



CASE STUDY.

PROJECT PROFILE:

BT-A Mold Making

The end-user is a Mold Maker for the plastics industry who contacted Allied for the testing of BTA tooling. The workpiece is a test block, 21" thick, made of P20 material, 28-32 RC hardness, using a Schienke Gundrill machine, with Hulcut 745D Semi-Synthetic coolant, 10% concentrate at 1000 PSI.

+ CHALLENGE:

In the first test, the customer was using an Ingersoll brazed carbide BTA drill running at the following parameters: 1300 RPM, 0.0054 IPR (0.137 mm/rev), which resulted in 7.02 IPM (178.3 mm/min). The tool drilled a 0.734" (18.64mm) diameter hole to a 21" (53.34cm) depth. The tool had a cycle time of 3 minutes, 10 seconds and a life of 19 holes. The cost per hole was \$7.94. Looking for improvements, the customer wanted to decrease total hole costs and improve the tool life.

+ OUR SOLUTION:

In the second test, Allied recommended the BT-A Drill using special insert item 081021-22 and holder 081021-21. The tooling ran at a speed of 1575 RPM, 0.0046 IPR which resulted in 7.23 IPM. The Allied BT-A cycle time, 3 minutes, 4 seconds was slightly better than the Ingersoll tool, but the big difference was in the number of holes drilled, as tool life increased from 19 to 39 holes. Allied's cost per hole came in at \$6.71, for a savings of \$1.23 per hole.

+ PROJECT DATA:

The outcome was a positive one for the customer as the BT-A Drill met the goals of decreasing total hole costs while improving the tool life. The customer realized over twice the tool life while saving 15.52% of the cost per hole.



LOWER COST PER HOLE