

Title (en)

Thermal spray coating process with cooling.

Title (de)

Verfahren zum Beschichten einer Oberfläche mittels einer thermischen Spritzmethode mit Kühlung.

Title (fr)

Procédé de dépôt par pulvérisation thermique avec refroidissement.

Publication

EP 0546359 B1 19950621 (DE)

Application

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Priority

DE 4141020 A 19911212

Abstract (en)

[origin: EP0546359A1] The invention relates to a process for coating a surface by means of a thermal spray method, in which a spray jet of hot carrier gas and molten material particles is directed at the surface in question and at the same time cooling is effected adjacent to the spray jet by means of a cooling jet which consists of substantial proportions of carbon dioxide and contains cold gas and snow particles. Hitherto, such a process was carried out based on liquid carbon dioxide, in order to ensure that a useful cooling jet with correspondingly high snow particle fractions is obtained. According to the invention, the carbon dioxide fraction in the cooling jet is obtained from gaseous carbon dioxide which is at a pressure of at least 45 bar, specifically by the carbon dioxide gas first being expanded, via a slit nozzle or another slit-like orifice, into an expansion volume which is disposed about said expansion slit and is largely enclosed with respect to the environment, and starting from this expansion volume and its outlet orifice the cooling jet is formed and is directed at the region to be cooled. <IMAGE>

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IPC 8 full level

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