

Title (en)
PLASMA COATINGS COMPRISED OF SPRAYED FIBERS

Publication
EP 0093779 B1 19870923 (EN)

Application
EP 83900217 A 19821115

Priority
US 32213281 A 19811117

Abstract (en)
[origin: WO8301751A1] A process for adhering small metal fibers (24), to a surface (23) by plasma spraying the fibers on a workpiece (20), and articles made using the process. The process is especially useful for improving the strength of plasma arc coatings, as well as for improving the bonding of plasma arc coatings to substrates. To make an improved ceramic faced metal article, fibers (24) are sprayed onto the workpiece (20, 34) by injecting fibers (44) into the plasma stream (36) external to the plasma gun nozzle (38). Then, plasma sprayed ceramic particles are caused to surround the fibers as a matrix (26). The optional interposition of a removable polymer material (3) on the workpiece surface (23), after the fibers (24) are sprayed but before the ceramic matrix (26) is sprayed, provides an effective way of providing a low stiffness connector (30') between a low thermal expansion coefficient ceramic material (26') and a high expansion coefficient metal substrate (20'). The connector alleviates strains from thermal expansion differences.

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B05D 1/36; B32B 5/02

IPC 8 full level
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Cited by
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