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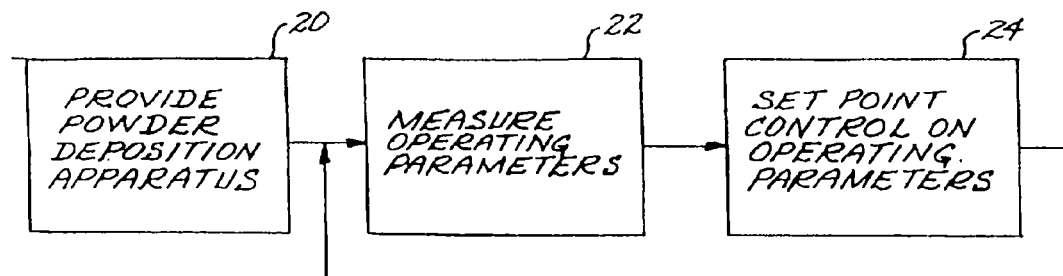
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162162

(54) Title: HIGH-TEMPERATURE POWDER DEPOSITION APPARATUS AND METHOD UTILIZING FEEDBACK CONTROL



(57) Abstract: A deposit is formed on a deposition substrate (52) using a deposition gun (32) that burns a mixture of a fuel and an oxidizer to form a deposition gas flow, mixes a powder into the deposition gas flow to form a deposition mixture flow (44), and projects the deposition mixture flow (44) therefrom. The deposition gun (32) is provided with a flowing coolant. A flow rate of the fuel to the deposition gun (32), a flow rate of the oxidizer to the deposition gun (32), a flow rate of the powder to the deposition gun (32), and a cooling capacity of the coolant flow are all measured. The flow rate of the fuel, the flow rate of the oxidizer, the flow rate of the powder, and the cooling capacity of the coolant flow are all controlled responsive to the step of measurements.



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