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(54) Title: METHODS AND SYSTEMS FOR CRACKING HYDROCARBONS

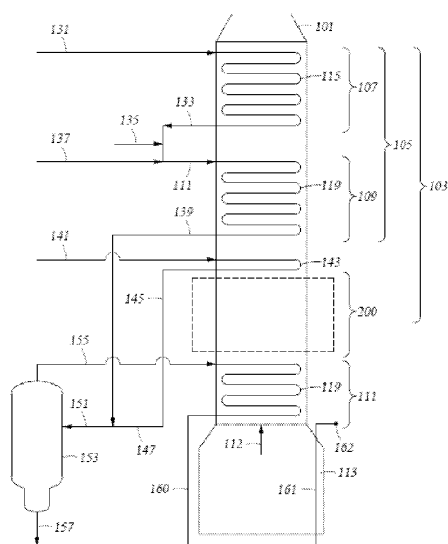


Fig. 1

(57) Abstract: The present disclosure relates to processes, methods, systems, and apparatus for steam cracking hydrocarbon in a pyrolysis furnace having a convection zone and a radiant zone. The convection zone includes three heat exchangers in series with a serpentine arrangement. A fluid source is disposed each heat exchanger to provide steam into the heat exchangers. The present disclosure further relates to a process of adjusting the stream flow rate for each fluid source to control operating conditions such as flue gas temperature, stack temperatures, and temperatures of other components of the furnace.

Declarations under Rule 4.17:

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