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(54) Title: METHODS OF MEASURING SOLIDS CONTENT IN A SLURRY CATALYST COMPOSITION

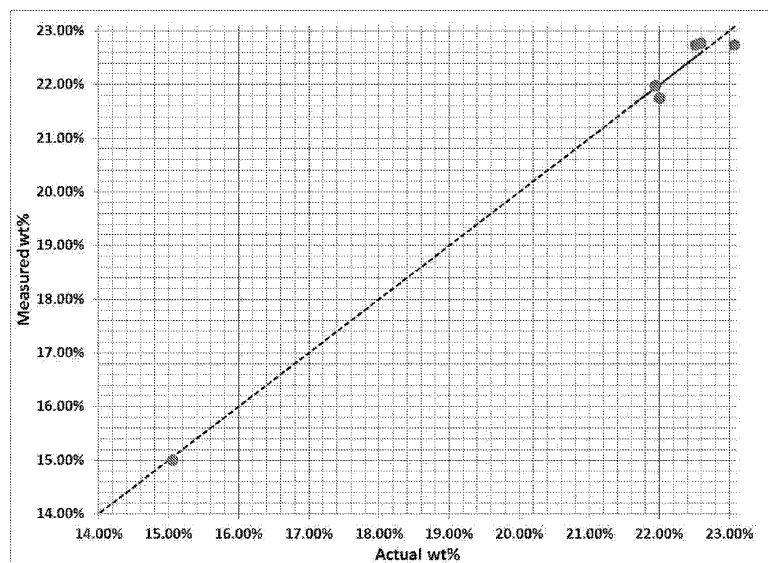


FIG. 1

(57) Abstract: The present disclosure provides a method of measuring a percent solids content (PSC) of solids by mass in a slurry catalyst composition, where the solids include a catalyst. The method includes obtaining a first time domain (TD) ¹H-nuclear magnetic resonance (NMR) spectrum using a time domain (TD)-NMR spectrometer and a test sample of the slurry catalyst composition from which a value of a voltage signal (a) that represents the slurry catalyst composition is determined. A second TD ¹H-NMR spectrum using the TD NMR spectrometer is obtained for a neat sample of the suspension liquid for the solids of the slurry catalyst composition, where a value of a voltage signal (b) from the second TD ¹H-NMR spectrum that represents the suspension liquid for the solids of the slurry catalyst composition is determined. The percent solids content (PSC) of solids in a slurry catalyst

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composition is then determined with Equation I: $PSC = (1 - a / b \times d_b / d_a) \times 100\%$ Equation I where x represents mathematical multiplication, a and b are as described above, d_b is a density of the suspension liquid for the solids of the slurry catalyst composition and d_a is a density of the slurry catalyst composition.