

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 May 2001 (03.05.2001)

PCT

(10) International Publication Number
WO 01/31080 A2

(51) International Patent Classification⁷: C23C 14/30

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(21) International Application Number: PCT/US00/21203

(22) International Filing Date: 3 August 2000 (03.08.2000)

(81) Designated States (*national*): JP, SG, UA.

(25) Filing Language: English

(84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

(26) Publication Language: English

(30) Priority Data:

60/147,232 4 August 1999 (04.08.1999) US
Not furnished 24 July 2000 (24.07.2000) US

Published:

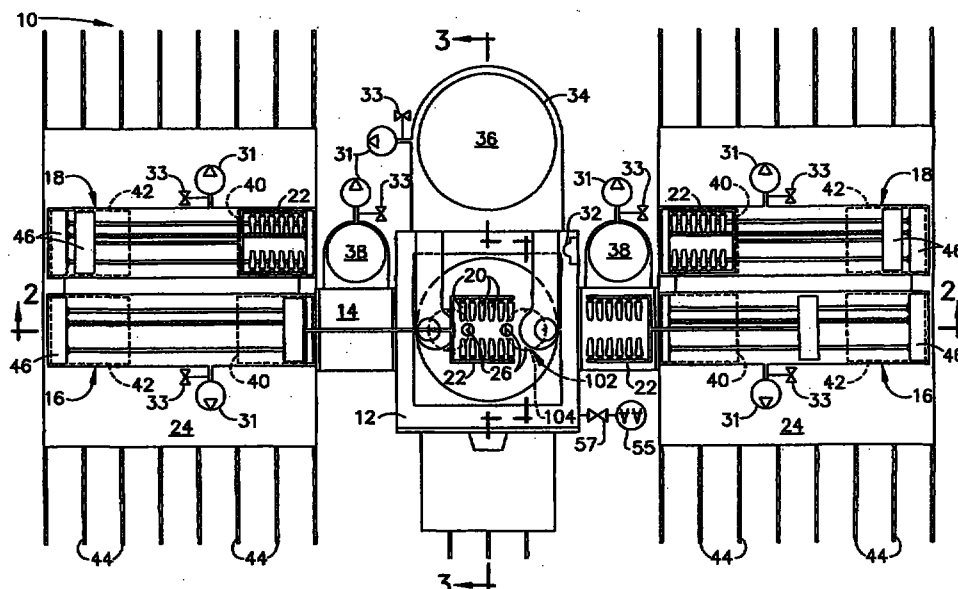
— Without international search report and to be republished upon receipt of that report.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: ELECTRON BEAM PHYSICAL VAPOR DEPOSITION APPARATUS



(57) Abstract: An electron beam physical vapor deposition (EBPVD) apparatus (10) and a method for using the apparatus (10) to produce a coating (e.g., a ceramic thermal barrier coating) on an article (20). The EBPVD apparatus (10) generally includes a coating chamber (12) that is operable at elevated temperatures and subatmospheric pressures. An electron beam gun (30) projects an electron beam (28) into the coating chamber (12) and onto a coating material (26) within the chamber (12), causing the coating material (26) to melt and evaporate. An article (20) is supported within the coating chamber (12) so that vapors of the coating material (26) deposit on the article (20). The operation of the EBPVD apparatus (10) is enhanced by the shape and intensity of the electron beam pattern on the coating material (26) and on a crucible (56) containing the molten coating material (26).

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