



Dr. Jeffrey A. Badger




The Grinding Doc

Expert in Grinding

Independent Consultant

www.TheGrindingDoc.com

Who is *The Grinding Doc*?

- An expert in grinding.
- Known as “The Grinding Doc” from my regular question/answer column in *Cutting Tool Engineering*.
- Pride myself on working “in the trenches” (instead of in the lab).
- Very practical and down-to-earth. Can explain complex grinding concepts in layman’s terms. Makes grinding theory work in the real world.
- Bachelor’s degree in Mechanical Engineering from The University of Texas at Austin. 
- Master’s degree in Mechanical Engineering from Pennsylvania State University. 
- Ph.D. in Mechanical Engineering from Trinity College, Dublin, Ireland. 
- Widely published in the academic journals such as *CIRP Annals* and the *International Journal of Machine Tools & Manufacture*.
- I work independently as a consultant, educating people about grinding and helping companies improve their grinding operations, reduce grinding costs, troubleshoot grinding problems and set up grinding research programs.

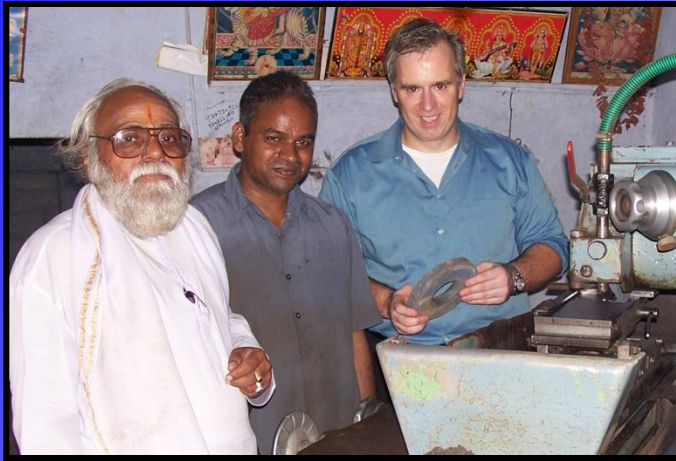


Dr. Jeffrey Badger

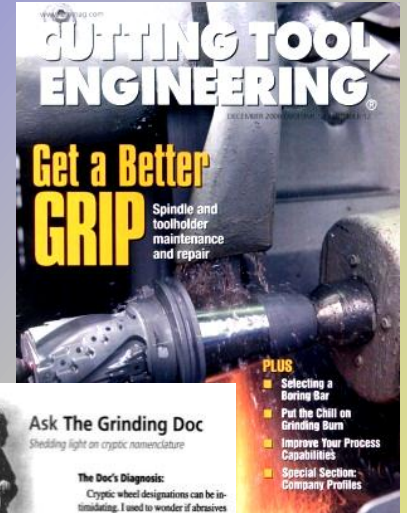
What I offer:

- **The High Intensity Grinding Course:** Three intense days of grinding: conventional- and super-abrasives, dressing, cooling, wheel specification, finding the sweet spot of the wheel, eliminating burn and chatter, reducing burr, cutting cycle times, new technologies. Held several times per year in the U.S. and Europe.
- **The Carbide Master-Grinder Clinic:** Three days focused entirely on grinding of tungsten carbide: Trueing & sticking, finding the finding the sweet spot of the wheel, reducing chipping, increasing material-removal rates, reducing cycle times, new technologies; creep-feed/flute grinding, cylindrical grinding, cup-wheel grinding, peel grinding. Held once a year in Chicago.
- **In-house Grinding Boot Camp:** Five-day visit to company to help them take their grinding operations to the highest level.
- **Executive Education:** One-day course for busy executives to educate them on grinding and discuss ways they can set themselves apart from the competition.
- **The Grindometer[®]:** Device for optimizing grinding cycles, comparing grinding wheels, comparing coolants and troubleshooting problems.
- **The Grinder’s Toolbox[®]:** Program for optimizing grinding, dressing and cooling parameters, avoiding chatter and predicting grinding temperatures. Current modules: surface grinding, creep-feed grinding, cylindrical-traverse grinding, cylindrical-plunge grinding, cup-wheel grinding, single-point/blade dressing, diamond-disc dressing, diamond plunge-roll dressing, cooling, superabrasive-wheel sticking.
- **Troubleshooting:** Company visit to troubleshoot problems, particularly “grinding burn”.
- **The Fast-Track Research Program:** Setting up research programs for quick, practical results.
- **Expert Witness**

Dr. Badger is known for his question/answer column "Ask The Grinding Doc" in *Cutting Tool Engineering*



The Grinding Doc, right, on the machines in India.



Ask The Grinding Doc
Shedding light on cryptic nomenclature

The Doc's Diagnosis:
Cryptic wheel designations can be intimidating. I used to wonder if abrasive salesmen spoke with such ambiguity because they were not quite sure what all the letters and numbers meant themselves. But that's usually not the case. Your salesman knows his subject and he wants to help you achieve the best results possible. It's just that all those digits can be tricky—even for the most experienced grinder. There is no reason to be wary.

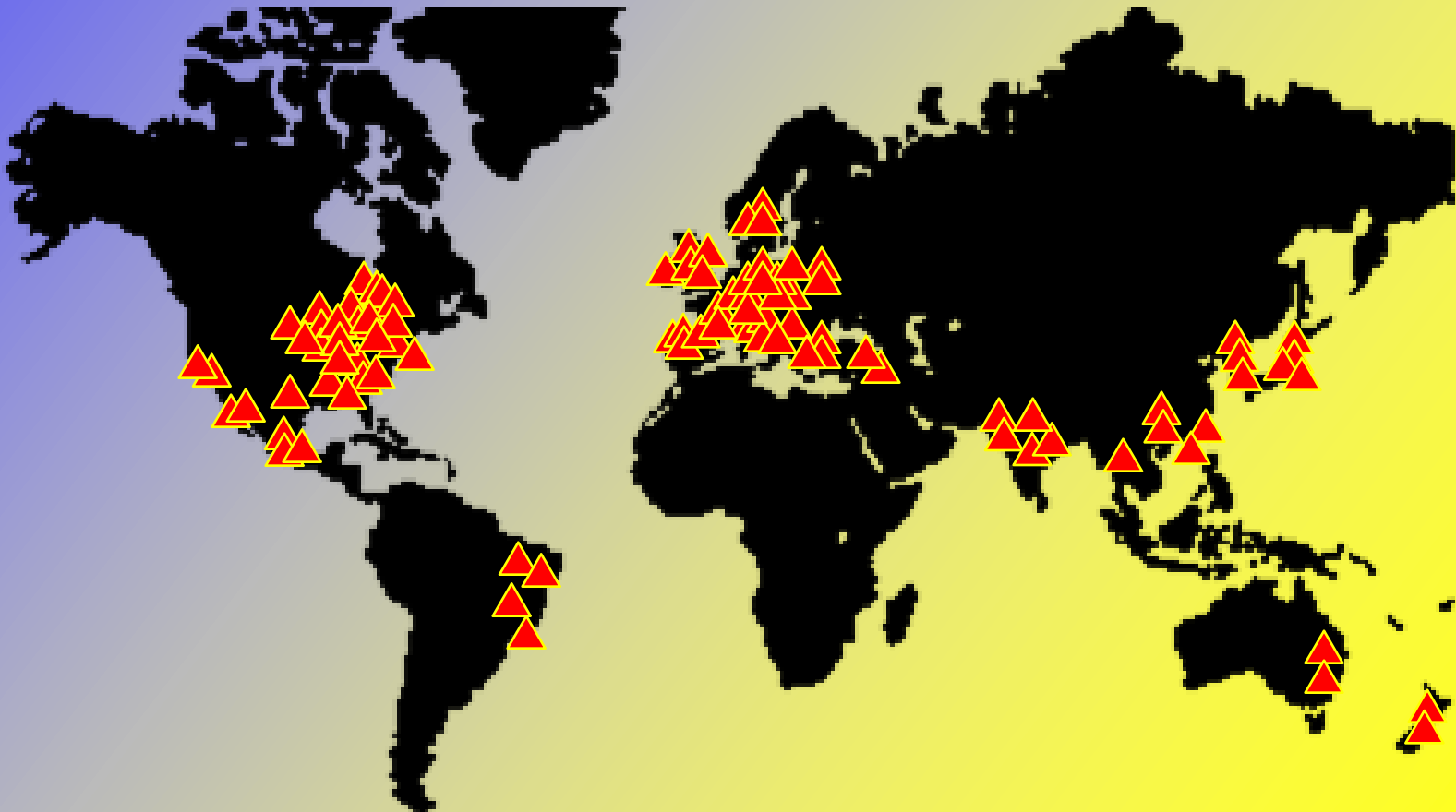
I can assure you that deciphering this code is not as difficult as it may seem. It's just a matter of learning the lingo and taking one parameter at a time. Let's start by looking at what's in a conventional grinding wheel.

The three basic constituents of a grinding wheel are the abrasive, the bond material and its porosity. The abrasive is the hard material that does the cutting. It is held in place by the bond material. The

BY DR. JEFFREY A. BADGER

The Doctor's in. Starting with this issue, CTE begins a semiregular column aimed at answering readers' questions about grinding and dispensing grinding-related advice. The author is Dr. Jeffrey Badger—The Grinding Doc. Badger is an independent consul-

Jeff Badger has worked in grinding facilities around the world and brings a no-nonsense, down-to-earth, practical and results-oriented approach to grinding.



Contact

Jeffrey A. Badger, Ph.D.
Austin, Texas
USA

(+1) 512-934-1857
JB@TheGrindingDoc.com
www.TheGrindingDoc.com

www.TheGrindingDoc.com

