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(71) Applicant (for all designated States except US): **GENERAL ELECTRIC COMPANY** [US/US]; 1 River Road, Schenectady, NY 12345 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **THIYAGARAJAN, Ramasamy** [IN/US]; General Electric Company Global Research, One Research Circle, Bldg. K1-3A59, Niskayuna, NY 12309 (US). **ANDERSON, Todd, Alan** [US/US]; General Electric Company Global Research, One Research Circle, Bldg. K1-3A59, Niskayuna, NY 12309 (US). **HANUMANTH, Gurumkonda, Srinivasa Rao**

[CA/IN]; General Electric Company Global Research, One Research Circle, Bldg. K1-3A59, Niskayuna, NY 12309 (US). **BEAUCHAMP, Philip, Paul** [US/US]; General Electric Company Global Research, One Research Circle, Bldg. K1-3A59, Niskayuna, NY 12309 (US). **KUMAR, Anubhav** [IN/IN]; General Electric Company Global Research, One Research Circle, Bldg. K1-3A59, Niskayuna, NY 12309 (US).

(74) Agents: **WINTER, Catherine, J.** et al.; General Electric Company, Global Patent Operation, 2 Corporate Drive, Suite 648, Shelton, CT 06484 (US).

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(54) Title: MULTI-LEAF REVERSE OSMOSIS ELEMENT

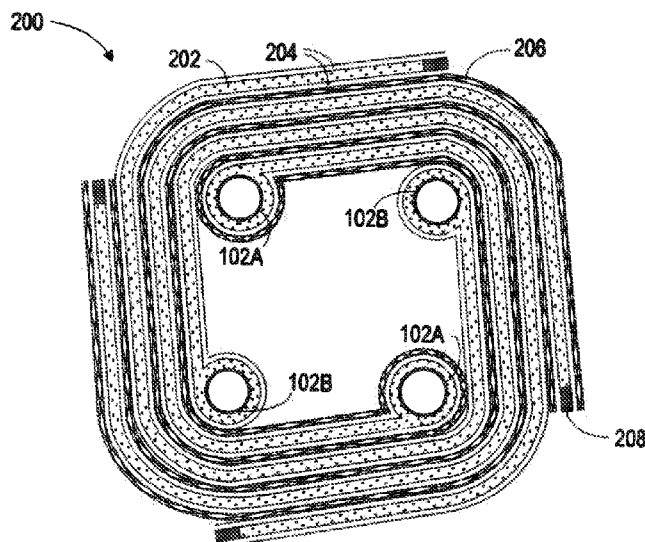


FIG. 2

(57) Abstract: A reverse osmosis element is provided. The reverse osmosis element includes a plurality of permeate tubes (102) arranged to form a core frame. The reverse osmosis element further includes a plurality of leaves (202, 204) wound over the core frame. Each leaf of the plurality of leaves is coupled to one permeate tube of the plurality of permeate tubes. A retentate channel is defined by the plurality of permeate tubes of the core frame, and sealed by the plurality of leaves wound over the core frame. The reverse osmosis element includes first and a second end caps coupled to the plurality of permeate tubes. At least one of the first and the second end caps includes a retentate discharge port, and at least one of the first and second end caps includes one or more permeate discharge ports.



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