

Example

Task to be done: determine the PI set for pressure drop in a smooth pipe (neglect effects at the pipe inlet) by matrix calculation

Target quantity: pressure drop (Δp)

Geometric parameter: pipe diameter and length (d, l)

Physical parameter: fluid density (ρ)

kinematic viscosity (ν)

Process related: volume flow rate (q)

Relevance list: $\{\Delta p; d; l; \rho; \nu; q\}$