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[54] **GAS BLENDER**

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[58] Field of Search **137/88, 93, 101.19**

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[57] **ABSTRACT**

A gas blender comprising a plenum for mixing gases, at least one flow valve, an oxygen sensor, a microprocessor, and driver circuits. The inlet gas port is adapted to be in fluid communication with a supply of a desired gas and the flow valve is disposed between the supply of gas and the inlet of the plenum. At least one driver circuit adjusts the flow valves to change the gas flow rate therethrough and, accordingly, the rate at which gas enters into the plenum. The oxygen sensor measures the percentage composition of oxygen exiting from, or inside, the plenum and generates an output based on the measured percentage composition of oxygen. The microprocessor controls the percentage composition of oxygen exiting from the plenum and is electrically coupled to the output of the oxygen sensor. The microprocessor compares the output of the oxygen sensor to a predetermined level of oxygen and generates a response signal based on the comparison, which is communicated to the driver circuits. The driver circuits are electrically coupled to both the microprocessor and the flow valves and adjust the flow valve so that the percentage composition of oxygen exiting the plenum is maintained at the predetermined level. The blender of the present invention may also include a pressure sensor in fluid communication with the outlet of the plenum.

15 Claims, 4 Drawing Sheets

