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(54) Title: UNIFORM CAVITATION FOR PARTICLE REMOVAL

(57) Abstract: Systems and methods for promoting a substantially uniform cavitation field. With system (100) including a diaphragm (109) dividing a container (103), a second energy pulse corresponding to a first energy pulse arising from collapse of a cavity C is produced and is used to determine whether to adjust a corresponding transducer 121-k. In system (16), a cavity creating unit (11), including an assembly of transducers 15-i, is moveable from a test liquid to a particle removal (PR) liquid after transducer testing. In another system, a sensor plate (170) having an array of sensors 171-j provides a virtual wafer. A substantially uniform field of cavitation may be maintained by a cavity enhancement liquid, or adjustment of transducer energy. Mechanisms of holding an object produce substantially uniform cavitation. Opposed transducers in a container having monotonically decreasing and/or increasing cavitation density produce substantially uniform cavitation density.

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