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(54) Title: SYSTEMS AND METHODS FOR USING INTERMEDIATE DATA TO IMPROVE SYSTEM CONTROL AND DIAGNOSTICS

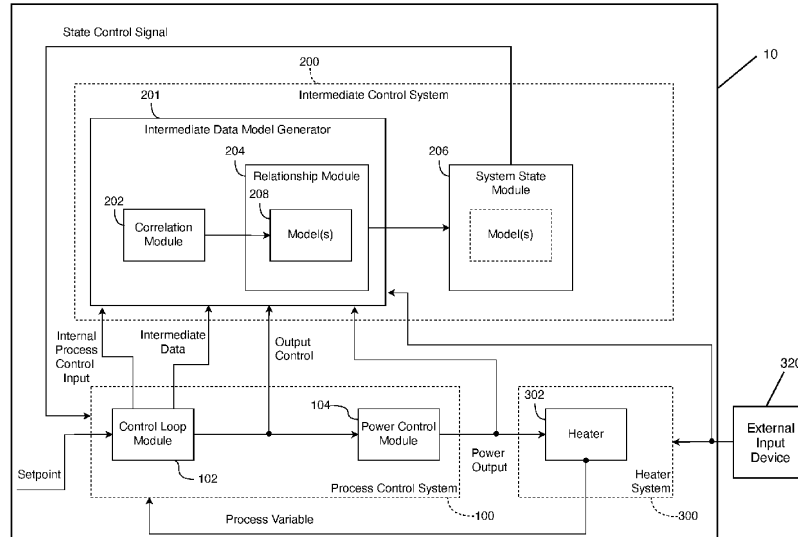


FIG. 1

(57) Abstract: A method of controlling a thermal system of an industrial process includes monitoring intermediate data, associating the intermediate data with correlation data, wherein the correlation data includes an internal process control input, an external heater control input, the output control, or a combination thereof. The method further includes generating a model that defines a relationship between the intermediate data and the correlation data, identifying a state of the heater system based on the model, and selectively performing a corrective action based on the identified state of the heater system.

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