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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

## (54) Title: METHOD OF MAINTAINING A PIPELINE

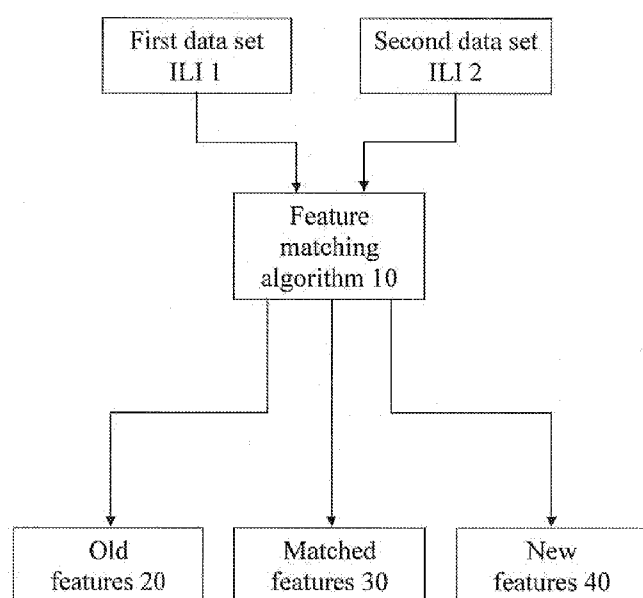


FIG. 1

(57) **Abstract:** A method of maintaining a pipeline, including estimating a corrosion rate of a pipeline segment, is provided. The method includes analyzing a first data set obtained by inspecting the pipeline segment at a first time and a second data set obtained by inspecting the pipeline segment at a second time subsequent to the first time. A plurality of matched features that include a feature in the first data set and a feature in the second data set is identified. A confidence metric for each of the matched features is calculated. A subset of the matched features is selected based on the confidence metric, a size of the matched features, and/or a desired size of the subset. The corrosion rate of the pipeline segment is calculated based on changes in a geometric characteristic of features within the subset of the matched features between the first time and the second time.

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