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(54) Title: SENSOR SYSTEMS FOR MEASURING AN INTERFACE LEVEL IN A MULTI-PHASE FLUID COMPOSITION

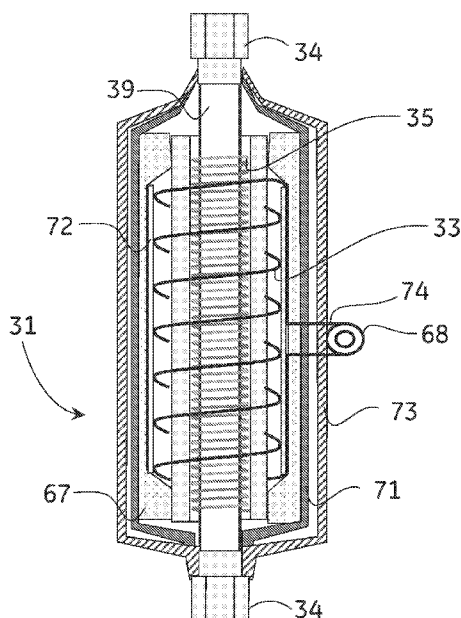


FIG. 22

(57) Abstract: A sensor includes a resonant transducer, the resonant transducer being configured to determine the composition of an emulsion or other dispersion. The resonant transducer has a sampling cell, a bottom winding disposed around the sampling cell, and a top winding disposed around the bottom winding. The composition of the dispersion is determined by measuring the complex impedance spectrum values of the mixture of the dispersion and applying multivariate data analysis to the values.

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