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(54) Title: ADSORPTION CHILLER

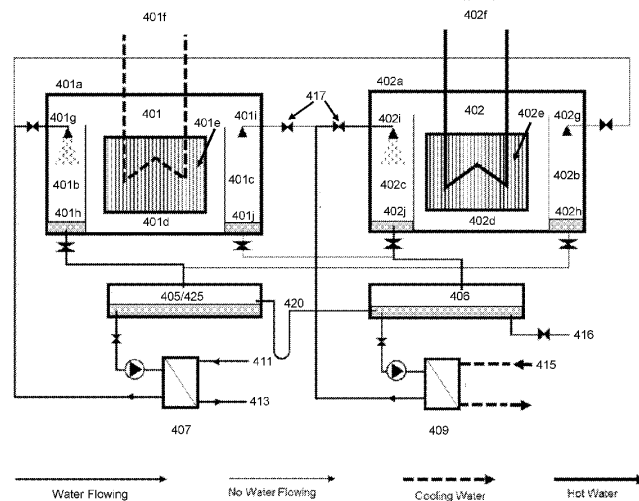


Figure 4a

(57) Abstract: The present invention provides an adsorption chiller comprising four adsorber bed devices and three heat exchangers. Each adsorber bed device comprises a vacuum chamber comprising an evaporative chamber, a condensing chamber and an adsorption bed chamber, where the adsorption bed chamber is situated between the evaporative and condensing chamber and is fluidly connected to the said chambers. Each heat exchanger is in selective fluid connection with any one of the four adsorber bed devices such that no two heat exchangers are connected to the same adsorber bed device. The first two heat exchangers are in selective fluid connection with the first liquid container and the third heat exchanger is in selective fluid connection with the second liquid container. When in operation, two adsorption beds can be operated in an adsorption cycle and the other two in a regeneration cycle. The adsorption chiller is able to operate almost continuously to simultaneously produce two temperatures of chilled water and distilled water.

[Continued on next page]

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