

LASER ENHANCEMENTS OF COLD SPRAYED DEPOSITS

ABSTRACT OF THE DISCLOSURE

A process for depositing a powder metal onto a substrate is performed by providing a substrate, depositing at least one layer of powder metal onto a surface of the substrate using a non-oxidizing carrier gas so that the powder metal plastically deforms without melting and bonds to a surface upon impact with the surface, and subjecting the at least one powder metal deposited layer to a treatment to improve density and/or raise a temperature of the at least one powder metal deposited layer. In a preferred embodiment of the present invention, the treatment to improve density and/or raise a temperature of the at least one powder metal deposited layer is a laser treatment.

Figure 2