

Impingement Plate Waterjet Drilling

Application Sheet #532

Description

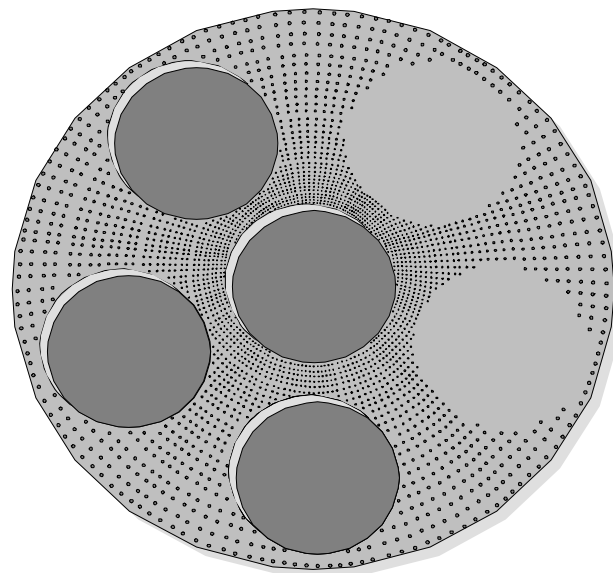
- Waterjet drilling of holes and abrasive cutting of impingement plates.
- The part is to have no heat affected zone or recast layer after drilling.

Application

- Drill approximately 5,000 holes in the part.
- Each hole is to be 0.033 in (0.838 mm) diameter \pm 0.003 in (\pm 0.076mm).
- Cut the six interior holes to a defined dimension with a tolerance of -0.000/+0.004 in (\pm 0.102mm).
- Cut the outside diameter to a defined dimension with a tolerance of \pm 0.002 in (\pm 0.057mm).

Process

- The material is located in a flat fixture inside the machine.
- The operator activates the approved part program and the waterjet drilling begins.
- Approximately 5,000 holes are drilled.
- The six larger holes are cut.
- The outside diameter of the part is cut.



Material

- The material is presented to the waterjet system in square sheets of 0.062 in (1.575 mm) thick Hastaloy.

Cycle Time

- The cycle time per hole is approximately six seconds.

Machine Features and Benefits

- Available on the Huffman WJ-155 Five-Axis CNC Waterjet System.
- Huffman's Abrasive Delivery System allows for accurate abrasive delivery to meet the hole tolerance.
- Huffman's Abrasive Monitoring System alerts the operator of a potential clog during the drilling process (eliminates scrap).
- Incoming/outgoing water treatment.
- Completely enclosed to meet noise reduction requirements.

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