

**METHOD FOR CONTROLLING WITH PRECISION A PROCESS
FOR SEPARATING CONSTITUENTS OF A MIXTURE, IN A
SIMULATED MOVING BED SEPARATION SYSTEM**

ABSTRACT

- Method for controlling with precision a permanent in-line process for separating constituents of a mixture in a simulated moving bed separation system from concentration and flow rate measurements.
- The system comprises a set of columns forming a closed loop comprising several zones between fluid injection and draw-off points. Control of the process (linear or nonlinear) is performed from a knowledge model and from a certain number of operating variables at a plurality of measuring points along the loop (concentrations and flow rates for example) and characteristic measurements of the fluids injected and drawn off. Ratios respectively indicative of the ratio, in each of the different zones, between the fluid flow rates and the simulated adsorbent material flow rates, are determined from actual values of controlled variables depending on the measured operating variables (purity of the constituents, system yield, etc.). Values to be given to the operating variables in order to bring or to bring back the controlled variables to predetermined set values are determined from these ratios. The method can be applied for stabilizing separation processes, notably for aromatic hydrocarbons, in the presence of notable feedstock flow rate or quality variations.