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(54) **AIR TANK AND VARIABLE GEOMETRY AIR HANDLING IN HYDROGEN FUEL CELLS**

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(57) ABSTRACT

An air handling system for a fuel cell stack includes a pneumatic storage device disposed downstream from a compressor, a flow control valve system configured to operatively couple an inlet of the pneumatic storage device to an outlet of the compressor and configured to operatively couple an outlet of the pneumatic storage device to an inlet of the fuel cell stack, and a controller configured to, in response to a power demand being greater than a threshold, cause the flow control valve to open to increase a flow rate of air from the pneumatic storage device to the fuel cell stack.

