Equipment Condition Assessment And Its Importance In

hearing before the Readiness Subcommittee of the Committee on Armed Services, House of Representatives, One Hundred Eighth Congress, first session, hearing held October 21, 2003
Proceedings of the 10th World Congress on Engineering Asset Management (WCEAM 2015)
Power Engineering
Fiscal Year 2009
NASA Tech Briefs
Condition Assessment Scheme
Systems, Sustainability, and Stewardship
Advances and Challenges Part B: Electrical Power
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Condition Assessment of High Voltage Insulation in Power System Equipment
Asset Management for Infrastructure Systems
U. S. Customs and Border Protection: Performance and Accountability Report
Engineering Technology and Applications
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Volume 1
Guidelines for Mechanical Integrity Systems
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Equipment Condition Assessment and Its Importance in Estimation and Prediction of Power System Reliability
Sustainable Manufacturing
Proceedings of the 1st International Conference on New Computational Social Science (ICNCSS 2020), September 25-27, 2020, Guangzhou, China
Computational Social Science
Protecting the Nation's Investment
First International Conference, ICWCA 2011, Sanya, China, August 1-3, 2011, Revised Selected Papers
Troubleshooting Rotating Machinery
Facility Inspection Field Manual: A Complete Condition Assessment Guide
Information Technology and Career Education
Resetting and reconstituting the forces
Colloquium on Monitors and Condition Assessment Equipment
Electrical Safety
Reliability and Relevancy of Procedures and Technologies
Encyclopedia of Quantitative Risk Analysis and Assessment
Power Plant Condition Monitoring
Strengthening the Disaster Resilience of the Academic Biomedical Research Community
Proceedings of the 2014 International Conference on Information Technology and Career Education (ICITCE 2014), Hong Kong, 9-10 October 2014
Aging Power Delivery Infrastructures, Second Edition
As Applied to the Refining, Petrochemical, and Process Industries
Including Centrifugal Pumps and Compressors, Reciprocating Pumps and Compressors, Fans, Steam Turbines, Electric Motors, and More

MOONEY HOOPER

hearing before the Readiness Subcommittee of the Committee on Armed Services, House of Representatives, One Hundred Eighth Congress, first session, hearing held October 21, 2003 Springer
In recent years, process safety management system compliance audits have revealed that organizations often have significant opportunities for improving their Mechanical Integrity programs. As part of the Center for Chemical Process Safety's Guidelines series, Guidelines for Mechanical Integrity Systems provides practitioners a basic familiarity of mechanical integrity concepts and best practices. The book recommends efficient approaches for establishing a successful MI program.
Proceedings of the 10th World Congress on Engineering Asset Management (WCEAM 2015) John Wiley & Sons
The academic biomedical research community is a hub of employment, economic productivity, and scientific progress. Academic research institutions are drivers of economic development in their local and state economies and, by extension, the national economy. Beyond the economic input that the academic biomedical research community both receives and provides, it generates knowledge that in turn affects society in myriad ways. The United States has experienced and continues to face the threat of disasters, and, like all entities, the academic biomedical research community can be affected. Recent disasters, from hurricanes to cyber-attacks, and their consequences have shown that the investments of the federal government and of the many other entities that sponsor academic research are not uniformly secure. First and foremost, events that damage biomedical laboratories and the institutions that house them can have impacts on the safety and well-being of humans and research animals. Furthermore, disasters can affect career trajectories, scientific progress, and financial stability at the individual and institutional levels. Strengthening the Disaster Resilience of the Academic Biomedical Research Community offers recommendations and guidance to enhance the disaster resilience of the academic biomedical research community, with a special focus on the potential actions researchers, academic research institutions, and research sponsors can take to mitigate the impact of future disasters.
Power Engineering IMO Publishing
The technological developments in electrical power generation over the last decade have enabled creation of large pulverized coal fired and combined cycle power plants. These are required to run continuously without faults to assure highest reliability and availability of electrical power around the clock. Condition Monitoring in Large Thermal Power Plants deals with monitoring the operational integrity of boiler and turbine generator plants that includes pumps, fans etc - A most important step in achieving highest reliability and availability.
Fiscal Year 2009 National Academies Press
Selected papers from the International Conference on New Computational Social Science, focusing on the following five aspects: Big data acquisition and analysis, Integration of qualitative research and quantitative research, Sociological Internet experiment research, Application of ABM simulation method in Sociology Research, Research and development of new social computing tools. With the rapid development of information technology, especially sweeping progress in the Internet of things, cloud computing, social networks, social media and big data, social computing, as a data-intensive science, is an emerging field that leverages the capacity to collect and analyze data with an unprecedented breadth, depth and scale. It represents a new computing paradigm and an interdisciplinary field of research and application. A broad comprehension of major topics involved in social computing is important for both scholars and practitioners. This proceedings presents and discusses key concepts and analyzes the state-of-the-art of the field. The conference not only gave insights on social computing, but also affords conduit for future research in the field. Social computing has two distinct trends: One is on the social science issues, such as computational social science, computational sociology, social network analysis, etc; The other is on the use of computational techniques. Finally some new challenges ahead are summarized, including interdisciplinary cooperation and training, big data sharing for scientific data mashups, and privacy protect.
NASA Tech Briefs Notion Press
Learn How to Implement Safety Codes and Regulations Effectively A number of electrical fatalities and injuries that occur each year can be overcome by a thorough understanding of electrical concepts. Yet due to the complexity of regulatory requirements, many safety professionals may not be fully equipped to handle the task. Electrical Safety: Systems, Sustainability, and Stewardship addresses the problem by simplifying the knowledge acquisition process, and arming safety professionals with the tools needed to successfully meet safety and efficacy goals. From power generation facility to electrical device, this text combines knowledge of industry standards, regulations, and real-world experience to provide a detailed explanation of electrical power generation, transmittal, and use. Explains the Concepts behind Electric Code The book introduces the basic sustainability and stewardship concepts inherent to reliability centered maintenance (RCM). It explains how these concepts apply to the components of an electrical system (the concepts can be used when auditing for electrical safety, training on electrical safety, and overseeing an upgrade or extension of a building's electrical system). In addition, it addresses general electrical safety, electromagnetic field shields, ohm/resistance study criteria, arc flash hazard analysis, and hazardous energy control. The authors outline OSHA requirements and the reasons for those requirements, and explain the implementation exigencies. This book: Describes power generation, transmittal, and usage Contains regulatory summaries from the OSHA electrical safety standards Presents the various types of electrical studies including arc flash, electromagnetic field, and ohm resistance investigations Discusses earthing grounds and overcurrent devices as overall components of electrical control and safety Offers an up-to-date discussions of arc flash criteria and evaluation needs that are linked to general electrical safety and grounding requirements Considers electromagnetic field physics, measurement, and control alternatives Electrical Safety: Systems, Sustainability, and Stewardship provides a step-by-step dialogue of the OSHA requirements and more importantly the reasons for those requirements. Describing electrical use within industrial settings, and presenting a ground approach to understanding how electrical power is used, this book lays down the ground work for making important decisions.
Condition Assessment Scheme Springer Science & Business Media
AR 750-1 09/12/2013 ARMY MATERIEL MAINTENANCE POLICY , Survival Ebooks
Systems, Sustainability, and Stewardship CRC Press
Small modular reactors (SMRs) generally include reactors with electric output of ~350 MWe or less (this cutoff varies somewhat but is substantially less than full-size plant output of 700 MWe or more). Advanced SMRs (AdvSMRs) refer to a specific class of SMRs and are based on modularization of advanced reactor concepts. Enhancing affordability of AdvSMRs will be critical to ensuring wider deployment, as AdvSMRs suffer from loss of economies of scale inherent in small reactors when compared to large (~greater than 600 MWe output) reactors and the controllable day-to-day costs of AdvSMRs will be dominated by operation and maintenance (O & M) costs. Technologies that help characterize real-time risk are important for controlling O & M costs. Risk monitors are used in current nuclear power plants to provide a point-in-time estimate of the system risk given the current plant configuration (e.g., equipment availability, operational regime, and environmental conditions). However, current risk monitors are unable to support the capability requirements listed above as they do not take into account plant-specific normal, abnormal, and deteriorating states of active components and systems. This report documents technology developments towards enhancing risk monitors that, if integrated with supervisory plant control systems, can provide the capability

requirements listed and meet the goals of controlling O & M costs. The report describes research results on augmenting an initial methodology for enhanced risk monitors that integrate real-time information about equipment condition and POF into risk monitors. Methods to propagate uncertainty through the enhanced risk monitor are evaluated. Available data to quantify the level of uncertainty and the POF of key components are examined for their relevance, and a status update of this data evaluation is described. Finally, we describe potential targets for developing new risk metrics that may be useful for studying trade-offs for economic operation while maintaining adequate safety margins.

Advances and Challenges Part B: Electrical Power ASTM International

The volume includes a set of selected papers extended and revised from the I2009 Pacific-Asia Conference on Knowledge Engineering and Software Engineering (KESE 2009) was held on December 19~ 20, 2009, Shenzhen, China. Volume 1 is to provide a forum for researchers, educators, engineers, and government officials involved in the general areas of Computer and Software Engineering to disseminate their latest research results and exchange views on the future research directions of these fields. 140 high-quality papers are included in the volume. Each paper has been peer-reviewed by at least 2 program committee members and selected by the volume editor Prof. Yanwen Wu. On behalf of this volume, we would like to express our sincere appreciation to all of authors and referees for their efforts reviewing the papers. Hoping you can find lots of profound research ideas and results on the related fields of Computer and Software Engineering.

Proceedings of the 2014 International Conference on Engineering Technology and Applications (ICETA 2014), Tsingtao, China, 29-30 April 2014 John Wiley & Sons

Various factors affect the performance of electrical contacts, including tribological, mechanical, electrical, and materials aspects. Although these behaviors have been studied for many years, they are not widely used or understood in practice. Combining approaches used across the globe, Electrical Contacts: Fundamentals, Applications, and Technology integrates advances in research and development in the tribological, material, and analytical aspects of electrical contacts with new data on electrical current transfer at the micro- and nanoscales. Taking an application-oriented approach, the authors illustrate how material characteristics, tribological behavior, and loading impact the degradation of contacts, formation of intermetallics, and overall reliability and performance. Coverage is divided broadly into three sections, with the first focused on mechanics, tribology, materials, current and heat transfer, and basic reliability issues of electrical contacts. The next section explores applications, such as power connections, electronic connections, and sliding contacts, while the final section presents the diagnostic and monitoring techniques used to investigate and measure phenomena occurring at electrical contact interfaces. Numerous references to current literature reflect the fact that this book is the most comprehensive survey in the field. Explore an impressive collection of data, theory, and practical applications in Electrical Contacts: Fundamentals, Applications, and Technology, a critical tool for anyone investigating or designing electrical equipment with improved performance and reliability in mind.

Condition Assessment of High Voltage Insulation in Power System Equipment CRC Press

Engineering Technology and Applications contains the contributions presented at the 2014 International Conference on Engineering Technology and Applications (ICETA 2014, Tsingtao, China, 29-30 April 2014). The book is divided into three main topics: Civil and environmental engineering Electrical and computer engineering Mechanical engineeringCon

Asset Management for Infrastructure Systems IET

The Condition Assessment Scheme (CAS) for oil tankers was adopted in 2001 and is applicable to all single-hull tankers of 15 years or older. Although the CAS does not specify structural standards in excess of the provisions of other IMO conventions, codes and recommendations, its requirements stipulate more stringent and transparent verification of the reported structural condition of the ship and that documentary and survey procedures have been properly carried out and completed. The Scheme requires that compliance with the CAS is assessed during the Enhanced Survey Program of Inspections concurrent with intermediate or renewal surveys currently required by resolution A.744(18), as amended.--Publisher's description.

U. S. Customs and Border Protection: Performance and Accountability Report Equipment Condition Assessment and Its Importance in Estimation and Prediction of Power System ReliabilityTransmission and Distribution Electric Utilities have a vast amount of assets distributed over their system in the form of various equipment. As part of an asset management program, electric utilities keep focusing on the inspection and maintenance activities of these assets to improve system performance, reliability, and to ensure cost-effective expenditures. Therefore methodology that will reflect these inspection and maintenance efforts in terms of overall condition of the equipment is needed. Also techniques are needed to assess the impact of inspection and maintenance activities on the overall reliability of systems performance. To achieve this, a methodology for the assessment of equipment condition and the estimation of the health index for transformers and circuit breakers was developed. After that, a technique to estimate the failure rate from the equipment health index was used. Then an IEEE test case was selected to demonstrate its impact on system reliability indices with the help of a predictive reliability assessment software tool, Milsoft Utility Solution. As part of equipment condition assessment method for transformer and circuit breaker, failure modes and maintenance practices for these equipment was reviewed. Based on this review, parameters were selected for condition assessment which will provide significant information about the equipment condition and will also justify the cost and efforts. For each of the parameters, a score and weight were defined, and guidelines were developed to assign them. Also, ways in which online monitoring systems can contribute to equipment condition assessment were presented briefly. A technique was used to convert the equipment health index into its failure rate. Then an IEEE reliability test case was modeled using the Milsoft software, incorporating this estimated failure rate and studied system's behavior in terms of reliability indices. It was observed that developing such models will provide more realistic information about the system's actual performance and will demonstrate the way in which impact of the inspection and maintenance efforts can be accounted.Condition Assessment of High Voltage Insulation in Power System Equipment

The U.S. Customs and Border Protection (CBP) FY 2009 Performance and Accountability Report (PAR) is a comprehensive report that combines CBP¿s Annual Performance Report with its audited financial statements, assurances on internal control, accountability reporting and agency assessments. CBP¿s PAR provides financial and performance information that enables Congress and the public to assess the performance of the agency as it relates to the CBP mission. CBP is America¿s frontline border agency; it guards our boundaries. The CBP PAR discusses the agency¿s strategic goals and objectives and provides a comparison of agency performance targets to actual performance results. Illustrations.

Engineering Technology and Applications McGraw Hill Professional

Get longer, safer system operating life for every facility maintenance dollar! How do you efficiently manage facility infrastructure? You turn to this hands-on, answer-packed, time- and money-saving guide designed for every facility manager who has to do more with less. It shows you how to conduct seamless facility condition inspections that provide an overall snapshot of the current condition of your facility, generating enormous amounts of priceless information that will help you reduce or eliminate downtime and keep your facility humming. This comprehensive, portable toolkit packs everything you need to: * Continually assess the condition status of every aspect of a building: all of its systems and equipment, components and subcomponents *Identify deficiencies before they become major problems * Get better performance from every system

Condition Assessment of Road Equipment with Emphasis on Road Markings and Barriers Springer Science & Business Media

Good aging infrastructure management consists of optimizing the choice of equipment and its refurbishment while also making compatible changes in all those operating and ownership policies, the whole combination aimed at optimizing the business results the power system owner desires. Both a reference and tutorial guide, this second edition of Aging Power Delivery Infrastructures provides updated coverage of aging power delivery systems, the problems they cause, and the technical and managerial approaches that power systems owners can take to manage them. See What’s New in the Second Edition: All chapters have been updated or are completely new Comprehensive discussions of all issues related to equipment aging Business impact analysis and models and engineering business studies of actual utility cases Strategy and policy issues and how to frame and customize them for specific situations This book looks at the basics of equipment aging and its system and business impacts on utilities. It covers various maintenance, service and retrofit methods available to mitigate age-related deterioration of equipment. It also presents numerous configuration and automation upgrades at the system level that can deal with higher portions of aging equipment in the system and still provide good service at a reasonable cost.

An Updated Methodology for Enhancing Risk Monitors with Integrated Equipment Condition Assessment Springer

How to use industry standards to create complete, consistent,and accurate equipment inventories The National Institute of Science and Technology estimates thatthe loss of information between the construction of buildings andtheir operation and maintenance costs facility owners $15.8 billionevery year. This phenomenal loss is caused by inconsistentstandards for capturing information about facilities and theirequipment. In Equipment Inventories for Owners and FacilityManagers, Robert Keady draws on his twenty+ years of experiencein facility management and his intimate knowledge of CSIclassification systems and standards to tackle this problemhead-on. Using standards already in use in the AEC industry, heprovides the road map for capturing everything owners and facilitymanagers need to know to operate and maintain any facility. This comprehensive, step-by-step guide: Explains the different types of equipment inventories and whythey are important Identifies and describes the types of information that shouldbe captured in an equipment inventory Describes and compares the different industry standards (CSIOmniClass™ and UniFormat™; COBie; and SPie) that can beused for equipment inventories Provides best practices for identifying and taggingequipment Walks through the equipment inventory process with real-worldexamples and best practices Provides the tools for conducting the equipmentinventory—tables of all the possible information and data thatneed to be collected, and fifty maps of workflows that can be usedto capture that data immediately

Standards, Strategies and Best Practices CRC Press

Information Technology and Career Education contains the contributions presented at the 2014 International Conference on Information Technology and Career Education (ICITCE 2014, Hong Kong, China, 910 October 2014). The book is divided into two main topics: information technology and vocational technology. Considerable attention is also paid to el

Volume 1 ASM International

This book introduces the reader to the major components of a high voltage system and the different insulating materials applied in particular equipments. During a review of these materials, measurable properties suitable for condition assessment are identified. Analyses are included of some of the insulation fault scenarios that may occur in power equipment. The basic facilities for carrying out tests on the internal and external insulation structures at high and low voltages are described. Tests and measurements according to specifications, on-site requirements and research investigations are considered.Advances in the application of digital techniques for detection and analyses of partial discharges are discussed and methods in use, or under development, for service condition monitoring are described. These include the utilisation of new sensors, the solution of online problems associated with noise rejection and the adaptation of artificial intelligence techniques for incipient fault diagnosis.

John Wiley & Sons

Intended for inspectors and engineers in the refining, petrochemical, and process industries. Includes material such as methods for inspecting process operations equipment, a diagrammatic cross-reference between processes and corrosion, a philosophy on metals selection for the construction of equipm

Guidelines for Mechanical Integrity Systems Springer Nature

This book constitutes the thoroughly refereed post-conference proceedings of the First International ICST Conference on Wireless Communications and Applications, ICWCA 2011, held in Sanya, China, in August 2011. The 43 revised full papers presented were carefully reviewed and selected from around 90 submissions and cover a wide range of topics as mobile ad hoc networks, sensor networks, network architectural design, network protocol design, local area networks, MAC, routing, and transport protocols, quality of service provisioning, reliability and fault tolerance issues, resource allocation and management, signal processing, medical imaging, data aggregation techniques, security and privacy issues, wireless computing and applications for wireless network as smart grid, agriculture, health care, smart home, conditional monitoring, etc.

Aging Power Delivery Infrastructures CRC Press

This book constitutes the thoroughly refereed proceedings of the 3rd International Conference on IoT as a service, IoTaaS 2017, held in Taichung, Taiwan, in September 2017. The 46 full papers were carefully selected from 65 submissions. The papers deal with the “Everything as a Service” deployment paradigm which enables the easy adoption of IoT based services and applications by end-users, and forces providers of smart objects and middleware platforms to architect their solutions accordingly. The three special sessions organized were Wearable Technology and Applications (WTAA), Building Smart Machine Applications (BSMA), and Security and Privacy in Internet of Things, Services and People (SP-IoTSP). The WTAA special session aimed to address the challenges of maintaining high efficiency of WTAA in terms of high recognition rate, energy consumption, computational costs and so forth. The BSMA special session aimed to explore how to construct smart machines architecture for the industry under the background of IoT and big data. The SP-IoTSP special session aimed to investigate recent research and future directions for IoTSP security and privacy.