

Nomenclature

f	:	Frictional force
q	:	(u, v, w) is the fluid Velocity in the film region
s	:	Slip parameter
k	:	Permeability of porous matrix
h	:	Fluid film thickness at any point
P	:	Lubricant film Pressure
u, U	:	Uniform velocity in the direction of x –axis
w	:	Load carrying capacity
A	:	Length of the bearing
H	:	Magnitude of the magnetic field
P	:	Non-dimensional pressure
W	:	Dimensionless load carrying capacity
h_0	:	Central film thickness
h_s	:	Stochastic random characterization
H_0	:	The thickness of porous medium
\bar{h}	:	The mean film thickness
\bar{s}	:	Dimensionless slip parameter
\bar{F}	:	Non-dimensional friction
\bar{H}	:	External magnetic field
α	:	Variance
α', β	:	Material constant
ε	:	Skewness
σ	:	Standard deviation
η	:	Viscosity of lubricant
ρ	:	Density of lubricant
θ	:	The angle of inclination of the magnetic field
ϕ	:	The permeability of porous facing
ψ	:	Porosity
ξ	:	Random character of surface roughness

Nomenclature

τ	:	Shear stress
μ_0	:	Permeability of the free space
$\bar{\sigma}$:	Dimensionless standard deviation
$\bar{\varepsilon}$:	Skewness in dimensionless form
$\bar{\alpha}$:	Non- dimensional variance
$\bar{\mu}$:	Magnetic susceptibility of particles
$\bar{\tau}$:	Non- dimensional shearing stress
μ^*	:	Dimensionless magnetization parameter
\dot{h}_0	:	Uniform velocity