

ABSTRACT

THERMAL SPRAY APPLICATION OF POLYMERIC MATERIAL

A PEEK composite may be applied to a metallic substrate (32) through an HVOF process. The metallic substrate (32) is prepared with a metallic bonding layer (34) that is arc sprayed onto its surface. A powderized PEEK composite material (36) is then heated and propelled against the substrate (32) and bonding layer (34) by a high velocity oxy fuel technique to uniformly coat the substrate (32). Following the HVOF process, the PEEK coating is annealed to provide a durable, PEEK-coated substrate.

Figure 5