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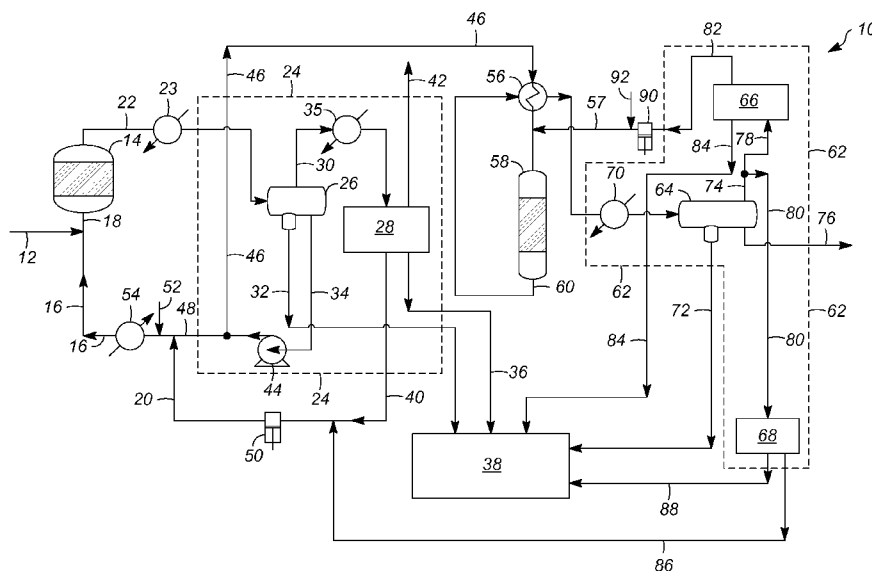
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(54) **Title:** METHODS FOR DEOXYGENATING BIOMASS-DERIVED PYROLYSIS OIL

**FIG. 1**

(57) **Abstract:** Methods for deoxygenating a biomass-derived pyrolysis oil are provided. In an embodiment, a method for deoxygenating a biomass-derived pyrolysis oil comprises the steps of combining a biomass-derived pyrolysis oil stream with a heated low-oxygen-pyool diluent recycle stream to form a heated diluted pyoil feed stream. The heated diluted pyoil feed stream has a feed temperature of 150°C or greater. The heated diluted pyoil feed stream is contacted with a first deoxygenating catalyst in the presence of hydrogen at first hydroprocessing conditions effective to form a low-oxygen biomass-derived pyrolysis oil effluent.