

NEW PATENTS

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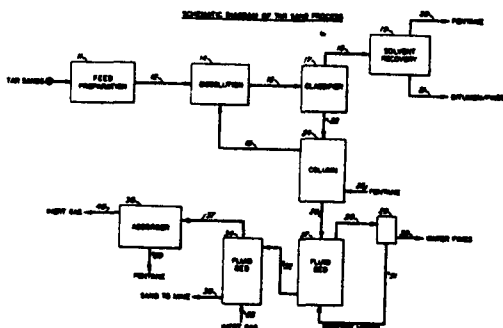
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4347118

SOLVENT EXTRACTION PROCESS FOR TAR SANDS

Edward W. Funk; Walter G. May; James C. Pirkle; assigned to Exxon Research & Engineering Co.



A solvent extraction process for tar sands is disclosed wherein a low boiling solvent having a normal boiling point of from 20 degrees to 70 degrees C. is used to extract tar sands. The solvent:bitumen weight ratio being maintained at from about 0.5:1 to 2:1. This mixture is passed to a separation zone in which bitumen and inorganic fines are separated from extracted sand, the separation zone containing a classifier and countercurrent extraction column. The extracted sand is introduced into a first fluid-bed drying zone fluidized by heated solvent vapors, so as to remove unbound solvent from extracted sand while at the same time lowering the water content of the sand to less than about 2 wt. %. The so-treated sand is then passed into a second fluid-bed drying zone fluidized by a heated inert gas to remove bound solvent. Recovered solvent is recycled to the dissolution zone.