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(54) Title: INTEGRATED HYDROTREATING, SOLVENT DEASPHALTING AND STEAM PYROLYSIS PROCESS FOR DIRECT PROCESSING OF A CRUDE OIL

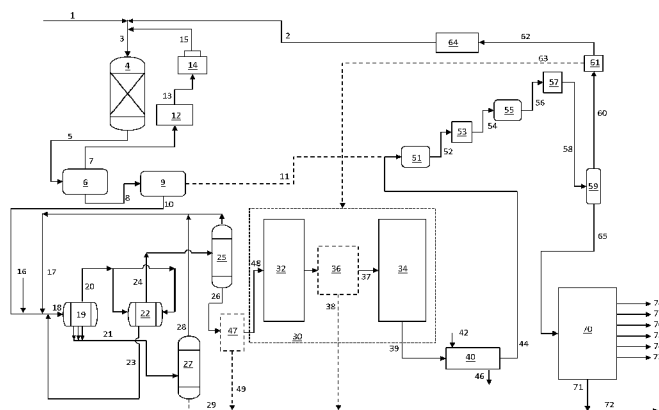


FIG. 1

(57) Abstract: A process is provided that is directed to a steam pyrolysis zone integrated with a hydrotreating zone and a solvent deasphalting zone to permit direct processing of crude oil feedstocks to produce petrochemicals including olefins and aromatics. The integrated hydrotreating, solvent deasphalting and steam pyrolysis process comprises charging the crude oil to a hydroprocessing zone operating under conditions effective to produce a hydroprocessed effluent reduced having a reduced content of contaminants, an increased paraffinicity, reduced Bureau of Mines Correlation Index, and an increased American Petroleum Institute gravity; charging the hydroprocessed effluent to a solvent deasphalting zone with an effective amount of solvent to produce a deasphalted and demetalized oil stream and a bottom asphalt phase; thermally cracking the deasphalted and demetalized oil stream in the presence of steam to produce a mixed product stream; separating the mixed product stream; purifying hydrogen recovered from the mixed product stream and recycling it to the hydroprocessing zone; recovering olefins and aromatics from the separated mixed product stream; and recovering pyrolysis fuel oil from the separated mixed product stream.



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