Abstract

A method and apparatus for plasma spray coating a portion of a workpiece, such as a gas turbine compressor blade, without masking any portions thereof. The apparatus includes a plasma apparatus with an anode, cathode, and an arc generator for generating an electric arc between the anode and cathode. An arc gas emitter injects inert gas through the electric arc. The electric arc is operable for ionizing the gas to create a plasma gas stream. A powder injector nozzle extends through the anode and injects powdered material into the plasma stream for transfer to the workpiece.