



CASE STUDY.

GEN2 HE Geometry

PROJECT PROFILE: Structural Steel A516 Grade 70 Energy

The end-user is manufacturing bearing housings for the Energy industry, made out of A516 Grade 70, 23 Rc using a 40 HP Shibaura BTD-11ER16 with approximately 120 PSI, utilizing semi-synthetic coolant. The holes need to be 1.375" in diameter, drilled into a 20" thick solid bearing housing.

+ CHALLENGE:

After investigating this option, the end-user determined that their initial choice, a twist drill, would have been very slow (speeds and feeds), and would have created excessive wear on the machine due to the need for numerous pecking cycles. Tool life was a concern as well. After checking around, the customer had heard that Allied was a leading drill manufacturer with the widest breadth of "off the shelf" products that would be able to handle a job of this hole depth. The customer wanted good chip control, good finish and absolutely no catastrophic failures!

+ OUR SOLUTION:

Allied provided the following solution: GEN2 T-A[®] with HE geometry, using insert item 452H-0112 -HE (Ø 1.375"), and holder 25020S-0041, outfitted with an RCA adapter. Speeds and feeds were run at: 250 RPM, 0.006 IPR (0,152 mm/rev), resulting in 1.5 IPM (38,10 mm/min).

+ PROJECT DATA:

Allied was able to produce good chips, and there were no catastrophic failures! The end-user was pleased and will be drilling with GEN2 T-A[®] with HE geometry for the remainder of this application. This success has opened the doors for additional Allied hole-making solutions for this end-user.



IMPROVED CHIP FORMATION