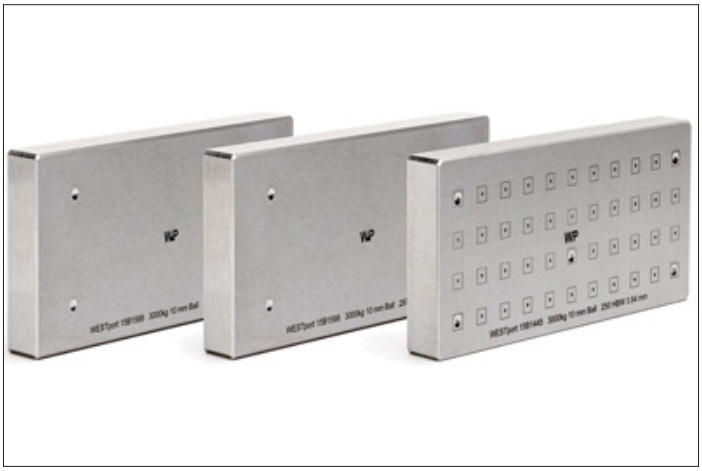
ALLIED MACHINE & ENGINEERING
Holemaking Solutions for Today's Manufacturing

Case Study Solutions

BT-A Drill

Case Study: 0904
Industry: Tool, Mold, & Die
Part: Test Block
Material: P20 Material
Diameter: 0.734" (18.64mm)
Depth: 21" (53.34cm)
Insert: 081021-22
Holder: 081021-21



The Challenge

The customer is a mold maker for the plastics industry that contacted Allied to test BTA tooling. The workpiece is a 21" thick test block made of P20 material (28-32 Rc). They are using a Schienke Gundrill machine with Hulcut 745D semi-synthetic coolant (10% concentrate) at 1000 PSI.

The customer needed to decrease total hole costs and improve the tool life.

The Advantages

The BT-A Drill successfully decreased total hole costs while improving the tool life.

- Increased tool life by 105%
- Overall cost savings = 15.52%

Previous Tooling

Ingersoll Brazed Carbide BTA Drill

- 1300 RPM
- 0.0054 IPR (0.137 mm/rev)
- 7.02 IPM (178.3 mm/min)
- Cycle time = 3 minutes and 10 seconds
- Tool life = 19 holes
- Cost per hole = $7.94

Allied Machine Solution

BT-A Drill

- 1575 RPM
- 0.0046 IPR
- 7.23 IPM
- Cycle time = 3 minutes and 4 seconds
- Tool life =39 holes
- Cost per hole = $6.71