

Tool

Deterioration

Chip Formation

Tool Life

Workpiece

Process

No Drill Penetration

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POSSIBLE SOLUTIONS Speed & Feed Coolant Setup Do not Extract Tool During Peck Workpiece Clamp Rigid Coolant Increase Flow Reduce Feed or Reduce at Exit Collet Accuracy Increase Speed Reduce Speed Increase Feed Reduce Feed at Entrance **Coolant Filter** Concentricity Tool Holder fit .0008 **Coolant Mix** Consistent Feed rate Alignment **Peck Drill** Χ Χ Χ Χ Χ Flank Wear Margin Wear Χ X X X Χ Breakage Χ Χ Χ X Χ X X Χ Χ Χ Χ X **Flaking** X X **Creater Wear** Χ **Chisel Edge Wear** Χ X Χ Χ **Corner Chipping** Χ Χ Χ Χ X Χ Flute Chipping Χ X **Cutting Edge Chipping** Χ Χ Χ Χ Χ Χ Χ **Cutting Edge Wear** Χ Χ **Point Center Chipping** Χ X **Rake Face** Scoring on Tool Body Χ X Χ X X X **Long Stringy** Varied Chip Form Χ Blue/Brown Chips X X X X X **Tool Life** X X X X X $\overline{\mathsf{X}}$ X X **Undersized Hole** Χ **Oversized Hole** X Χ Χ X Χ **Poor Alignment** Χ Χ Χ Χ Χ Χ **Poor Surface Finish** Χ Χ X X Χ X X Χ Χ **Heavy Burr Breakout Retract Marks** Χ **Hole Location** Χ Χ X X Χ X X **Hole Straightness** Χ Χ X X Deflection X **Point Deflection** Χ Galling Vibration Χ X X Χ **Abnormal Noise** Χ X X X X X X **Chip Packing** Χ

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