

Title (en)

Laval nozzle for thermal or kinetical spraying

Title (de)

Lavaldüse für thermisches oder kinetisches Spritzen

Title (fr)

Buse de Laval pour la pulvérisation thermique et cinétique

Publication

EP 1506816 A1 20050216 (DE)

Application

EP 04010236 A 20040429

Priority

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- EP 04008360 A 20040406

Abstract (en)

The Laval nozzle has a convergent and a divergent section. At least part of the divergent section has a bell-shaped contour, resulting in an outlet velocity of more than 2.5. The contour is formed to provide a parallel jet nozzle. The full length of the nozzle is between 60mm and 300mm, pref. between 100mm and 200mm, and the cross section of the nozzle neck is 3-25mm², pref. 5-10mm². The expansion ratio is between 1 and 25, and the critical outlet velocity ratio is between 2.5 and 5, pref. between 2.5 and 4. The nozzle contour is specially adapted for nitrogen, air, or helium. A powder tube ends in the divergent part of the nozzle.

Abstract (de)

Die Erfindung betrifft eine Lavaldüse für das thermische Spritzen und das kinetische Spritzen, insbesondere für das Kaltgasspritzen, mit einem konvergenten und einem divergenten Abschnitt. Zum Erreichen eines besseren Auftragswirkungsgrades besitzt erfindungsgemäß zumindest ein Teil des divergenten Abschnittes eine glockenförmige Kontur (Fig.).

IPC 1-7

B05B 7/14

IPC 8 full level

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CPC (source: EP)

B05B 7/162 (2013.01); **B05B 7/20** (2013.01); **C23C 24/04** (2013.01)

Citation (search report)

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