

1. Record Nr.	UNINA9911007375003321
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Titolo	Turbine steam path [[electronic resource]] : maintenance and repair . Volume 1 // William P. Sanders
Pubbl/distr/stampa	Tulsa, OK, : PennWell, c2001
ISBN	1-62870-290-7
Descrizione fisica	1 online resource (782 p.)
Disciplina	621.406
Soggetti	Steam-turbines - Maintenance and repair Turbines
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Machine generated contents note: List of Acronyms -- Foreword -- Preface -- Acknowledgements -- Chapter 1-Considerations of a Turbine Steam -- Path Maintenance Strategy -- Introduction -- Considerations Relating to a Maintenance Strategy -- The Turbine Outage -- Establishing the Need for Unit Shutdown -- Outage Scheduling -- Interval Between Maintenance Outages -- The Inspection/Maintenance Outage -- The Available Corrective Options -- Distinction Between Causes and Mechanisms of Failure -- Component Susceptibility for Deterioration -- Instantaneous Damage or Failure -- Factors Contributing to Gradual Deterioration -- Monitoring Damage and Deterioration -- Replacement Parts Strategy and Supply -- References -- Chapter 2-Steam Path Component Alignment -- and Stage Spatial Requirements -- Introduction -- Predictable Factors Affecting Design Clearance -- Rotor Vertical Deflection -- Differential Expansion -- Radial Expansion of the Steam Path Parts -- Diaphragm Deflection at Pressure and Temperature -- Unit "End-to-End" Lateral Alignment -- Methods of Field Alignment -- Unpredictable Factors Affecting Design Clearance -- Steam Path Area Requirements -- The Stage Operating Definition -- Steam Path Component Arrangement (Axial/Radial Direction) -- Blade Vane and Cascade Geometry -- The Effect of Vane Placement Errors -- References -- Chapter 3-Steam Path Damage -- Induced by Water -- Introduction -- Water Condensation in Expanding Steam -- Radial Distribution of Moisture -- Moisture

Deposition -- Measuring Moisture Distribution and Content -- Water Removal from the Steam Path -- Moisture-induced Damage -- Moisture-impact Erosion -- Blade-trailing Edge Erosion -- Wire-drawing Erosion -- Water-washing Erosion -- Water Ingestion into the Steam Path -- References -- Chapter 4-Operational Events -- Giving Rise to Steam Path Damage -- Introduction -- Foreign Object Impact Damage -- Sources of the Impacting Objects -- Impact Damage Classification -- Solid-particle Erosion (Abrasion) -- Scale Formation -- The Erosion Mechanisms -- Material Loss Patterns Due to SPE -- Protective Measures Against Erosion -- SPE Influence on Stage Performance -- Steam Path Component Rubbing -- Fretting Corrosion -- References -- Chapter 5-Steam Path Damage -- and Deterioration from Material -- Property Degradation -- Introduction -- Considerations of Material Structure -- High-temperature Creep -- Creep Deformation -- The Creep Mechanism -- Creep Rate -- Creep in Steam Path Components -- High-cycle Fatigue -- The High-cycle Phenomena -- Rotating Blade Vibratory Stresses -- Material Properties -- Fatigue Stresses and their Representation -- Crack Growth -- HCF Failure Surface Appearance -- Creep Fatigue -- Temper Embrittlement -- Low-cycle Thermal Fatigue -- Thermal Transients -- Determination of Thermal Stresses -- Components Operating at High Temperature -- References -- Chapter 6 -- Steam Path Damage and Deterioration from -- the Deposition of Contaminants -- Introduction -- Source of Steam Path Impurities -- The Composition of Deposits -- The Removal of Chemical Deposits from the Steam Path -- Steam Path Cleaning Methods -- Deposition Patterns -- Steam Path Efficiency Deterioration -- Steam Path Corrosion -- Forms of the Corrosion Process -- References.

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#### Sommario/riassunto

William P. Sanders, prominent expert in the field of steam turbines, brings the information and expertise of his seminars to this long-awaited practical approach to steam turbine maintenance and repair. This authoritative guide affords anyone seeking information on turbine steam path maintenance and repair a complete and focused working knowledge of the subject--from the experienced engineer to industry lay person. The reader of this book will be able to: - Identify the type and severity of any damage - Suggest possible cause of damage - Indicate the most appropriate corrective actions available With thought-provoking examples, numerous photographs and figures, and an excellent simplification of a complicated topic, *Turbine Steam Path Maintenance & Repair, Volume 1* is sure to be an invaluable resource readers turn to many times during their careers

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