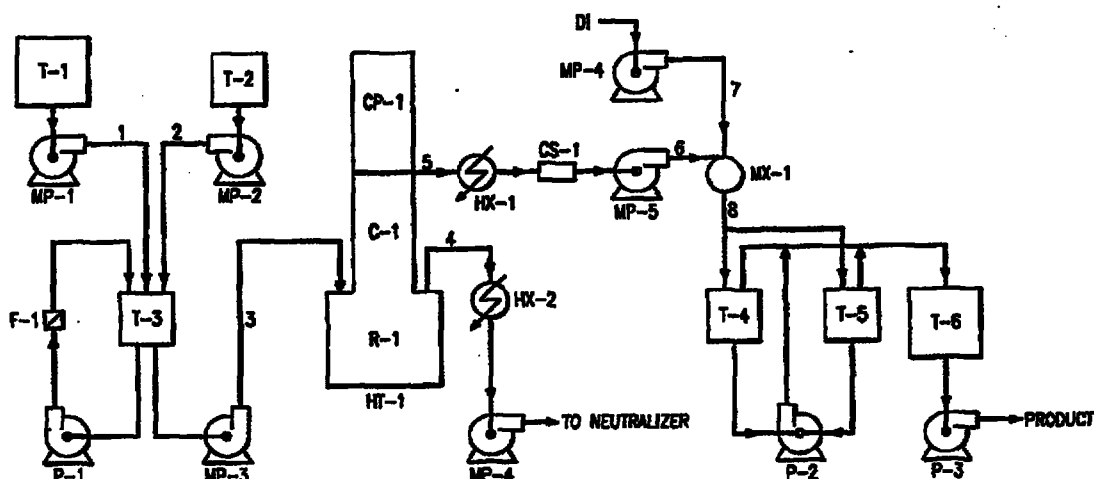


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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : B08B 7/04, B01D 1/00, 3/14, 3/02, 3/00, C01B 7/19, 7/07, F26B 7/00		A1	(11) International Publication Number: WO 96/39263 (43) International Publication Date: 12 December 1996 (12.12.96)
(21) International Application Number: PCT/US96/09215 (22) International Filing Date: 5 June 1996 (05.06.96) (30) Priority Data: PCT/US95/07649 6 June 1995 (06.06.95) WO (34) Countries for which the regional or international application was filed: KE et al. (71) Applicant (for all designated States except US): STARTEC VENTURES, INC. [US/US]; 1327 Farrand Road, Fallbrook, CA 92028 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): HOFFMAN, Joe, G. [US/US]; Suite F, 2140 Orinda Drive, Cardiff, CA 92007 (US). CLARK, R., Scot [US/US]; 1327 Farrand Road, Fallbrook, CA 92028 (US). YUAN, Wallace, I. [US/US]; 3 Hawkridge, Irvine, CA 92714 (US). (74) Agent: WENDT, Jeffrey, L.; Air Liquide, Suite 1800, 2700 Post Oak Boulevard, Houston, TX 77056 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>	

(54) Title: ON-SITE MANUFACTURE OF ULTRA-HIGH-PURITY NITRIC ACID FOR SEMICONDUCTOR PROCESSING



(57) Abstract

A system and method for semiconductor manufacture using on-site distillation to obtain ultra pure nitric acid from technical grade starting material. The source material for distillation (T-3) is provided at a concentration higher than that of the high boiling point azeotrope, so that dilution does not occur during condensation (C-1). A reflux condenser (CD-1) is used, with a purge of at least 5 % to prevent impurities from accumulating. This is performed on site, at a semiconductor manufacturing facility and the ultrapure chemical thus generated is routed directly, through ultraclean piping, to the point of use in a semiconductor front end (T-5).