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(71) Applicant: LUMMUS TECHNOLOGY LLC [US/US];
1515 Broad Street, Bloomfield, NJ 07003-3096 (US).

(72) Inventors: ALMERING, Martinus, Johannes; 1515
Broad Street, Bloomfield, NJ 07003-3096 (US). ROB-
BINS, Christopher; 1515 Broad Street, Bloomfield, NJ
07003-3096 (US).

(74) Agent: GRIFFITH, Aron, T. et al.; Osha Liang LLP, 909
Fannin Street, Suite 3500, Houston, TX 77010 (US).

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(54) Title: PROCESS FOR THE PRODUCTION OF HIGH PURITY ISOBUTYLENE

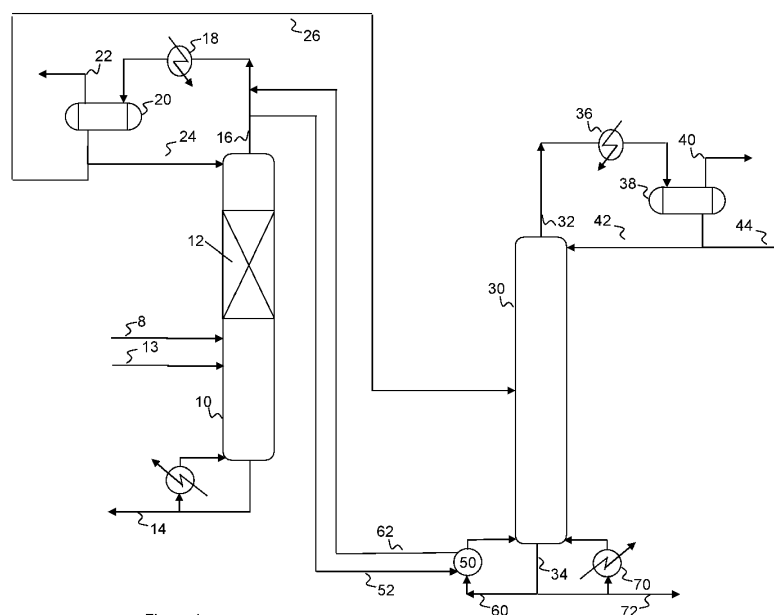


Figure 1

(57) Abstract: Processes for the production of high purity isobutylene are disclosed. The processes may include supplying a mixed C4 feed stream to a catalytic distillation column, which may contain a butene isomerization catalyst. 1-butene is isomerized to 2-butene and concurrently in the catalytic distillation column the 2-butene is separated from the isobutane and isobutylene. The overheads fraction comprising the isobutane and isobutylene is then condensed in an overheads system and fed to a splitter, where the isobutane is separated from the isobutylene. The process further includes operating the catalytic distillation column at an overheads temperature greater than a bottoms temperature of the splitter, and heating a portion of the splitter bottoms stream via indirect heat exchange with at least a portion of the catalytic distillation column overheads fraction, thereby producing a heated bottoms stream (reboil vapor) fed to the splitter and a cooled overheads fraction.

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