

(54) Title of the invention : MULTI-BATCH AND APPARATUS FOR SUPERCRITICAL GAS-LIQUID EQUILIBRIUM SOLUBILITY AND VLE MEASUREMENTS.

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(57) Abstract :

Measurements of the phase equilibrium for the system carbon dioxide and Polymer solvent performed at 25 and 75°C in the pressure range 8.54-13.34MPa. Both the liquid and the gas phase composition measured. The experiments carried out by means of a two-reactor recirculation apparatus. According to the procedure, in one of the reactors the gas-liquid equilibrium established, whereas the second one contains only the gas phase continuously recirculated through the reactors to reduce time for equilibration. Before sampling, the reactors separated to avoid disturbances of the equilibrium when reducing pressure during the withdrawal of the gas phase. Experimental data at 50°C used for the validation of the experimental method, through comparison with literature data, whereas those at 70°C are mostly original. The experimental data successfully correlated by means of a thermodynamic model.

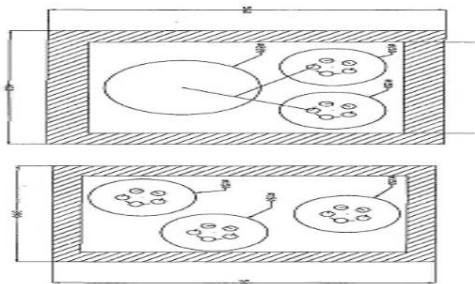


Figure 1 buffer vessel and Reactors layout

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