CASE STUDY. GEN3SYS®

PROJECT PROFILE: **Cast Ductile Iron Mining Job Shop**

The end-user is manufacturing suspension components made out of cast ductile iron using a Mori Seiki horizontal machining center, with 1000 PSI water soluble through-tool coolant.

EXTENDED TOOL LIFE

+ CHALLENGE:

Previously the customer was using a Kennametal KSEM HP(M) KC7315 drill running at the following parameters: 1420 RPM, 0.016 IPR (0,41 mm/rev), which resulted in 22.7 IPM (577 mm/min). The tool drilled a 0.781" (19,8 mm) diameter blind hole to a 2.200" (55,9 mm) depth. The tool had a cycle time of 5.8 seconds and a life of 825 holes. Tool life was judged on a cutting time of 80 minutes.

The customer was also utilizing regrinds with inconsistent results. Looking to increase tool life, and get out of the regrind program, Allied was called to offer its recommendations.

+ OUR SOLUTION:

Allied recommended GEN3SYS® with Cast Iron Geometry, using insert item 5C218H-0025-CI and holder 60318S-100F. The tooling ran at the same speeds and feeds as the KSEM: 1420 RPM, 0.016 IPR (0,41 mm/rev), which resulted in 22.7 IPM (577 mm/min), but the outcome was far different. While the KSEM was only able to deliver 825 holes, GEN3SYS® stepped up and provided 1240 holes... an increase of over 50% above the competitor's best effort.

The Allied tool life was also judged on minutes of cutting time: 120 minutes.

+ PROJECT DATA:

Allied's GEN3SYS® stood out as the clear winner in the testing, as it eliminated the need for regrinds while providing a significant increase in tool life. As a result, the cost per hole was reduced from $0.28 to $0.22, for a dollar savings of 20.14%.