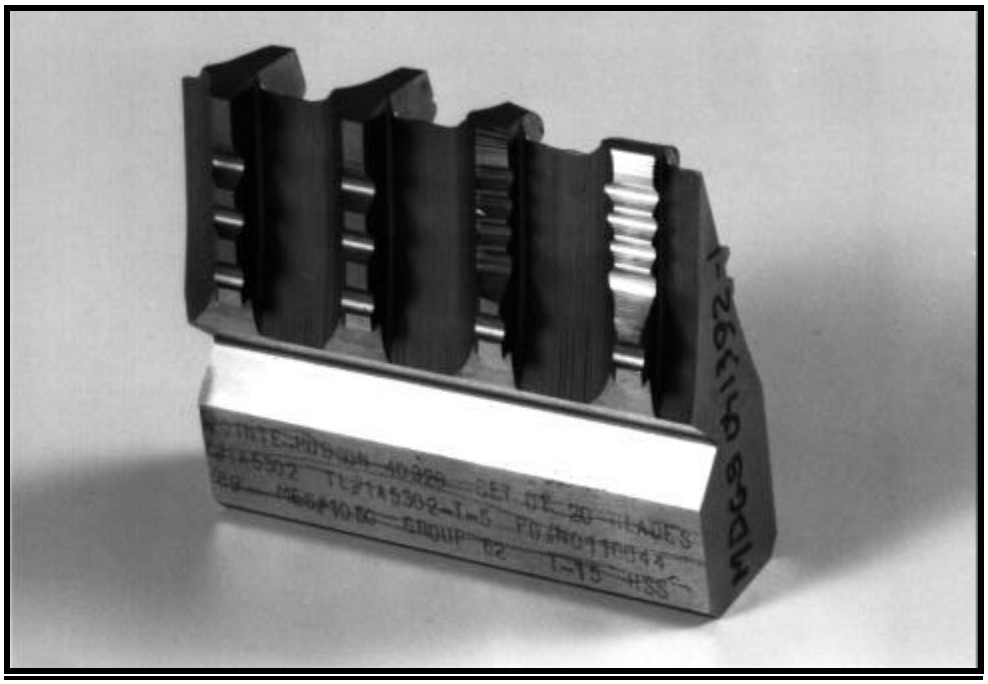
Root Form Broaches

Application Sheet #514

Description

Regrinding of root form broaches



Application

- Root Form (or Fir Tree) broaches are used to generate female root forms in rotor discs which accept turbine blades, etc.
- Gullet grinding only
- Grinds both the right and left hand side of the cutter.

Process

- Root Form Broaches are mounted in fixture against the fence of a magnetic chuck.
- Rake and Shear angles are set with the “B” and “C” axes respectively.
- The base of the gullet is set horizontal using the A-axis.
- The contact probe locates the broach and the first tooth (or all teeth if necessary).
- The depth (or length) of the grind is set in the broach datafile or the gullet depths can be probed as an option.
- Multiple roughing passes can be assigned.

Material

Hardened tool steel

Features and Benefits

- Available on Huffman HS-856 and HS-130 and HS-160 Series Grinders.
- A CNC A-Axis with cradle assembly is available as an option.
- The B and C axes are available as either manual or CNC axes.
- Broach fixturing is optional.
- Features integrated probing
- Standard (Inch) or metric input is possible.
- A single CBN plated grinding wheel is required.
- Probing routines (for given broaches) can be archived for future use.
- Probing can be set to check the location of the first tooth only; using data file information for the location of all others. It can also be set to check all teeth.
- Optional software is available to allow one wheel profile to produce a variety of tooth profiles.

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