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(56) Documents Cited:
WO 2014/204473 A1 **US 8879053 B2**
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US 20070035736 A1

(58) Field of Search:
INT CL **E21B, G01J, G01K, G01N, G01V**
Other: **eKOMPASS (KIPO Internal)**

(54) Title of the Invention: **Systems and methods for volume concentration determination with diffraction of electromagnetic radiation**
Abstract Title: **Systems and methods for volume concentration determination with diffraction of electromagnetic radiation**

(57) A system, method, and device for determining volume concentration with diffraction of electromagnetic radiation. A device for determining a volume concentration of a fluid in a sample comprises a transducer, a transmitter, a detector, and a processor. The transducer generates a standing acoustic wave through the sample. The transmitter emits electromagnetic (EM) radiation into the sample such that the EM radiation is diffracted by the sample. The detector is responsive to the diffracted EM radiation and generates a signal indicative of a wavelength of an acoustic wave corresponding to the standing acoustic wave. The processor analyzes the signal to determine the volume concentration of the fluid in the sample.

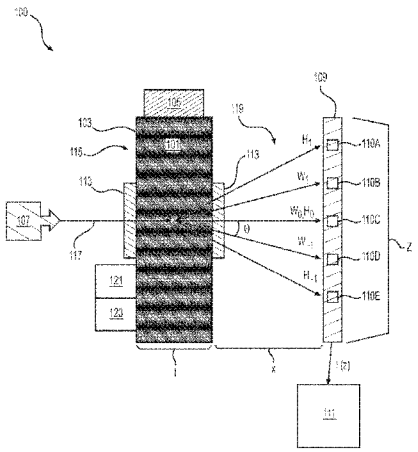

FIG. 1

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This international application has entered the national phase early.

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.