



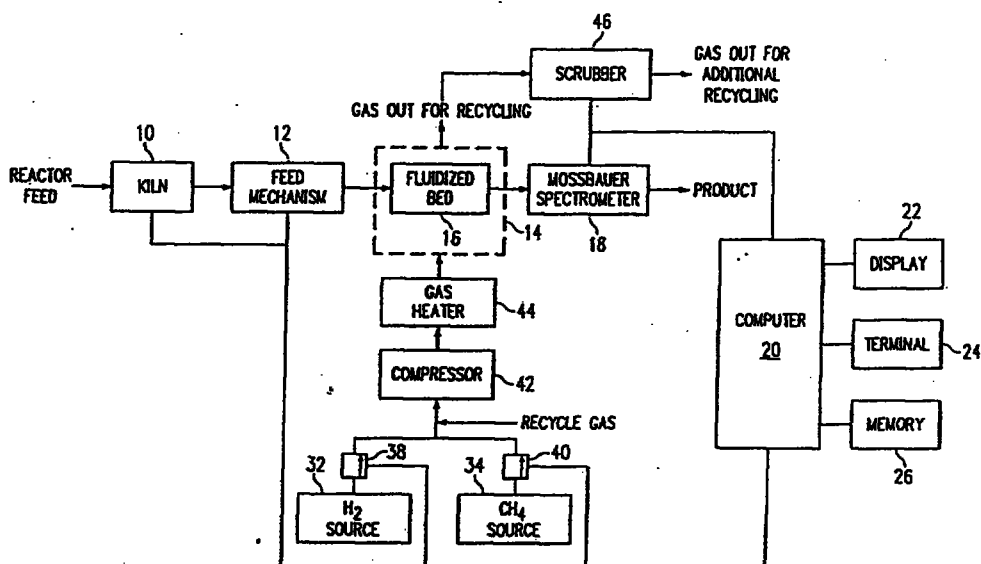
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(21) International Application Number: PCT/US91/05199 (22) International Filing Date: 23 July 1991 (23.07.91) (30) Priority data: 561,077 1 August 1990 (01.08.90) US (71) Applicant: IRON CARBIDE HOLDINGS, LIMITED [US/US]; 3000 Yonugfield, Suite 285, Lakewood, CO 80215 (US). (72) Inventors: HAGER, John, P. ; 2054 Crestive Circle, Golden, CO 80401 (US). STEPHENS, Frank, A. ; 6796 Arbutus Street, Arvada, CO 80004 (US). STEPHENS, Frank, M., Jr. ; 12225 West 18th Drive, Lakewood, CO 80215 (US).		(74) Agents: TOMPKINS, Michael, L. et al.; Sheridan, Ross & McIntosh, One United Bank Center, 1700 Lincoln Street, 35th Floor, Denver, CO 80203 (US). (81) Designated States: AT, AT (European patent), AU, BB, BE (European patent), BF (OAPI patent), BG, BJ (OAPI patent), BR, CA, CF (OAPI patent), CG (OAPI patent), CH, CH (European patent), CI (OAPI patent), CM (OAPI patent), CS, DE, DE (European patent), DK, DK (European patent), ES, ES (European patent), FI, FR (European patent), GA (OAPI patent), GB, GB (European patent), GN (OAPI patent), GR (European patent), HU, IT (European patent), JP, KP, KR, LK, LU, LU (European patent), MC, MG, ML (OAPI patent), MN, MR (OAPI patent), MW, NL, NL (European patent), NO, PL, RO, SD, SE, SE (European patent), SN (OAPI patent), SU, TD (OAPI patent), TG (OAPI patent). Published <i>With international search report.</i>

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(54) Title: PROCESS FOR CONTROLLING THE PRODUCT QUALITY IN THE CONVERSION OF REACTOR FEED INTO IRON CARBIDE

**(57) Abstract**

A method of controlling product quality in a conversion of reactor feed to an iron carbide-containing product in a fluidized bed reactor (16). A Mossbauer analysis is performed (18) on product samples leaving the fluidized bed reactor (16), and a regression analysis is performed on the Mossbauer data. Depending upon the results of the regression analysis, process parameters are adjusted in order to obtain a product having a desired composition. Adjustments are made to the temperature and pressure in the fluidized bed reactor, rate of feed (12) to the fluidized bed reactor (16), and the composition of the process gas which reacts with the reactor feed in the fluidized bed reactor (16), dependent upon the analysis results.