1. Record Nr. UNINA9910131571803321

Autore	Guzinski Jarosaw
Titolo	Variable speed AC drives with inverter output filters / / Jaroslaw Guzinski, Haitham Abu-Rub, Patryk Strankowski
Pubbl/distr/stampa	Chichester, England : , : Wiley, , 2015 ©2015
ISBN	1-118-79192-4 1-118-78298-4 1-118-78301-8
Descrizione fisica	1 online resource (458 p.)
Collana	IEEE Press Series on Power Engineering
Disciplina	621.317
Soggetti	Power electronics Variable speed drives Electric driving, Variable speed Electrical engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	""Title Page""; ""Table of Contents""; ""Foreword""; ""Acknowledgments""; ""About the Authors""; ""Nomenclature""; ""1 Introduction to Electric Drives with LC Filters""; ""1.1 Preliminary Remarks""; ""1.2 General Overview of AC Drives with Inverter Output Filters""; ""1.3 Book Overview""; ""1.4 Remarks on Simulation Examples""; ""References""; ""2 Problems with AC Drives and Voltage Source Inverter Supply Effects""; ""2.1 Effects Related to Common Mode Voltage""; ""2.2 Determination of the Induction Motor CM Parameters""; ""2.3 Prevention of Common Mode Current: Passive Methods"" ""2.4 Active Systems for Reducing the CM Current""""2.5 Common Mode Current Reduction by PWM Algorithm Modifications""; ""2.6 Simulation Examples""; ""2.7 Summary""; ""References""; ""3 Model of AC Induction Machine""; ""3.1 Introduction""; ""3.2 Inverse- Model of Induction Machine""; ""3.3 Per-Unit System""; ""3.4 Machine Parameters""; ""3.5 Simulation Examples""; ""References""; ""4 Inverter Output Filters""; ""4.1 Structures and Fundamentals of Operations""; ""4.2 Output Filter

Model""; ""4.3 Design of Inverter Output Filters""; ""4.4 dV/dt Filter""; ""4.5 Motor Choke""
""4.6 Simulation Examples""""4.7 Summary""; ""References""; ""5 Estimation of the State Variables in the Drive with LC Filter""; ""5.1 Introduction""; ""5.2 The State Observer with LC Filter Simulator""; ""5.3 Speed Observer with Simplified Model of Disturbances""; ""5.4 Speed Observer with Extended Model of Disturbances""; ""5.5 Speed Observer with Complete Model of Disturbances""; ""5.6 Speed Observer Operating for Rotating Coordinates""; ""5.7 Speed Observer Based on Voltage Model of Induction Motor""; ""5.8 Speed Observer with Dual Model of Stator Circuit""
""5.9 Adaptive Speed Observer""""5.10 Luenberger Flux Observer""; ""5.11 Simulation Examples""; ""5.12 Summary""; ""References""; ""6 Control of Induction Motor Drives with LC Filters""; ""6.1 Introduction""; ""6.2 A Sinusoidal Filter as the Control Object""; ""6.3 Field Oriented Control""; ""6.4 Nonlinear Field Oriented Control""; ""6.5 Multiscalar Control""; ""6.6 Electric Drive with Load-Angle Control""; ""6.7 Direct Torque Control with Space Vector Pulse Width Modulation""; ""6.8 Simulation Examples""; ""6.9 Summary""; ""References""; ""7 Current Control of the Induction Motor""
""7.1 Introduction""""7.2 Current Controller""; ""7.3 Investigations""; ""7.4 Simulation Examples of Induction Motor with Motor Choke and Predictive Control""; ""7.5 Summary and Conclusions""; ""References""; ""8 Diagnostics of the Motor and Mechanical Side Faults""; ""8.1 Introduction""; ""8.2 Drive Diagnosis Using Motor Torque Analysis""; ""8.3 Diagnosis of Rotor Faults in Closed-Loop Control""; ""8.4 Simulation Examples of Induction Motor with Inverter Output Filter and Load Torque Estimation""; ""8.5 Conclusions""; ""References""
""9 Multiphase Drive with Induction Motor and an LC Filter""