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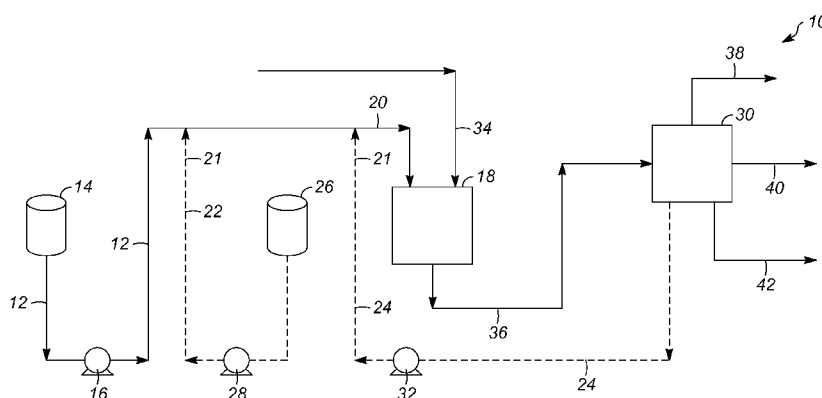


FIG. 1

(57) Abstract: Methods for deoxygenating a biomass-derived pyrolysis oil are provided. In an embodiment, a method comprises the steps of diluting the biomass-derived pyrolysis oil with a phenolic-containing diluent to form a diluted pyoil-phenolic feed. The diluted pyoil-phenolic feed is contacted with a deoxygenating catalyst in the presence of hydrogen at hydroprocessing conditions effective to form a low-oxygen biomass-derived pyrolysis oil effluent.