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NOMENCLATURE

g	acceleration due to gravity in m/s ²
H	vertical length in m
b	horizontal length in m
s	inclination extent in m
h	apex of the caterpillar curve in m
w	breadth of the curvature in m
n	perpendicular direction to the plane
A	area in m ²
d	diameter in m
p	pressure in N/m ²
u,v	velocity components in m/s
u _b	Brownian motion velocity in m/s
x,y	Cartesian co-ordinates system
T	temperature in K
T _h	temperature of hot wall in K
T _c	temperature of cold wall in K
Pr	Prandtl number
Gr	Grashof number
Pe	Peclet number
Nu _x	Nusselt number (Local)
Nu	Nusselt number (Average)

Greek symbols

α	thermal diffusivity in m ² /s
β	coefficient of thermal expansion in 1/K
k	conduction coefficient in W/mK
ρ	density in Kg/m ³
μ	dynamic viscosity in N-s/m ²
ν	kinematic viscosity in m ² /s
ψ	stream function in Kg/s
δ	curvature aspect ratio (h/w)
Ψ	dimensionless stream function

Subscripts

h	hot wall
c	cold wall
f	basefluid
np	nanoparticle
nf	nanofluid