

	$[u_m \sqrt{K}/\vartheta]$	
Re_{u_m}	Reynolds number based on mean velocity as $[u_m D/\vartheta]$	—
r	Raduis of the conduit	m
r_o	Outer raduis of the conduit	m
T	Temperature	K
T_e	The temperature at the entrance of the conduit	K
T_w	The temperature at the wall of the conduit	K
u	Velocity component in z – direction	m/s
u_m	The mean velocity in the conduit	m/s
v	Velocity component in r – direction	m/s
x	Axial coordinate	—
y	Normal coordinate	—
Z	The dimension length of the conduit	—

Greek Letters

Symbol	Quantity	Unit
α	Thermal diffusivity as $[k/\rho C_p]$	m^2/s
$\alpha(i)$	A constant in iterative equation number (71)	—
$\beta(i)$	A constant in iterative equation number (71)	—
$\gamma(i)$	A constant in iterative equation number (71)	—
θ	Dimensionless temperature	—
μ	Absolute or dynamic viscosity	$kg/(m.s)$
ϑ	Kinematic viscosity as $[\mu/\rho]$	m^2/s
ρ	Fluid density	kg/m^3