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NOMENCLATURE

a_n	Fourier series coefficients in eq. (13)
A	surface area of strut (m^2)
A_c	cross-sectional area of strut, $2tw$ (m^2)
Bi_t	transverse Biot number, $\frac{\overline{h}\,t}{k}$
h	convection coefficient ($W/m^2\,K$)
$\overline{h}$	mean convection coefficient ($W/m^2\,K$)
k	thermal conductivity (W/m K)
L	half-length of strut (m)
m^2	thermo-geometric parameter, ($1/m^2$)
Q	heat transfer rate (W)
R_C	external convection resistance (K/W)
R_K	internal conduction resistance (K/W)
S	slenderness ratio of strut, $\frac{L}{t}$
t	half-thickness of strut (m)
T	temperature (K)
T_b	base temperature (K)
T_f	fluid temperature (K)
$\overline{T}$	transverse mean temperature (K)
w	depth of strut (m)
x	axial coordinate (m)
y	transversal coordinate (m)

Greek symbols

δ	thickness of strut, $2t$ (m)
ε	relative error
θ	temperature excess, $T - T_f$ (K)
$\overline{\theta}$	transverse mean temperature excess, $\overline{T} - T_f$ (K)
λ_n	roots of transcendental eq. (9)
μ_n	eigenvalues in eq. (18)

Subscripts

opt	optimal
1	one term