



## CASE STUDY.

### Special T-A<sup>®</sup> Medium Carbon Steel

#### PROJECT PROFILE:

The End-user is manufacturing heavy equipment for the coal and salt mining industries. The customer is machining a track shoe made out of medium carbon steel using a Makino 866 HMC running with water soluble coolant.

#### + CHALLENGE:

Previously the customer was using an YG-1 cobalt blade running at the following parameters: 600 RPM, 137 SFM, 0.004 IPR, and 2.4 IPM. The tool drilled a 0.8750" diameter hole at a 9.0" depth. The tool had a cycle time of 3 minutes and 45 seconds and a life of 40 holes. Unsatisfied with their current production process, the customer wanted to increase tool life and lower their costs.

#### + OUR SOLUTION:

AMEC recommended a special non-stock standard T-A<sup>®</sup> drill insert item #1C21H-0028IN and a special chrome helix holder item #070429-501 running at a speed of 1000 RPM, 229 SFM, 0.012 IPR, and 12.0 IPM. The results went above and beyond the customer's expectations. The T-A<sup>®</sup> tooling increased the tool life by 150% to 100 holes and reduced the cycle time to only 45 seconds. The customer also succeeded in decreasing their cost of production saving a total of \$3539.23 per 1000 holes.

#### + PROJECT DATA:

By increasing productivity and decreasing downtime, the customer was able to achieve their goals and generate a total cost savings of 73% per 1000 holes.



## EXTENDED TOOL LIFE