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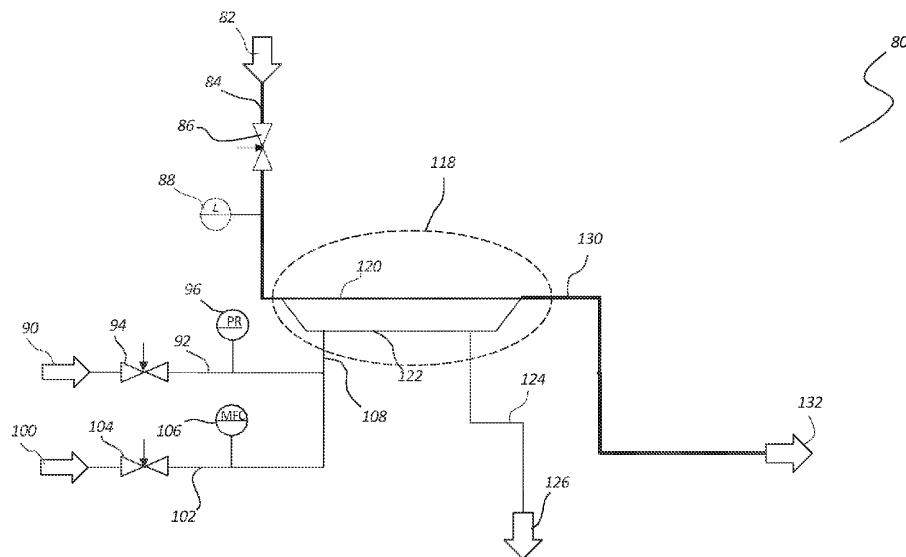
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(54) Title: DISSOLVED AMMONIA DELIVERY SYSTEM AND METHODS OF USE

Fig. 2



(57) Abstract: The present invention concerns a dissolved ammonia delivery system, comprising at least one ultrapure water source configured to provide ultrapure water, at least one carrier gas source configured to provide at least one carrier gas, at least one ammonia (NH₃) source configured to provide NH₃, at least one ammonia saturation module having at least one of one main flow pathway and one bypass flow pathway in communication with the main flow pathway if both main flow pathway and bypass flow pathway are comprised by said at least one ammonia saturation module, the main flow pathway if present configured to have ultrapure water from the ultrapure water source flowed therethrough, the bypass flow pathway configured to receive at least a portion of the ultrapure water from the main flow pathway, if present, to form at least one ultrapure water bypass flow within the bypass flow pathway, wherein the carrier gas and NH₃ introduced into the ultrapure water bypass flow resulting in NH₃ dissolving in the ultrapure water bypass flow.

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