



## CASE STUDY.

# GEN2 T-A<sup>®</sup>

### PROJECT PROFILE: **Structural 44W Structural Steel**

The end-user is drilling solid steel plate made out of Structural Steel 44W using a Daewoo 4020 D 20HP Vertical Machining Center, with 300 PSI through-tool coolant.

#### + CHALLENGE:

Previously the customer was using a Dormer HSS Twist Drill running at the following parameters: 525 RPM, 0.010 IPR (0,25 mm/rev), which resulted in 5.25 IPM (133,35 mm/min). The tool drilled a thru-hole into a 4" thick plate, (101,6 mm) to a diameter of 13/16" (20,65 mm). The tool had a cycle time of 1 minute, 12 seconds and a tool life of 25 holes. The customer was looking for a tool that could break the chip, as they were getting 'bird nests' around the spindle every time.

#### + OUR SOLUTION:

Allied recommended GEN2 T-A<sup>®</sup> using insert item 450H-0022-HE and holder 26005H-075F. The Allied tooling ran at a speed of 1230 RPM, 0.007" IPR (0,18 mm/rev) which resulted in 8.8" IPM (223,52 mm/min). The tool life on this identical operation increased to 1500 linear inches with a cycle time of 45 seconds.

#### + PROJECT DATA:

The Allied GEN2 T-A<sup>®</sup> eliminated the poor chip formation while reducing the cost per hole from \$14.00 for the competitive tool, to \$0.70 for the GEN2 T-A<sup>®</sup> for a cost savings of 95%! The outcome was clearly in favor of GEN2 T-A<sup>®</sup> as it met the customer's goal of improved chip formation, and a significantly lower cost per hole.



## *IMPROVED CHIP FORMATION*