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<p>(21) International Application Number: PCT/US98/09142 (22) International Filing Date: 5 May 1998 (05.05.98) (30) Priority Data: 08/851,868 6 May 1997 (06.05.97) US (71) Applicant: EXXON RESEARCH AND ENGINEERING COMPANY [US/US]; 180 Park Avenue, P.O. Box 390, Florham Park, NJ 07932-0390 (US). (72) Inventor: LEVINESS, Stephen, C.; 1850 Cloverdale Avenue, Baton Rouge, LA 70808 (US). (74) Agents: SIMON, Jay et al.; Exxon Research and Engineering Company, P.O. Box 390, Florham Park, NJ 07932-0390 (US).</p>		<p>(81) Designated States: AU, BR, CA, JP, KR, NO, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>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.</i></p>

(54) Title: **MULTIZONE DOWNCOMER FOR SLURRY HYDROCARBON SYNTHESIS PROCESS**

(57) Abstract

A downcomer for producing at least two slurries having different solids and gas concentrations from a single three phase slurry of particulate solids and gas bubbles in a slurry liquid has two or more concentric gas and solids disengaging zones, each having an open fluid conduit depending from an orifice in the bottom. The downcomer is useful in a slurry hydrocarbon synthesis process for forming a catalyst and gas reduced slurry which is passed to a liquid filter to remove hydrocarbon liquid from the slurry reactor.

