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(54) Title: A SYSTEM AND A METHOD FOR A 24X7 SOLAR THERMAL-BASED ATMOSPHERIC WATER GENERATOR USING DESICCANTS

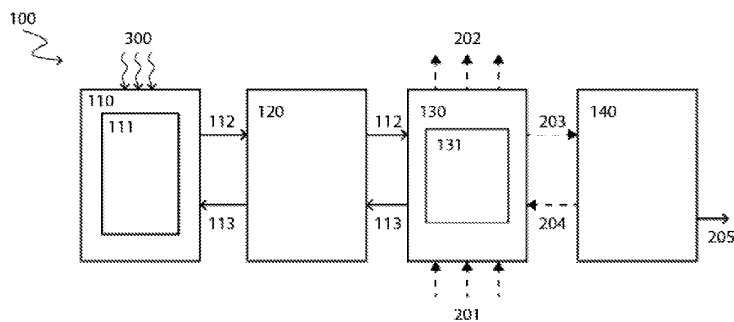


Figure 1

(57) Abstract: The present invention relates to a field of atmospheric water generator systems and more particularly to an atmospheric water generator system (100) comprising: a solar heat unit (110) configured to receive solar radiation during solar hours and convert the received solar radiation (300) into heat, a thermal storage unit (120) configured to receive the heat from the solar heat unit (110) during solar hours and store the received heat, a desiccant unit (130) comprising a desiccant material (131), and configured to receive the heat from the thermal storage unit (120) or the solar heat unit (110), wherein the desiccant unit (130) is configured to undergo an adsorption mode (150) to adsorb air from the atmosphere and a desorption mode (160) to recover water vapor from the desiccant material (131) and a condenser unit (140) configured to receive and facilitate condensation of water vapor and generate fresh water (205) and wherein the solar heat unit (110) and the desiccant unit (130) are in fluidic communication with each other.

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