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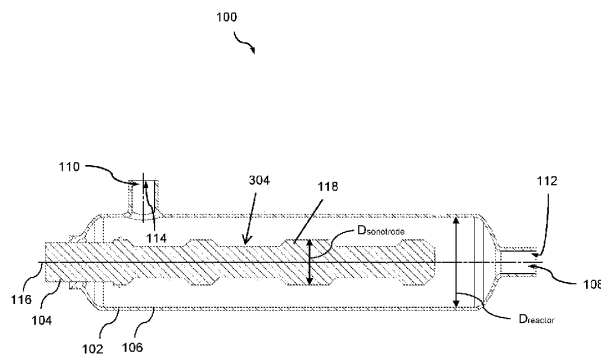


FIG. 1

(57) Abstract: An ultrasonically induced cavitation reactor is disclosed comprising a vessel having an inlet for receiving a processing liquid and an outlet for exiting the processing liquid; and a vibrating probe disposed within walls of the vessel. The processing liquid is configured to flow generally parallel to the probe. The probe is configured to produce pressure waves to induce formation of nano-sized bubbles in the processing liquid along one or more cavitation zones along a length of the probe, wherein the vessel walls are at a distance of approximately 0.5 to 5 times the diameter of a smallest diameter of the probe.

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