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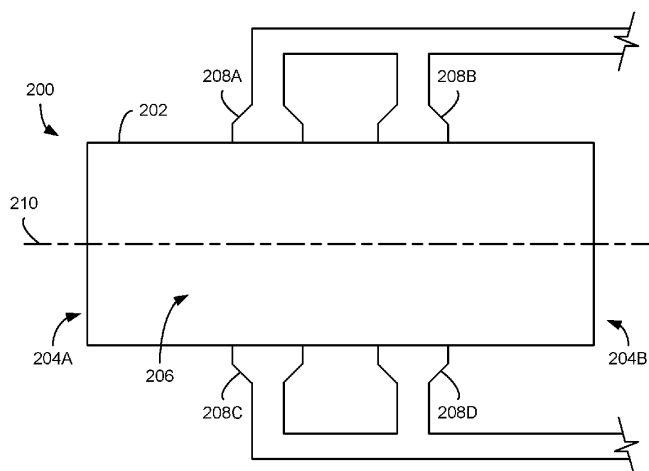


FIG. 2

(57) Abstract: Systems and methods including modular electromagnetic heating systems enable heating of articles using electromagnetic energy. The systems include a primary processing vessel equipped with electromagnetic energy launchers and fluid delivery systems to enable capable of preheating, heating, and cooling of the articles within the primary processing vessel. The primary processing vessel is further configured to be coupled to one or more upstream or downstream vessels such that portions of the preheating and/or heating functionality may instead be performed by the additional vessels. This flexibility enables scaling of the electromagnetic heating system between a relatively small (e.g., lab) scale system and a relatively large (e.g., production) scale system while minimizing capital expenditures and space requirements.

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