



Shroud Grinding

Application

Shroud grinding for the Flight and Industrial Gas Turbine Industries.

Process

Superabrasive grinding technology, in conjunction with a multi-axis grinding system produces the maximum number of surfaces with a minimum number of setups. Typically, ground features include:

- Rub surfaces
- Radial surfaces
- Straight surfaces
- Grooves/hooks
- Mate faces
- Seal slots

As an example, 24 surfaces were ground in a single cycle, with 5 grinding wheels on a single wheel arbor, using 3 part fixtures. Multiple fixtures were placed in the machine so that one part was completed in each grinding cycle.

Proper application of superabrasives with a precise, reliable motion and control system, plus modular machine design enable single part flow, replacing batch flow on large rotary grinders.

Material

Cobalt and nickel base alloys.

Cycle Time

Cycle times depend on component size and amount of material removed. A typical cycle time for an aero-engine shroud is 15 to 30 minutes.

Machine Features and Benefits

Available on the HS-150, HS-190, HS-200, HS-210 and HS -220 series grinder systems.

Up to 50 HP (37 kW) for fast material removal rates.

Optional scale feedback is available for increased accuracy.

Quick change wheel arbors, coolant nozzle manifolds and fixtures offer fast changeover between part sizes.

