9612214-8
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : F25J 3/04 — A1

(11) International Publication Number: WO 96/27111

(43) International Publication Date: 6 September 1996 (06.09.96)

(21) International Application Number: PCT/IB96/00323

(22) International Filing Date: 4 March 1996 (04.03.96)

(30) Priority Data:
08/397,340 2 March 1995 (02.03.95) US

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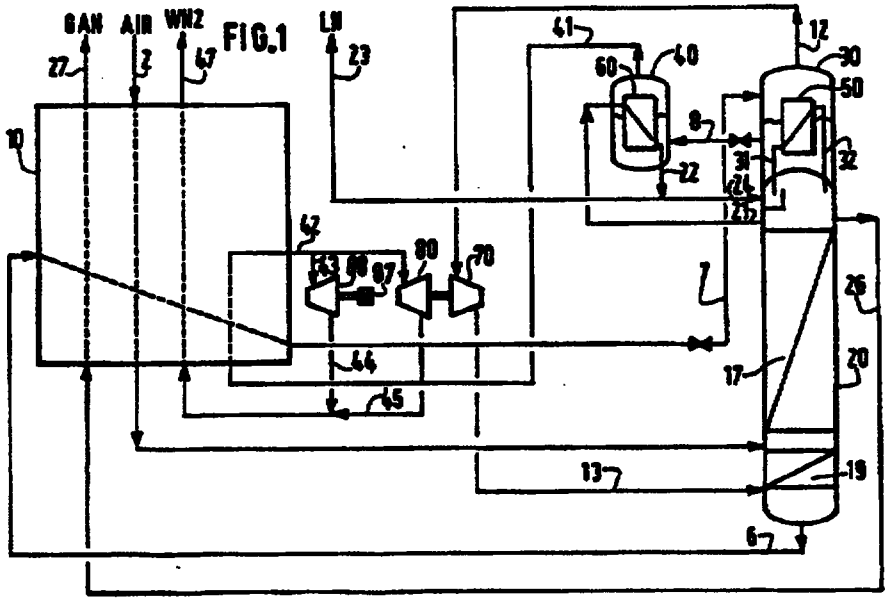
(81) Designated States: CN, JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: HIGH EFFICIENCY NITROGEN GENERATOR



(57) Abstract

A process and apparatus are disclosed for highly efficient generation of nitrogen product in a single column arrangement. Oxigen-enriched liquid from a distillation column (20) is partially vaporized to form a liquid and a vapor phase. The liquid is vaporized in a second reboiler/condenser (60) and thereafter the vapor may be expanded to provide process refrigeration. The vapor portion having higher nitrogen content is compressed and returned to the distillation column separately from the air feed for higher overall nitrogen recovery.