

1. Record Nr.	UNINA9910135013203321
Autore	Perez Robert X.
Titolo	Troubleshooting rotating machinery : including centrifugal pumps and compressors, reciprocating pumps and compressors, fans, steam turbines, electric motors, and more // Robert X. Perez and Andrew P. Conkey
Pubbl/distr/stampa	Salem, Massachusetts ; ; Hoboken, New Jersey : , : Scrivener Publishing : , : Wiley, , 2016 ©2016
ISBN	1-5231-1505-X 1-119-29440-1 1-119-29439-8 1-119-29444-4
Descrizione fisica	1 online resource (224 p.)
Disciplina	621.8/16
Soggetti	Machinery - Maintenance and repair Rotors - Maintenance and repair Turbomachines - Maintenance and repair
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Half Title page; Title page; Copyright page; Dedication; Preface; Acknowledgements; Chapter 1: Troubleshooting for Fun and Profit; 1.1 Why Troubleshoot?; 1.2 Traits of a Successful Troubleshooter; Chapter 2: An Insight in Design: Machines and Their Components Serve a Function; 2.1 An Overview of the Design Process; 2.2 Complex Machine Element Environments; Chapter 3: Machinery Design Issues and Failure Modes; 3.1 Common Failure Modes; Chapter 4: Machinery in Process Services - The Big Picture; Chapter 5: Causes Versus Symptoms; 5.1 Causal Chains; 5.2 Summary Chapter 6: Approach Field Troubleshooting Like a Reputable News Reporter Chapter 7: The "What" Questions; 7.1 What is the Problem or What Are the Symptoms?; 7.2 What is Your Assessment of the Problem?; 7.3 What is at Stake?; 7.4 What Risk is at Hand?; 7.5 What Additional Information is Required?; Chapter 8: Who Knows the Most About the

Problem?; Chapter 9: When Do the Symptoms Show Up?; 9.1 "When" Questions to Ask; 9.2 Ways to Display Time Related Data; 9.3 Timelines; 9.4 Trend Plots; 9.5 Constant Amplitude Trends; 9.6 Step Changes; 9.7 Gradual Versus Rapidly Changing Trends; 9.8 Correlations
9.9 Speed-Related Issues
9.10 Erratic Amplitude; Chapter 10: Where Do the Symptoms Show Up?; 10.1 Locating a Machine-Train Problem; 10.2 Troubleshooting Problems Involving Multiple Machine-Trains; 10.3 Multiple Versus Single Machine Train Examples; 10.4 Analyzing Noises, Pings, and Knocks; 10.5 Seeing the Light at the End of the Tunnel; Chapter 11: Why is the Problem Occurring?; 11.1 Fitting the Pieces Together; 11.2 Reciprocating Compressor Example; 11.3 Troubleshooting Matrices; 11.4 Assessing Machine with Multiple Symptoms; Chapter 12: Analyze, Test, Act, and Confirm (Repeat as Needed)
12.1 The Iterative Path to the Final Solution
Chapter 13: Real-World Examples; 13.1 Case Study #1; 13.2 Case Study #2; 13.3 Case Study #3; 13.4 Case Study #4; 13.5 Case Study #5; Chapter 14: The "Hourglass" Approach to Troubleshooting; 14.1 Thinking and Acting Globally; Chapter 15: Vibration Analysis; 15.1 Vibration Analysis Primer; 15.2 Identifying Machine Vibration Characteristics; Chapter 16: Applying the 5Qs to Rotordynamic Investigations; 16.1 Introduction; 16.2 Using Rotordynamic Results for Troubleshooting; 16.3 Closing; Chapter 17: Managing Critical Machinery Vibration Data
17.1 Vibration Analysis Strategies
Chapter 18: Closing Remarks; 18.1 Practice the Method; 18.2 Provide Training on Fault Trees and Cause Mapping; 18.3 Employ Team Approach for Complex Problems; 18.4 Get Management's Support; Appendix A: The Field Troubleshooting Process-Step by Step; Appendix B: Troubleshooting Matrices and Tables; Index
