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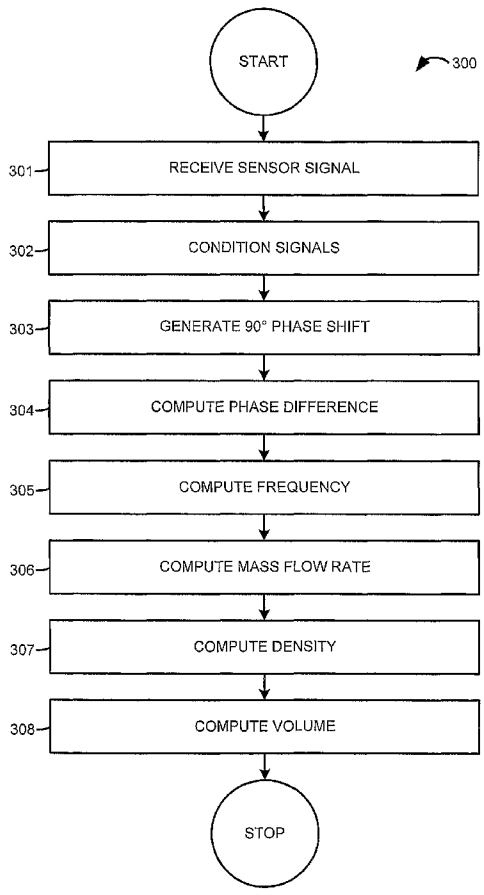
(54) Title: METHODS AND METER ELECTRONICS FOR RAPIDLY DETECTING A NON-UNIFORMITY OF A MATERIAL FLOWING THROUGH A CORIOLIS FLOWMETER



(57) Abstract: Meter electronics (20) and methods for detecting a flow anomaly in a flow material flowing through a flow meter (5) are provided. The meter electronics (20) includes an interface (201) for receiving a vibrational response of the flow material, with the vibrational response including at least a first sensor signal and a second sensor signal, and a processing system (203) in communication with the interface (201). The processing system (203) is configured to receive the vibrational response from the interface (201), generate a ninety degree phase shift from the first sensor signal and generate at least one flow characteristic using at least the first sensor signal and the ninety degree phase shift, compare the at least one flow characteristic to at least one anomaly profile, detect a shift in the vibrational response if the at least one flow characteristic falls within the anomaly profile, and indicate an anomaly condition as a result of the detecting.

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