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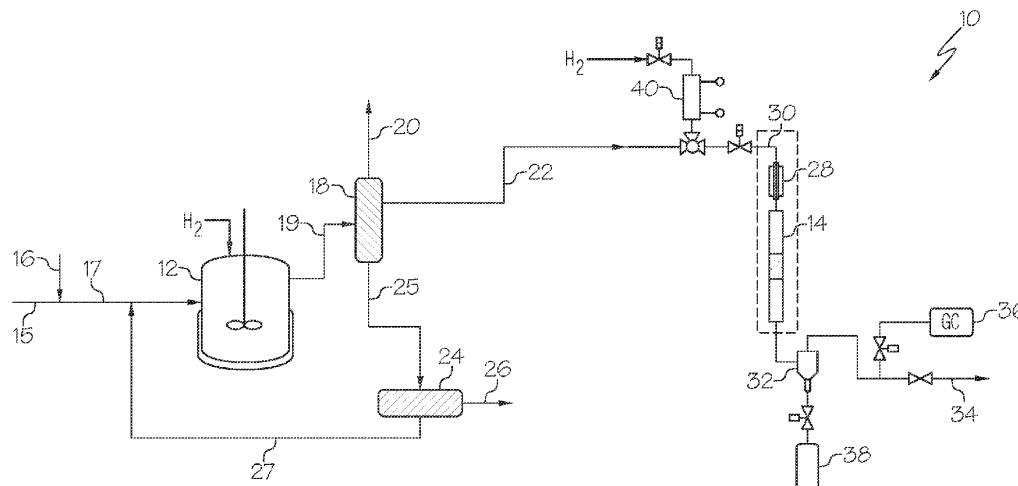


FIG. 1

(57) Abstract: In accordance with one or more embodiments of the present disclosure, a multi-stage process for upgrading a mixed pyrolysis oil comprising polyaromatic compounds to benzene, toluene, ethylbenzene, and xylenes (BTEX) includes combining light pyrolysis oil with heavy pyrolysis oil to form the mixed pyrolysis oil; upgrading the mixed pyrolysis oil in a slurry-phase reactor zone to produce intermediate products, wherein the slurry-phase reactor zone comprises a mixed metal oxide catalyst; and hydrocracking the intermediate products in a fixed-bed reactor zone to produce the BTEX, wherein the fixed-bed reactor zone comprises a mesoporous zeolite-supported metal catalyst.

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