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NOMENCLATURE

α	radius of the pipe
τ_y	yield stress
u	axial velocity
μ_∞	Newtonian viscosity
C	solute concentration
D	molecular diffusivity
κ	bulk flow reaction parameter
δ	dirac delta function
β	absorption parameter
Pe	Péclet number
Sc	Schmidt number
H_i	Hermite polynomials
r_p	plug core radius
C_p	moment of the solute concentration
μ_p	p-th order central moment of the solute concentration
K_0	exchange coefficient