CASE STUDY. GEN3SYS®

PROJECT PROFILE: **Ductile Iron Heavy Equipment**

The end-user is manufacturing brake adapters made out of Ductile Iron using a vertical lathe, with 300 PSI water soluble coolant.

REDUCED COST OF PRODUCTION

+ CHALLENGE:

Previously the customer was using a Mitsubishi TAW drill running at the following parameters: 1175 RPM, 0.012 IPR (0,30 mm/rev), which resulted in 14.10 IPM (358,14 mm/min). The tool drilled a 1.172" (29,77 mm) diameter blind hole to a depth of 3.125 inches (79,38 mm). The tool had a cycle time of 13.3 seconds and a tool life of 720 holes. Looking for improvements, the customer wanted to reduce the cost of operations as well as eliminate the ear-piercing noise caused by the TAW drill.

+ OUR SOLUTION:

Allied recommended the GEN3SYS® High Penetration Drill, holder item number 60329H-125F, along with insert item 5C229H-1.172-CI. This unique insert geometry is designed specifically for cast iron, and gave Allied a distinct advantage for this application. The tooling ran at a speed of 1275 RPM, 0.018 IPR(0,46 mm/rev), which resulted in 22.95 IPM (582,93 mm/min). GEN3SYS® had a cycle time of 8.2 seconds and with no loss in tool life. The outcome was in favor of the Allied tool which met the customer's goals of reduced costs.
Notably, GEN3SYS® ran much quieter, eliminating the high pitched squeal of the TAW drill.

+ PROJECT DATA:

Thanks to the 39% reduction in cycle time, the GEN3SYS® High Penetration Drill was instrumental in reducing the cost per hole from $0.52 to $0.39 providing a savings of over 25%.