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Titolo	Numerical Analysis : Proceedings of the Biennial Conference Held at Dundee, June 28-July 1, 1977 / edited by G. A. Watson
Pubbl/distr/stampa	Berlin, : Springer, 1978
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Soggetti	65-XX - Numerical analysis [MSC 2020] 00B25 - Proceedings of conferences of miscellaneous specific interest [MSC 2020]
Lingua di pubblicazione	Inglese
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Titolo	Heat treatment : theory, techniques, and applications / / Gregory J. Bonami, editor
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2010
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Descrizione fisica	1 online resource (313 p.)
Collana	Materials science and technologies
Altri autori (Persone)	BonamiGregory J
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Soggetti	Metals - Heat treatment Tempering
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""HEAT TREATMENT: THEORY, TECHNIQUES AND APPLICATIONS""; ""CONTENTS""; ""PREFACE""; ""HEAT TREATMENT OF VITRIFIED GRINDING WHEELS""; ""ABSTRACT""; ""1. INTRODUCTION""; ""2. GRINDING WHEEL STRUCTURE FORMATION DURING HEAT TREATMENT""; ""2.1. Physico-Chemical Processes That Occur during Firing""; ""2.2. Ceramic Bond Minerals That Form during Firing""; ""3. CASE STUDY I: INTERFACIAL

COMPOUNDS AND THEIR EFFECT ON GRINDING WHEEL WEAR"; "3.1. Wear Mechanisms"; "3.2. Microstructure of Abrasive Grains"; "3.3. Experimental Procedure"; "3.4. Experimental Results"
"3.5. Discussion of Interfacial Compounds on Grinding Wheel Wear"
4. CASE STUDY II: DISSOLUTION OF QUARTZ AND ITS EFFECT ON GRINDING WHEEL WEAR"; "4.1. Dissolution Models for Vitrified Grinding Wheel Bonds"; "4.2. Experimental Procedures"; "4.3. Experimental Results"; "5. DISCUSSION"; "6. CONCLUSIONS";
"ACKNOWLEDGMENTS"; "REFERENCES"; "THE POTENTIAL FOR COST AND WEIGHTREDUCTION IN TRANSPORT APPLICATIONS THROUGH THE USE OF HEAT TREATED ALUMINUMHIGH PRESSURE DIECASTINGS";
"ABSTRACT"; "INTRODUCTION"; "Component Design";
"APPLICATION TO INDUSTRIALLY PRODUCED COMPONENTS"
"Development of Heat Treatment Procedures" Reject Rates due to Heat Treatment"; "Experiments Using an Industrial Heat Treatment Facility"; "COST BASIS"; "Examples of Cost and Weight Reduction: Materials Replacement Strategy"; "Case 1. Replacement of a Small HPDC with a Heat Treated HPDC"; "Case 2. Replacement of a Large HPDC with a Heat Treated HPDC"; "Case 3. Replacement of a Large Sand cast Component with a Heat TreatedHPDC Component"; "Other Considerations in Replacing Permanent Mold Castings with HeatTreated HPDC"; "FRACTURE RESISTANCE"
"New HPDC Alloy Developments" SUMMARY AND CONCLUSIONS";
"REFERENCES"; "QUENCHING UNDER FOG CONDITIONS: THEORY, TECHNIQUE AND APPLICATIONON ROLLING MILLS"; "ABSTRACT"; "1. THEORY ON QUENCHING UNDER FOG CONDITIONS"; "1.1. Chemistry and Phase Diagrams"; "1.2. Quenching"; "1.3. Quenchants"; "2. TECHNIQUE FOR OBTAINING FOG"; "2.1. Spray Characteristics"; "2.2. Spray Performances"; "2.3. Atomization"; "2.4. Heat Transfer Tests"; "2.5. Results and Discussion"; "3. APPLICATION FOR 70VMOCR28 ROLLING MILL"; "3.1. Experimental"; "3.2. Results and Discussion"
"4. CONCLUSION" REFERENCES"; "ALCU2,5MG ALLUMINUM ALLOYHEAT TREATMENT: THEORY, TECHNIQUES AND APPLICATIONS";
"ABSTRACT"; "1. INTRODUCTION"; "Aluminum Heat Treatment";
"Heat Treatment Processes"; "Aging"; "Annealing";
"Homogenization (Ingot Preheating Treatments)"; "Quenching";
"Tempering"; "Batch Installations"; "Continuous Installations";
"Integration with Lean and Agile Manufacturing"; "2. ESTABLISHING THE EXPERIMENTAL TECHNOLOGICAL CONDITIONS. PROGRAMMING THE EXPERIMENT"; "2.1. Establishing the Preliminary Experimental Conditions"
"2.2. Programming the Experiment"

Sommario/riassunto

Heat treatment is a method used to alter the physical, and sometimes chemical, properties of a material. This book reviews research in the study of heat treatments including the heat treatment of vitrified grinding wheels; and, fog-quenching after heat treatments for big cylindrical parts in rolling mills.
