



## CASE STUDY.

### PROJECT PROFILE:

## GEN3SYS<sup>®</sup>

Cast Steel

The End-user is a contract machine shop that manufactures hydraulic pumps and motors. The customer is machining a motor housing made out of mild carbon cast steel using a Mazak VMC running with 1000 PSI through-tool coolant.

#### + CHALLENGE:

Previously the customer was using a WNT solid carbide drill running at the following parameters: 1365 RPM, 197 SFM, 0.0071 IPR, and 9.69 IPM. The tool drilled a 0.5512 $\times$  (14 mm) diameter hole to a 1.1810 $\times$  (30 mm) depth. The tool had a cycle time of 8 seconds including a pecking cycle and a life of 500 holes. Unsatisfied with their current production, the customer wanted to decrease their costs.

#### + OUR SOLUTION:

AMEC recommended the GEN3SYS<sup>®</sup> High Penetration Drilling System using insert item #5C114H-14 and holder #60314H-20FM running at a speed of 1935 RPM, 279 SFM, 0.010 IPR, and 19.3 IPM. The results were excellent and went beyond the customer's expectations. The GEN3SYS<sup>®</sup> tool reduced the cycle time to only 4 seconds and doubled the tool life to 1000 holes while achieving superior chip control. By increasing productivity and decreasing downtime, the customer succeeded in lowering their costs.

#### + PROJECT DATA:

Due to the successful performance of the GEN3SYS<sup>®</sup> tooling, the customer met their goal of lowering their costs and was thoroughly satisfied with the results of the test.



*REDUCED COST  
OF PRODUCTION*