STEINER

INGENIOUS CUTTING TOOLS

CASE STUDY: Hydraulic Cylinders & Finish Issues

Customer Profile:

A Mississippi machining and fabricating company

The Challenge:

Speed up the spot facing proves on a heavy equipment component while improving surface finish. The application requirement was to decrease part process time per part while eliminating quality problems associated with the original process. Bad finishes and a 50% rejection rate made solving this issue mission critical.

The Steiner Solution:

The original process consisted of (3) CT50 integral shank back boring bars. This tool used expensive inserts @ $60 each that could only be ordered in packs of 50. The feature was a 70.75mm (2.785”) bore reaching thru 55mm (2.17) to generate a 150mm (5.905”) spot face. The spot face also had a 6mm (.236”) corner radius and a 4.5mm x 45° ID chamfer. This feature was machined in 3 steps and produced surface quality inconsistencies with blends between the 3 steps. The Steiner process machined the complete feature (ID Chamfer, Spot Face & Corner Radius) in a single pass. The Autofacer was run a 150 RPM and a feed rate of 0.8 IPM.

The Results:

The customer realized a cycle time savings of 45 to 60 minutes per part, making the Steiner solution 2 to 2.6 times faster than the old process and at the same time reducing insert consumption by 90%, improving surface finish quality problems, and eliminating the high rejection rate.

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REQUEST A QUOTE

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