1. Record Nr. UNINA9910144327803321 Autore Oates J. A. H (Joseph A. H.) Titolo Lime and limestone [[electronic resource]]: chemistry and technology, production and uses / / J.A.H. Oates Pubbl/distr/stampa Weinheim, Federal Republic of Germany;; New York,: Wiley-VCH, c1998 **ISBN** 1-281-76385-3 9786611763855 3-527-61202-5 3-527-61201-7 Descrizione fisica 1 online resource (474 p.) Disciplina 553.51 622.3516 Soggetti Lime Limestone Electronic books. Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Lime and Limestone; Contents; 32 Other Uses of Quick and Slaked Lime; 1.1 Introduction; 1.1 General; 1.2 Importance of Lime and Limestone; 1.3 History [1.1-1.3]; 1.4 References; Part 1 Production of Limestone; 2 Formation, Classification and Occurrence of Limestone; 2.1 Formation of Limestone; 2.2 Classification of Limestones; 2.3 Occurrence of Limestones; 2.4 References; 3 Physical and Chemical Properties of Limestone; 3.1 Physical Properties; 3.2 Chemical Properties; 3.3 Impurities; 3.4 References; 4 Prospecting and Quarrying; 4.1 Introduction; 4.2 Prospecting; 4.3 Quarrying; 4.4 Loading 4.5 Hauling 4.6 Current Trends in Quarrying; 4.7 Dimension Stone; 4.8 References; 5 Processing and Dispatch of Limestone; 5.1 Introduction; 5.2 Crushing; 5.3 Pulverising and Grinding; 5.4 Production of Precipitated Calcium Carbonate; 5.5 Sizing; 5.6 Benefication; 5.7 Storage and Loading Out; 5.8 Transport; 5.9 Specifications; 5.10 References: 6 Sampling and Testing of Limestone: 6.1 Introduction: 6.2

Sampling; 6.3 Sample Preparation; 6.4 Testing; 6.5 CEN Standards for

Test Methods; 6.6 References; Part 2 Uses and Specifications of Limestone

7 Overview and Economic Aspects of the Limestone Market7.1 General: 7.2 Market Overview; 7.3 Economic Aspects; 7.4 References; 8 Construction and Building; 8.1 Introduction; 8.2 Specifications and Test Methods; 8.3 Aggregates for Concrete; 8.4 Sand for Mortars; 8.5 Unbound Aggregates for Roads; 8.6 Aggregates for Asphalts; 8.7 Other Applications: 8.8 CEN Standards for Aggregates: 8.9 References: 9 Use of Limestone in Cement Production; 9.1 Introduction; 9.2 Portland Cement Production; 9.3 Composite Cements; 9.4 Masonry Cements; 9.5 Calcium Aluminate Cements; 9.6 References 10 The Use of Limestone in Agriculture 10.1 Introduction; 10.2 Arable Land and Pasture; 10.3 Fertilisers; 10.4 Animal Feedstuffs; 10.5 Poultry Grits: 10.6 Neutralising Acid Rainfall: 10.7 References: 11 Use of Limestone in Refining Metals: 11.1 The Production of Iron: 11.2 Open Hearth Steelmaking; 11.3 Smelting; 11.4 The Production of Alumina; 11.5 References; 12 Other Uses of Limestone; 12.1 Introduction; 12.2 Glass Manufacture: 12.3 Ceramics: 12.4 Mineral Wool: 12.5 Acid Gas Removal: 12.6 Sulfite Process for Paper Pulp: 12.7 Production of Organic Chemicals; 12.8 "Rock Dust" for Mines 12.9 Fillers and Extenders12.10 Water Treatment; 12.11 Sodium Dichromate: 12.12 Calcium Zirconate: 12.13 References: Part 3 Production of Quicklime; 13 Physical and Chemical Properties of Quicklime: 13.1 Physical Properties: 13.2 Chemical Properties: 13.3 References; 14 Raw Materials for Lime Burning (Limestone, Fuel and Refractories); 14.1 General; 14.2 Limestone; 14.3 Fuel; 14.4 Refractory Linings; 14.5 References; 15 Calcination of Limestone; 15.1 Introduction; 15.2 The Chemical Reactions; 15.3 Kinetics of Calcination; 15.4 Sintering of High-calcium Quicklime 15.5 Sintering of Calcined Dolomite

Sommario/riassunto

Modern uses of traditional materials 'Lime and Limestone' is a comprehensive and up-to-date presentation of the main scientific and technological aspects of the quarrying, processing, calcining and slaking of lime and limestone products. It places emphasis on how the processes are designed to ensure that the products meet market requirements and comply with customer specifications. It describes authoritatively, and in detail, the current uses in the many market segments, including:iron, steel and other metals,building, construction and cement,water, sewage and enviro