

Title (en)
APPARATUS AND METHODS FOR THE PRODUCTION OF POWDERS

Title (de)
VORRICHTUNGEN UND VERFAHREN ZUR HERSTELLUNG VON PUDER

Title (fr)
DISPOSITIFS ET PROCEDES SERVANT A FABRIQUER DES POUDRES

Publication
EP 1230017 A4 20030910 (EN)

Application
EP 00961495 A 20000901

Priority
• US 0024143 W 20000901
• US 15237799 P 19990903

Abstract (en)
[origin: WO0117671A1] Metallic powders are formed by the electrically exploded wire (EEW) process. An apparatus (20) for manufacturing such powders includes a closed loop recirculating gas path between a reaction chamber (100) and an extractor (32). A wire (31) is delivered from a source (400) along a wire path from ambient conditions outside the chamber to within the chamber. Within the chamber, a first electrode (200) has an aperture circumscribing the wire path and a second electrode (203) is located proximate to a terminal end of the wire path. A source (26) of electrical energy applies a discharge voltage between the electrodes to explode the length of wire therebetween to form an initial particulate. The initial particulate may be selectively extracted and processed to produce desired powders, in particular, energetic powders which are passivated for stability under ambient conditions.

IPC 1-7
B01J 19/08; B22F 9/14

IPC 8 full level
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CPC (source: EP US)
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C-Set (source: EP US)
B22F 2998/00 + B22F 1/054

Citation (search report)
• [X] WO 9217303 A1 19921015 - AKTSIONERNOE OBSHCHESTVO SERVER [RU]
• [A] US 3015852 A 19620109 - NICOLAS HOFFMAN DANIEL JAKOBUS, et al
• [A] US 3634040 A 19720111 - JOHNSON RICHARD L, et al
• See references of WO 0117671A1

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CN114273023A; CN106955996A

Designated contracting state (EPC)
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WO 0117671 A1 20010315; AU 7343900 A 20010410; CA 2383861 A1 20010315; CN 1377297 A 20021030; EP 1230017 A1 20020814; EP 1230017 A4 20030910; IL 148073 A0 20020912; JP 2003508633 A 20030304

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