Keith Reckling (914) 674-8629 National Research Company

In 1948, the US declared diamonds to be a strategic war material. So they began stockpiling natural diamond, in a crushed boart state, from Belgium Congo.

The US had stockpiled 40 million carats, and there became a shortage of diamond. Boart was being purchased by people like Norton, for military and civilian uses.

General Electric opened up project super-pressure to try to synthesize diamond so they could supply them for the tungsten carbide and grinding wheel uses. GE needed diamonds for grinding of tc and production of light bulb. GE moved diamond grit from research lab to production very quickly. That prompted DeBeers to assemble a team and get it going.

In the 60s – 70s the diamond grit market grew by 8-10% per year.

Resin bond diamonds developed moved to metal bond, because metal bond was stronger.

The US was biggest consumer of diamond grit until late 80s, when China and Japan jumped in. China and Japan also started producing their own grit. Highways were being built so it prompted the use of more. Many things started happening: highway programs, they were sawing the control joints that prompted the use of more diamond saw blades. Tungsten carbide was a big user. The next biggest user was concrete saw blades.

Diamond grit was used to grind and shape tungsten carbide, or it should be called cemented tungsten carbide. Take tc particles, then put them together with cobalt, press or cinter together as a big block. It's placed in a furnace to bond. Then block needs to be shaped. The grinding is then done by grinding wheels.

Edge of windows or mirror are ground with metal bond diamond wheel. 90 percent of every product manufactured, somewhere in the process an industrial diamond is used.