List of symbols

a	radius of the sphere, length of infinitely long rectangular plate, upper radius of the truncated cone (m)
A	length of the slider (m)
B	breadth of the slider (m)
b	breadth of infinitely long rectangular plate, lower radius of the truncated cone (m)
D_c	mean particle size (m)
D_s	mean solid size (m)
h	film thickness (m)
h_i	initial film thickness (m)
h_1 or h_m	minimum film thickness (m)
h_2	maximum film thickness (m)
$\bar{h}$	dimensionless film thickness (m)
$\bar{h}_i$	dimensionless initial film thickness (m)
$\bar{h}_m$	dimensionless minimum film thickness (m)
$\dot{h}$ or $\dot{h}_m$	dh/dt or dh_m/dt, squeeze velocity (m/s)
H	strength of variable magnetic field (A/m)
$\mathbf{H}$	magnetic field vector

H^* or H_0 or d_1 or d_2	thickness of porous matrix (m)
H_c	central thickness of convex pad surface (m)
$\bar{H}_0$	dimensionless thickness of the porous matrix
k or k_1 or k_2	permeability of the porous matrix (m^2)
$\mathbf{M}$	magnetization vector
p	film pressure (N/m^2)
$\bar{p}$	dimensionless film pressure
P or P_1 or P_2	pressure in the porous region (N/m^2)
$\mathbf{q}$	fluid velocity vector
r	radial coordinate (m)
R	dimensionless radial coordinate
s	slip parameter ($1/m$)
$\bar{s}$ or s^*	dimensionless slip parameter
t	time (s)
$\bar{t}$	dimensionless response time
u, v, w	fluid velocity components in x, y and z -directions for the film region
$\bar{u}, \bar{v}, \bar{w}$	fluid velocity components in x, y and z -directions for the porous region
U	velocity of the slider in the x -direction (m/s)

w_h	squeeze velocity in the downward z -direction (m / s)
W	load carrying capacity (N)
$\bar{W}$	dimensionless load carrying capacity
x, y, z	cartesian coordinates (m)

Greek symbols

~	slip coefficient
¦	fluid viscosity ($N\,s / m^2$)
°	fluid density ($N\,s^2 / m^4$)
$¦_r$	porosity of the porous region in the radial direction
$«_0$	free space permeability (N / A^2)
$\bar{«}$	magnetic susceptibility
« *	dimensionless magnetization parameter
$¤_r, ¤_z$	permeabilities of the fluid in the radial and axial directions of the porous region (m^2)
$\bar{¤}_r$ or $¤_r^*$	dimensionless radial permeability parameter of the porous region
·	dimensionless permeability parameter of the porous region
µ	semi-vertical angle of the cone (*rad*.)
£	porosity of the porous matrix