Title (en)

Process and device for high speed flame spraying of refractory filler material in form of powder or wire for coating surfaces.

Title (de)

Verfahren und Vorrichtung zum Hochgeschwindigkeitsflammspritzen von hochschmelzenden draht- und pulverförmigen Zusatzwerkstoffen zum Beschichten von Oberflächen.

Title (fr)

Procédé et dispositif de pulvérisation par flamme à haute vitesse de matériau d'apport réfractaire sous forme de poudre ou de fil pour le revêtement de surfaces.

Publication

EP 0458018 B1 19940511 (DE)

Application

EP 91103273 A 19910305

Priority

DE 4016412 A 19900522

Abstract (en)

[origin: EP0458018A2] The invention relates to a process and a device for the high-speed flame-spraying of refractory filler materials in the form of wire and powder for the coating of surfaces, wherein, by means of at least two gas-mixing systems running independently of one another, the spraying filler material in the form of wire or powder, introduced into a primary combustion chamber, is fused by primary heating flames arranged concentrically around a charging channel, accelerated by the resulting high-speed flame and passed through a primary expansion nozzle bore into a downstream secondary combustion chamber, through which the primary high-speed flame passes at supersonic speed, taking along the melt-plastic filler materials, and which leads into a downstream water-cooled secondary expansion nozzle, axially widened centrically, or into the bore thereof, so that a zone of reduced pressure is generated in the region of secondary fuel gas/oxygen channels arranged radially, axially and/or in a focusing manner and leading into the secondary combustion chamber, and a fuel gas mixture can be fed at low inflow pressures and, in the secondary chamber, the fuel gas mixture is ignited and expanded radially, axially around the primary high-speed flame and, due to a high flame temperature and an extreme ignition and combustion rate, contributes to the final fusion of the spray filler materials and to their additional acceleration. <IMAGE>

IPC 1-7

C23C 4/12; B05B 7/20

IPC 8 full level

B05B 7/20 (2006.01); **C23C 4/12** (2016.01)

CPC (source: EP)

B05B 7/201 (2013.01); **C23C 4/12** (2013.01)

Cited by

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DOCDB simple family (application)

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