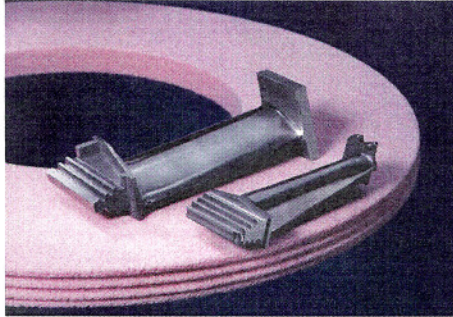


Continuous Dress Creep Feed Grinding of Turbine Blades



Part Data

Work Piece: Turbine Blade
Operation: Root form and platform
Material: Udimet 500
Nominal Composition: 52 NI + 18 CR + 19 CO + 4.2 ME +
3.0 AL + 3.0 TI All others under 0.1%

Wheel Data

Size: 20" x 2" x 8"
Hermes Spec: ERT 80 E 18 V62
Competitors Spec: 89A 702 H10A V237 P5

Total passes with the new 20" wheel = 185/wheel stub 11.9"
Total parts = 185 Cycle time per part = 0.35 minutes

Machine Data

Model: Blohm Profimat RT
H.P.: 106

Process Parameters:

Turbine blades are processed using a down cut continuous dress creep feed grinding (CDCF) mode. The process was changed from a multiple pass operation to a single pass using CDCF at a depth of 0.280 with one finish pass conventional creep feed. Clients cycle time was reduced together with abrasive wheel consumption as part of process optimization.

BCH08



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