

Title (en)
PROCESS FOR THE VACUUM REFINING OF METAL AND ASSOCIATED DEVICE

Title (de)
VERFAHREN UND VORRICHTUNG ZUR VAKUUMRAFFINATION VON METALLEN

Title (fr)
DISPOSITIF D'AFFINAGE SOUS VIDE DE METAL ET DISPOSITIF ASSOCIE

Publication
EP 0803579 A4 19980422 (EN)

Application
EP 94909359 A 19940224

Priority
• RU 9400034 W 19940224
• RU 94000727 A 19940119

Abstract (en)
[origin: WO9520057A1] A process for the vacuum refining of metal involves lowering the pressure of the gas mixture on the surface of the metal melt until the partial pressures of the gases above the melt are lower than the partial pressures of the gases within it; and subjecting the metal to pressure pulses of 0.02-0.08 MPa in the low-frequency range 0.03-5 Hz while also simultaneously altering the pressure in the medium-frequency range 55-195 Hz from 0.005 to 0.01 MPa, and in the high-frequency range 350-3500 Hz from 0.0001 to 0.001 MPa. To that end, the proposed device for the vacuum refining of metal by the process described above comprises: an airtight chamber (1) with a gas outlet pipe (2); an ejector (3) comprising a housing (4), a nozzle (5) and a mixer channel (6); a unit (7) for creating low-frequency pulses in the working gas flowing through the nozzle (5) of the ejector (3); a unit (8) for creating medium-frequency pulses in the gas flow at the inlet to the gas outlet pipe (2); and a unit (10) for creating high-frequency pulses in the gas flow leaving the chamber (1), the latter being designed as a regulator for, in the present case, the flow-through section of the nozzle (5) which forms an insert (20).

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Citation (search report)
• [A] GB 823419 A 19591111 - SIEMENS AG
• [A] US 3162908 A 19641229 - DE LUCA NOEL
• [A] DE 753613 C 19530223 - IG FARBENINDUSTRIE AG
• See references of WO 9520057A1

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