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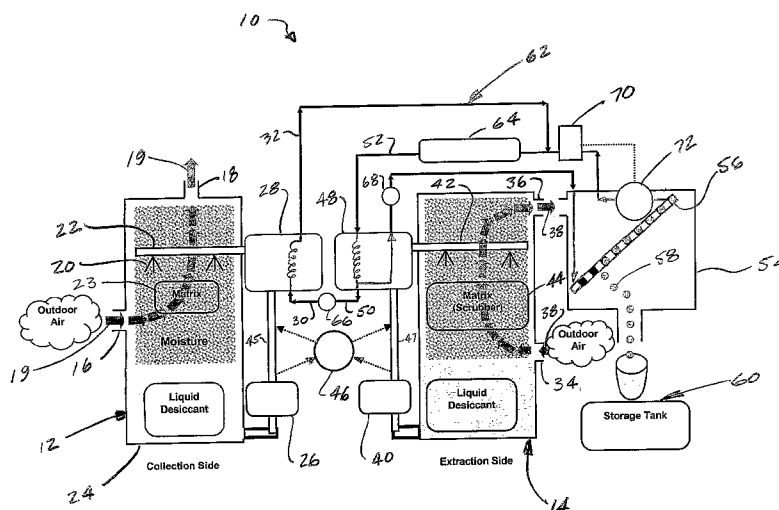
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(54) Title: SYSTEM AND METHOD FOR MANAGING WATER CONTENT IN A FLUID



(57) **Abstract:** A system and method for managing water content in a fluid (19,38) includes a collection chamber (12) for collecting water from the fluid (19) with a desiccant (20), and a regeneration chamber (14) for collecting water from the desiccant (20) and transferring it to a second fluid (38). An evaporator (28) cools the desiccant (20) entering the collection chamber (12), and a second evaporator (52) cools the second fluid (38) to extract the water. The evaporators (28,54) use a refrigerant, the flow of which is controlled by a flow control valve (70). When the temperature in the second evaporator (54) drops below a set point, the refrigerant flow to the second evaporator (54) is stopped, and the refrigerant flow to the first evaporator (28) is increased. This increases the water collection in the collection chamber (12), and causes a rise in the temperature in the second evaporator (54). The valve (70) is then opened to increase the cooling in the second evaporator (54).

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