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| 1. Record Nr. | UNICAMPANIAVAN0260861 |
| 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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| 2. Record Nr. | UNINA9910964757203321 |
| Titolo | Heat treatment : theory, techniques, and applications / / Gregory J. Bonami, editor |
| Pubbl/distr/stampa | New York, : Nova Science Publishers, c2010 |
| ISBN | 1-61324-684-6 |
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| Descrizione fisica | 1 online resource (313 p.) |
| Collana | Materials science and technologies |
| Altri autori (Persone) | BonamiGregory J |
| Disciplina | 671.3/6 |
| Soggetti | Metals - Heat treatment
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| Formato | Materiale a stampa |
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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 WEIGHT REDUCTION IN TRANSPORT APPLICATIONS THROUGH THE USE OF HEAT TREATED ALUMINUM HIGH 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 Treated HPDC Component"; "Other Considerations in Replacing Permanent Mold Castings with Heat Treated HPDC's"; "FRACTURE RESISTANCE"; "New HPDC Alloy Developments"; "SUMMARY AND CONCLUSIONS"; "REFERENCES"; "QUENCHING UNDER FOG CONDITIONS: THEORY, TECHNIQUE AND APPLICATION ON 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 70VMC R28 ROLLING MILL"; "3.1. Experimental"; "3.2. Results and Discussion"; "4. CONCLUSION"; "REFERENCES"; "ALCU2,5MG ALLUMINUM ALLOY HEAT 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.