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(54) Title: SYSTEM AND METHOD OF CHEMICAL-FREE ALKALINITY/pH CONTROL

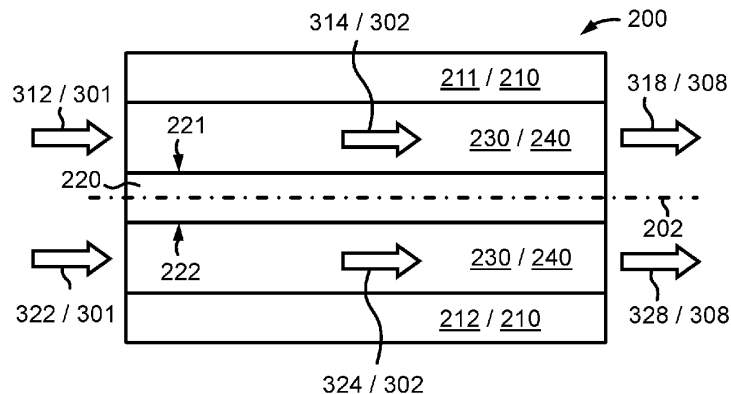


FIG. 3A

(57) Abstract: A system and method of adjusting alkalinity/pH of a solution. The method includes providing at least one liquid stream to flow by a filtration membrane and applying a potential difference across a first electrode and a second electrode. The first electrode and the second electrode are disposed at different sides of the filtration membrane. The filtration membrane separates the liquid stream into a first stream and a second stream on either side of the filtration membrane. The first stream is configured to flow by the first electrode to form a first effluent stream characterized by a first alkalinity/pH, and the second stream is configured to flow by the second electrode to form a second effluent stream characterized by a second alkalinity/pH different from the first alkalinity/pH.

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