

NOMENCLATURE

IM	Induction Motor
ISFDTC	Imposed Switching Frequency Direct Torque Control
Γ	Electromagnetic Torque
φ	Flux linkage
θ_s	The stator flux angle
I_{sv}	Current
V	Voltage
$\varepsilon_\Gamma, \varepsilon_\varphi$	Error torque and flux respectively
f_s	Sampling frequency
T_e	Sampling time
f_i	Imposed frequency
E_c	DC voltage link
p	Number of cell of inverter
V_c	Voltage capacitor

APPENDIX

Table 4. Parameters of the induction motor used in the simulations

Type	Three-phase induction machine
Power	7.457 KW
Nominal voltage	460 V
Nominal speed	1760 rpm/min
Rated frequency	60 HZ
Stator resistance	0.6837 Ohm
Rotor resistance	0.451 Ohm
Stator inductance	0.004152 H
Rotor inductance	0.004152 H
Mutual inductance	0.1486 H
Number of pole pairs	$P_{p=2}$
Moment of inertia	0.05 Nms ² /rad
Coefficient of friction	0.008141 Nms/rad