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Autore	Byrd Andrew Miles <1979->
Titolo	Indo-European syllable // by Andrew Miles Byrd
Pubbl/distr/stampa	Leiden, Netherlands ; ; Boston, [Massachusetts] : , : Brill, , 2015 ©2015
ISBN	90-04-29302-7
Descrizione fisica	1 online resource (327 pages) : illustrations
Collana	Brill's Studies in Indo-European Languages & Linguistics, , 1875-6328 ; ; Volume 15
Disciplina	414
Soggetti	Indo-European language - Syllabication Indo-European languages - Phonology Reconstruction (Linguistics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Revision of the authors Thesis (Ph. D.)--UCLA, 2010.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Part 1. Preliminaries -- Part 2. The proposal -- Part 3. Ramifications -- Part 4. Appendices.
Sommario/riassunto	In The Indo-European Syllable Andrew Miles Byrd investigates the process of syllabification within Proto-Indo-European (PIE), revealing connections to a number of seemingly unrelated phonological processes in the proto-language. Drawing from insights in linguistic typology and synchronic theory, he makes two significant advances in our understanding of PIE phonology. First, by analyzing securely reconstructable consonant clusters at word's edge, he devises a methodology which allows us to predict which types of consonant clusters could occur word-medially in PIE. Thus, a number of previously disconnected phonological rules can now be understood as being part of a conspiracy motivated by violations in syllable structure. Second, he uncovers evidence of morphological influence within the syllable, created by processes such as quantitative ablaut. These advances allow us to view PIE as a synchronic grammar, one which can be described by -- and contribute to -- modern linguistic theory.

2. Record Nr.	UNINA9910957625003321
Titolo	Coatings for high-temperature structural materials : trends and opportunities // Committee on Coatings for High-Temperature Structural Materials, National Materials Advisory Board, Commission on Engineering and Technical Systems, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1996
ISBN	9786610192694 9780309176026 0309176026 9781280192692 1280192690 9780309578257 0309578256 9780585037080 0585037086
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Descrizione fisica	1 online resource (101 p.)
Soggetti	Heat resistant materials Refractory coating Gas-turbines - Blades - Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Coatings for High-Temperature Structural Materials -- Copyright -- Abstract -- Acknowledgments -- Preface -- Contents -- Acronyms -- Executive Summary -- TRENDS -- High-Temperature Coatings Design -- High-Temperature Coating Types -- Processes for Applying Coatings -- Degradation Modes -- Engineering Considerations -- Life-Cycle Factors -- NEAR-TERM OPPORTUNITIES -- Concurrent Development of High-Temperature Coatings and Substrate Materials -- Oxidation and Hot-Corrosion-Resistant Coating Development -- Thermal Barrier Coating Development -- Analytical Methods and Models -- Repair and Overhaul -- Nondestructive Evaluation -- LONG-

TERM OPPORTUNITIES AND INNOVATIONS -- Innovative Coating Architectures -- Other Innovative Concepts -- 1 Introduction -- 2 Application Needs and Trends -- APPLICATION NEEDS -- Aircraft Turbine Needs -- Land-Based Turbine Needs -- Marine Turbine Needs -- CURRENT COMPONENT DESIGN AND BASE MATERIALS -- ADVANCED MATERIALS FOR ENGINE COMPONENTS -- Ceramics -- Intermetallics -- Refractory Metals -- 3 Materials and Processes -- COATINGS FOR HIGH-TEMPERATURE STRUCTURES -- Coatings for Superalloys -- Coatings for Ceramics -- Coatings for Refractory Metals -- Coatings for Intermetallic Materials -- COATING PROCESSES -- Physical Vapor Deposition -- Sputtering -- Thermal Spray Processes -- Diffusion Coating Methods -- COATING PROCESS CONTROL -- SUMMARY -- 4 Failure Modes -- DEGRADATION MECHANISMS OF STRUCTURAL MATERIALS -- DEGRADATION MECHANISMS OF COATINGS -- High-Temperature Oxidation -- Hot Corrosion -- Mechanical Distress -- Solid-State Diffusion -- Spallation -- A CASE STUDY: DEGRADATION OF THERMAL BARRIER COATINGS -- Spallation -- Plasma-Sprayed TBCs -- EB-PVD TBCs -- Erosion -- RESEARCH OPPORTUNITIES -- 5 Engineering Considerations -- COMPATIBILITY OF COATINGS WITH STRUCTURAL MATERIALS. Chemical (metallurgical) Compatibility -- Process Compatibility -- Mechanical Compatibility -- COMPONENT COATABILITY -- OTHER ENGINEERING CONSIDERATIONS -- Coating Databases -- Management of Air, Fuel, and Water -- Influence of Coatings on Gas-Turbine Emissions -- CONCURRENT COATING DEVELOPMENT -- 6 Refurbishment of Coated Structure -- FACTORS AFFECTING COMPONENT LIFE -- REPAIR OF HIGH-TEMPERATURE COATINGS -- Importance and Need of Repair Technology -- Current Status -- Future Directions -- STANDARD DESIGNATIONS FOR COATINGS -- NONDESTRUCTIVE EVALUATION -- 7 Near-Term Trends and Opportunities -- THERMAL BARRIER COATING DEVELOPMENT -- COATING PROCESSES -- Repair and Overhaul -- Analytical Methods -- Modeling -- Nondestructive Evaluation -- 8 Long-Term Opportunities and Innovative Systems -- INNOVATIVE COATING ARCHITECTURES -- Continuously Graded Coatings -- Horizontally Layered Materials -- Interphase Layers -- Vertically Layered Materials -- Three-Dimensional Structured Materials -- OTHER INNOVATIVE CONCEPTS -- Nanocrystalline Coatings and Substrates -- Advanced Processing -- Built-In Sensors for Condition Monitoring -- Embedded Microchannels within TBC for Cooling -- Coatings for Refractory Metals -- References -- Appendix A Testing and Standards -- NOMENCLATURE AND DESIGNATION -- PROCESSING -- MECHANICAL PROPERTIES -- CORROSION -- EROSION -- THERMAL PROPERTIES -- MICROSTRUCTURE -- INTERNATIONAL ACTIVITIES -- SUMMARY -- CURRENT STANDARDS -- American Society for Testing and Materials -- Society of Automotive Engineers -- Military Standards -- British Standards Institute -- DIN -- Japan Institute of Standards -- REFERENCES -- Appendix B Radiation Transport in Thermal Barrier Coatings -- REFERENCES -- Appendix C Survey of Nondestructive Evaluation Methods -- OPTICAL METHODS -- THERMAL METHODS -- Optical-Source Infrared Radiometric Detection. Other-Source Infrared Radiometric Detection -- Radiometric Methods in Coating Deposition -- Laser Acoustic Interferometric Imaging -- Induced Current Methods -- Injected Current Methods -- Conventional Ultrasonic Methods -- Laser Ultrasonics and Interferometric Detection -- X-ray Methods -- EMERGING NDE METHODS FOR INSPECTING COATING SYSTEMS -- X-ray Thermal Imaging: Composition with Depth -- Transient Grating Characterization Methods -- Microwave

Thermoreflectance -- Modulated Stress Methods -- REFERENCES --
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PHYSICAL VAPOR DEPOSITION PROCESSES -- SPUTTERING --
ELECTROSPARK DEPOSITION -- AUXILIARY PROCESSES -- QUALITY
CONTROL -- REFERENCES -- Appendix F Example of a Coating
Designation System -- Appendix G Biographical Sketches of Committee
Members.

Sommario/riassunto

A report assessing coatings materials and processes for gas-turbine blades and vanes, examining potential applications in high-temperature environments. Discusses required inspection, repair, and maintenance methods, and reviews promising areas for research and development of materials and processes
