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#### **ABSTRACT**

Thermal spray coating involves heating of coating materials (ceramic, carbide, and metal alloys) to a semi-molten or molten state and propels to substrate. The flame temperature is in the range of 3,000 to 16,000 °C but the surface temperature of the substrate rarely exceeds 500 °C depending on the thermal spray processes being used. The coating materials are feed into the spray gun in the form of powders, rods or wires. Thermal spray coating is use for the following purposes; (i) increase corrosion and wear resistance, (ii) protection against electromagnetic, or electrostatic, (iii) protection against radio frequency interference, (iv) metal buildup and, (iv) cosmetic. Thermal spray coating can be categorized into five most common processes; (i) Flame arc spraying, (ii) Electric Arc spraying, (iii) Plasma arc spraying, (iv) High-velocity Oxy/Fuel (HVOF) and (v) Detonation Gun. In this paper, thermal spraying processes will be explained, along with the advantages and disadvantages of one another.

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