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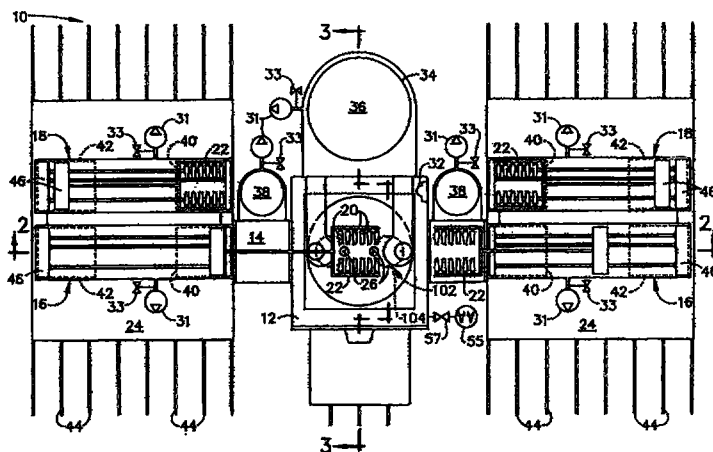
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(54) Title: ELECTRON BEAM PHYSICAL VAPOR DEPOSITION APPARATUS WITH INGOT MAGAZINE



(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 inclusion of a rotatable magazine (102) that supports multiple ingots (26) of the coating material (26) beneath the coating chamber (12). The magazine (102) is indexed to individually align multiple stacks of one or more ingots (26) with an aperture (56) to the coating chamber (12) for sequentially feeding the ingots (26) into the coating chamber (12) without interrupting deposition of the coating material (26).

WO 01/11105 A1