

Company logo with link to the company website:



The Grinding Doc[®]

www.TheGrindingDoc.com

Research activities of the company:

Grinding cycle optimization; grinding education; wear rates of natural and synthetic diamond dressing tools; power-monitoring in grinding; chatter detection via high-frequency power monitoring; grinding of hard materials such as tungsten-carbide, cermet, PCBN and PCD.

Name(s) of the CIRP Corporate member and STC's of primary interest:

The Grinding Doc

Dr. Jeffrey Badger, JB@TheGrindingDoc.com

STC's: STC G

Research needs of the company (if applicable)

The Grinding Doc provides high-level technical support and education to industry. Challenging and poorly understood areas are: (1) finding the source of forced chatter; (2) coping with loading when grinding tungsten-carbide and cermets; (3) Non-destructive evaluation of thermal damage in metals, example: Barkhausen Noise; (4) eliminating swirl in cylindrical-traverse grinding; (5) cleaning nozzles to remove loading in diamond wheels; (6) the effect of coolant formulation and extreme-pressure additives on grinding forces and grit wear.

Main activities of the company:

The Grinding Doc provides education and technical support to companies and universities working in precision grinding. Industries include aerospace, automotive, gears, bearings, carbide and HSS tooling and gemstones, among others. The Grinding Doc works with end-users and with wheel, dressing-tool and coolant manufacturers.

Interest in CIRP cooperative research on:

Chatter, loading, Barkhausen Noise, swirl, scrubber nozzles, coolants.

Other points of interest:

The Grinding Doc is heavily involved in grinding education to machinists, CNC programmers and engineers working in industry. A large part of The Grinding Doc's work involves taking high-level concepts and knowledge learned in the academic world and translating them for use in the industrial world.