



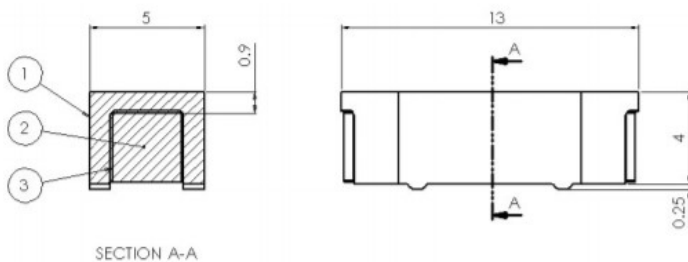
**Diamond Wear Inserts**



TSP Xtreme is a new insert offering the durability of TSP (Thermally Stable Polycrystalline Diamond) with the ease of application of tungsten carbide inserts. TSP Xtreme features a coated TSP core brazed in to a tungsten carbide jacket that incorporates the patented QuickTip rib design. Applied using the QuickTip process to ensure a secure bond, the tungsten carbide jacket holds the TSP securely in position. This allows for the application of an even layer of extremely durable TSP wear protection.

The TSP-Xtreme Insert is designed for use on downhole tools in extreme wear conditions; where the tool life is a function of the life of the hardfacing; or for non-magnetic stabilizers whose material properties are compromised with repeated hardfacing.

The TSP-Xtreme Insert is intended for use in critical areas of the tool, but the insert can also be used to cover the entire surface. The inserts are designed to replace standard 13x5x4mm Tungsten Carbide inserts, when hardfacing a tool using the QuickTip process. The Inserts are laid in the same way as a standard insert with no special procedures required. They incorporate a grinding allowance which allows the tool to be ground to the specified diameter leaving a tungsten carbide surface which, when worn, will expose the TSP diamond. The Inserts are constructed using a tungsten carbide shoe ①, metallurgically bonded to a TSP insert ②, with a copper braze ③



**Tungsten Carbide grade, CW40**

**TSP** – synthetically produced, thermally stable diamond grit, approximately 75/80%, bonded with Silicon & Silicon Carbide binder, 20/25%.

