1. Record Nr. UNINA9910830101803321

Autore	Thomson William T.
Titolo	Current Signature Analysis for Condition Monitoring of Cage Induction Motors : Industrial Application and Case Histories / / William T. Thomson, Ian Culbert
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley : , : IEEE Press, , 2016 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2016]
ISBN	1-119-17546-1 1-119-17547-X
Descrizione fisica	1 PDF (440 pages)
Collana	IEEE press series on power engineering
Altri autori (Persone)	CulbertIan
Disciplina	621.34
Soggetti	Electric motors, Induction - Testing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Motor Current Signature Analysis for Induction Motors / William T Thomson -- Design, Construction, and Manufacture of Squirrel Cage Rotors / Ian Culbert -- Causes of Breaks in Squirrel Cage Windings During Direct-On-Line Starts and Steady-State Operation / Ian Culbert -- Motor Current Signature Analysis (MCSA) to Detect Cage Winding Defects / William T Thomson -- MCSA Industrial Case Histories-Diagnosis of Cage Winding Defects in SCIMs Driving Steady Loads / William T Thomson -- MCSA Case Histories-Diagnosis of Cage Winding Defects in SCIMs Fitted with End Ring Retaining Rings / William T Thomson -- MCSA Case Histories-Cyclic Loads Can Cause False Positives of Cage Winding Breaks / William T Thomson -- MCSA Case Histories-SCIM Drives With Slow Speed Gearboxes and Fluctuating Loads Can Give False Positives Of Broken Rotor Bars -- Miscellaneous MCSA Case Histories / William T Thomson -- MCSA to Estimate the Operational Airgap Eccentricity in Squirrel Cage Induction Motors / William T Thomson -- Case Histories-Successful and Unsuccessful Application of MCSA to Estimate Operational Airgap Eccentricity in Scims / William T Thomson -- Critical Appraisal of Mcsa to Diagnose Short Circuited Turns in LV and HV Stator Windings and Faults in Roller Element Bearings in SCIMS / William T Thomson -- Appraisal of MCSA Including Lessons Learned via Industrial Case Histories / William T

Thomson -- List of Equations.

Sommario/riassunto

Provides coverage of Motor Current Signature Analysis (MCSA) for cage induction motors This book has 13 chapters and contains a unique database of 50 industrial case histories on theapplication of MCSA to diagnose broken rotor bars or unacceptable levels of airgap eccentricity in cage induction motors with ratings from 127 kW (170 H.P.) to 10,160 kW (13,620 H.P.). There are also unsuccessful case histories which is another unique feature of the book. The case studies also illustrate the effects of mechanical load dynamics downstream of the motor on the interpretation of current signatures. A number of cases are presented where abnormal operation of the driven loadwas diagnosed. Other unique features include: . All case histories are presented in a step-by-step format, with predictions and outcomes supported by current spectra and photographic evidence to confirm a correct orincorrect diagnosis. Chapter 13 presents a critical appraisal of MCSA including successes, failures, and lessons learned via industrial case studies. There are 10 questions at the end of chapters 1 to 12 and answers can be obtained viathe publisher Current Signature Analysis for Condition Monitoring of Cage Induction Motors: Industrial Application and Case Histories serves as a reference for professional engineers, head electricians and technicians working with induction motors.