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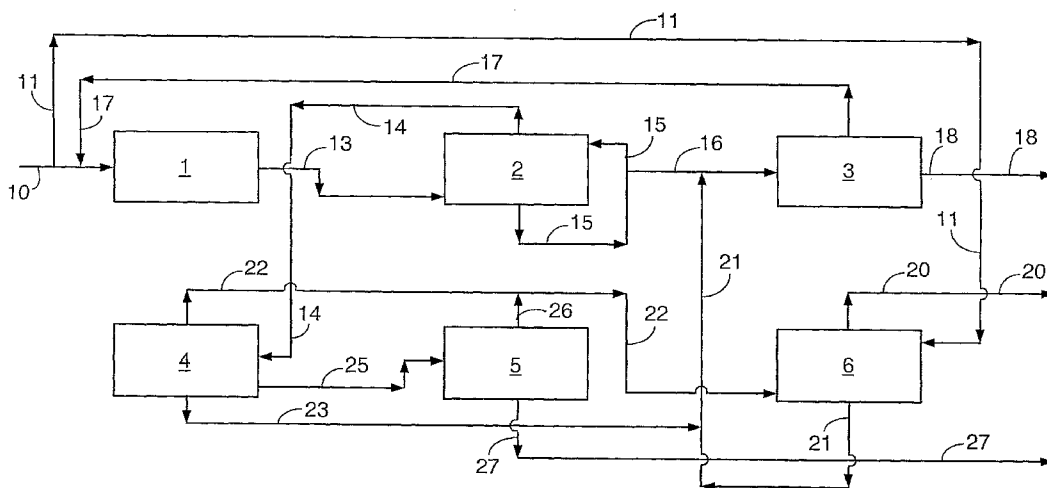
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(54) Title: SELECTIVE DIMETHYLETHER RECOVERY AND RECYCLE IN A METHANOL-TO-OLEFIN PROCESS



(57) Abstract: An improved methanol-to-olefin (MTO) product recovery scheme is provided which enables substantial reduction in the amount of light olefins that are undesirably captured in a dimethylether (DME) recycle stream when a portion of the methanolic feed to the MTO reaction zone is used as the scrubbing solvent in a primary DME absorption zone in order to recycle this DME oxygenate by-product to the MTO reaction zone. In accordance with the present invention, a liquid solvent stream recovered from the primary DME absorption zone is subjected in a stripping zone to light olefin stripping conditions sufficient to lift a substantial portion of the light olefins that are absorbed in the DME solvent without stripping a significant portion of this methanol solvent, thereby increasing the recovery of desired light olefins while simultaneously diminishing the amount of light olefins carried by the DME recycle stream back to MTO conversion step.

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