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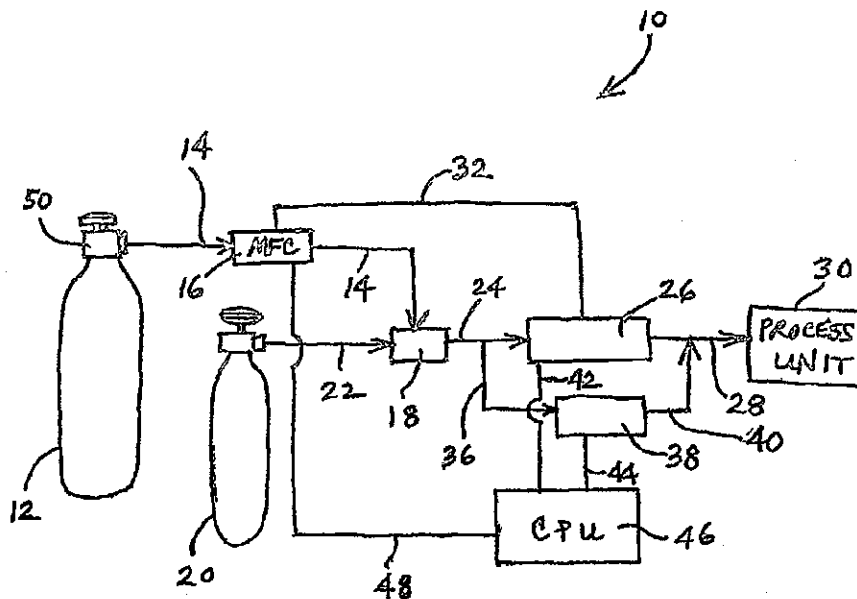
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(54) Title: **IN-SITU GAS BLENDING AND DILUTION SYSTEM FOR DELIVERY OF DILUTE GAS AT A PREDETERMINED CONCENTRATION**



(57) Abstract: Apparatus and method for delivery of dilute active fluid, e.g., to a downstream active fluid-consuming process unit of a semiconductor manufacturing plant. The delivery system includes an active fluid source, a diluent fluid source, a fluid flow metering device for dispensing of the active fluid at a predetermined flow rate, a mixer arranged to mix active gas from the active fluid source that is dispensed at such predetermined flow rate by the fluid flow metering device, with diluent fluid to form a diluted active fluid mixture, and a monitor arranged to measure concentration of active fluid in the diluted active fluid mixture, and responsively adjust the fluid flow metering device, to control the dispensing rate of the active fluid, and maintain a predetermined concentration of active fluid in the diluted active fluid mixture.



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