and best of all, the total time per part went from 29.5 hours to 22.5 hours.

### + PROJECT DATA:

Allied Machine & Engineering Corp. and the GEN3SYS® High Penetration Drilling System drilled faster, saving the customer SEVEN hours per set-up. The cost per hole fell from \$0.587 to \$0.451, for a savings of 23.09%. This provides a monetary savings of \$1,152.80 for every four plates manufactured.



*INCREASED  
PRODUCTION  
EFFICIENCY*