1. Record Nr. UNINA9910813229103321 **Titolo** Fault detection [[electronic resource]]: theory, methods and systems / / Lea M. Simon, editor Pubbl/distr/stampa New York,: Nova Science Publishers, c2011 **ISBN** 1-61728-441-6 Descrizione fisica 1 online resource (316 p.) Collana Engineering tools, techniques and tables Altri autori (Persone) SimonLea M Disciplina 620/.0044 Soggetti **Defects** Fault location (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 and index. ""FAULT DETECTION: THEORY, METHODS AND SYSTEMS ""; ""FAULT Nota di contenuto DETECTION: THEORY, METHODS AND SYSTEMS""; ""CONTENTS ""; ""PREFACE ""; ""ADVANCED SYSTEM FOR AUTOMATICALLY DETECTING FAULTS OCCURRING IN BEARINGS ""; ""Abstract ""; ""Section 1. Introduction ""; ""1.1. The Background of Machinery Fault Detection ""; ""1.2. The Motivation to Develop an Automatic System for Detecting Bearing Faults "": ""1.3. The Review of the Maintenance Approaches "": ""1.3.1. The Run-to-Breakdown Approach ""; ""1.3.2. The Time-Based Preventive Maintenance Approach "" ""1.3.3. The Condition-Based Maintenance Approach """"1.3.4. The Advantages for Adopting the Conditional-based Maintenance Approach ""; ""Section 2. The Review of the Machinery Fault Detection Methodology ""; ""2.1. Transducer Used for Measuring Vibration Signal ""; ""2.2. Vibration Measurement ""; ""2.3. Vibration Trend ""; ""2.4. The Introduction of Fast Fourier Transform (FFT) ""; ""2.4.1. The Principal of Fast Fourier Transform ""; ""2.4.2. The Limitations of the Existing FFT ""; ""2.5. The Introduction of Wavelet Transform ""; ""2.5.1. The Principal of Wavelet Transform "" ""2.5.2. The Limitations of Existing Wavelet Transform """"2.6. The Introduction of the Reassignment Wavelet Transform ""; ""2.6.1. The Principal of Reassignment ""; ""2.6.2. The Definition of Reassignment Wavelet Transform ""; ""2.7. The Use of the Higher Order Statistics in Machinery Fault Detection ""; ""2.7.1. Kurtosis ""; ""2.7.2. Spectral

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