

Iterative solution algorithm

1. Converged solution of fluid flow field is calculated with $S_{u_i}^P = 0$.
2. Large number of discrete particles / droplets are traced through the flow field.
3. Source terms for the momentum exchange between phases are calculated.
4. Converged solution of fluid flow field is recalculated. Source terms due to momentum transfer between phases are taken into account. Appropriate underrelaxation factors have to be considered.
 - inner iterations for the solution of the linearized algebraic equations for one variable (Strongly Implicit Procedure (SIP) of Stone, ILU decomposition of coefficient matrix)
 - outer iterations for the non-linear coupling of the system of transport equations (pressure-velocity coupling, scalar quantities)
5. Convergence criterion is checked;
6. Steps 2 - 5 have to be repeated until convergence.

