Brush Wellman Inc. Powder Metal Products Awarded Patent for Functionally Graded Material Composite Flanges

CLEVELAND--Sept. 20, 2000--Brush Wellman Powder Metal Group, Tucson, Arizona, a business unit of Brush Wellman Inc., has been awarded a U.S. patent for functionally graded material (FGM) flanges for microelectronic and optoelectronic packaging.

Copper tungsten FGM substrates are used in optoelectronics as mounts or submounts for laser diodes, sensors, and detectors, and in microelectronics power packages for RF microwave, and millimeter-wave applications. Typical end user applications include cellular phone transmitting stations and pump laser diode based light amplifiers for fiber-optics networks.

FGM copper/tungsten metal matrix composite flanges are high performance heat sinks with an effective thermal conductivity (TC) of 320 W/mK (watts per meter Kelvin). The newly patented process represents a revolutionary breakthrough since previous TC was only 200 W/mK.