List of Symbols

H_c	Coercivity of PMs
h_m	Thickness of PMs
$\Re_m$	Reluctance of PMs
φ_p	Flux produced by PMs in the air gap
T	Pole pitch
p	No. of poles
B_r	Residual Flux Density
μ_o	permeability of air gap
M_y	Magnetization in the y-direction
n	Harmonic index of space harmonics
q	Harmonic index of time harmonics
α	Pole arc to pole pitch ratio
m	No. of phases
ϕ	Phase difference between stator and rotor equivalent current sheet
J_1	Peak value of stator equivalent current sheet
J_2	Peak value of rotor equivalent current sheet
I_1	Stator current per phase
τ_m	Magnet pole pitch
N_1	No. of conductors per phase in stator winding
k_w	Winding factor
L	peripheral length of motor bore for solution in real space
g_e	Effective air gap
g	Actual air gap
k_c	Carter's coefficient
μ_r	Relative permeability of PMs
w_o	Width of stator slot opening
B	Air gap flux density
j_1	Equivalent current sheet of primary winding
j_2	Equivalent current sheet of secondary winding
v	Speed in m/sec
ρ_s	surface resistivity of the secondary sheet

v_s	Secondary speed in m/sec
A	Magnetic vector potential
μ_r	Relative permeability of conducting media
l	layer number (subscript)
σ_l	Conductivity of respective layers (S/m)
μ_l	Permeability of respective layers
A_l	Magnetic vector potential of respective layers
f	Frequency of stator supply
ξ, χ, γ	Fourier indices of respective layers
k_1	Pole pitch of stator
k_2	Pole pitch of rotor
ω	Angular speed (rad/sec)
τ_t	Stator tooth width (mm)
τ_c	Stator coil width (mm)
τ_w	Stator tooth-tip width (mm)
τ_s	Stator slot-opening width (mm)
k_e	back-EMF constant
D	Diameter of stator bore of original machine (m)
H	Magnetic Field Intensity
R_o	Outer Radius of the RFPM machine (m)
D_o	Outer diameter of AFPM motor (m)
D_i	Inner diameter of AFPM motor (m)
R_{ave}	Mean radius of AFPM motor
φ	No-load magnetic flux
n_s	Speed of motor in rad/sec
V	Stator supply voltage
R	Resistance of the primary winding
E	speed induced back-EMF