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(54) Title: OPERATION OF MOLTEN CARBONATE FUEL CELLS WITH HIGH ELECTROLYTE FILL LEVEL

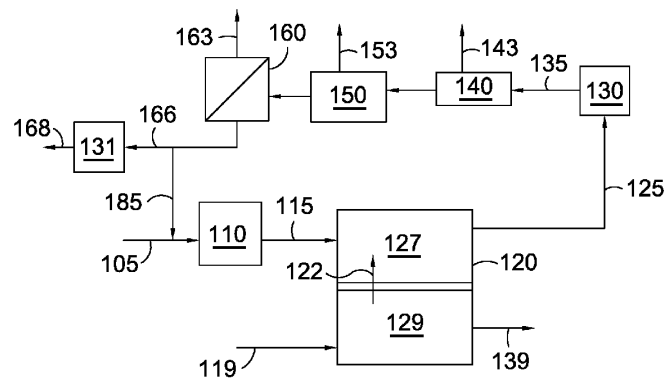


FIG. 1.

(57) Abstract: An elevated target amount of electrolyte is used to initially fill a molten carbonate fuel cell that is operated under carbon capture conditions. The increased target electrolyte fill level can be achieved in part by adding additional electrolyte to the cathode collector prior to start of operation. The increased target electrolyte fill level can provide improved fuel cell performance and lifetime when operating a molten carbonate fuel cell at high current density with a low-CO₂ content cathode input stream and/or when operating a molten carbonate fuel cell at high CO₂ utilization.

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