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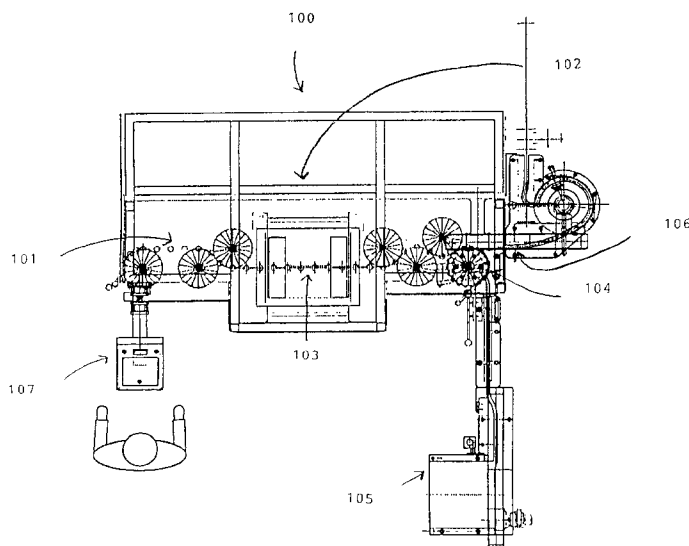
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(54) Title: NMR MEASURING SYSTEM



(57) Abstract: Magnetic resonance measurement methods for determining the mass of samples (1) are provided in which magnetic field homogeneity is determined, compensation is provided for potential drifts in the measuring system, and the presence of metal in samples is determined. The methods include applying a magnetic field in a first direction in an interrogation zone (103) for creating a net magnetisation within a sample (1) located within the interrogation zone (103); applying an alternating magnetic field in a second direction in the interrogation zone (103) for temporarily changing the net magnetisation of the sample located within the interrogation zone (103); monitoring energy emitted by the sample (1) as the net magnetisation of the sample returns to its original state and generating an output signal having a characteristic which is proportional to the energy emitted; and comparing the output signal of the monitoring with other data.

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