1. Record Nr. UNINA9910786979303321 Autore Speight James G **Titolo** Coal-fired power generation handbook [[electronic resource] /] / James G. Speight Beverly, Mass.,: Scrivener Pub., 2013 Pubbl/distr/stampa **ISBN** 1-118-73960-4 1-118-73945-0 1-118-73941-8 Descrizione fisica 1 online resource (758 p.) Collana **Power Generation** Disciplina 333.7932 Soggetti Coal-fired power plants Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Cover; Title Page; Copyright Page; Contents; Preface; 1 Occurrence and Nota di contenuto Resources: 1.1 Introduction: 1.2 Origin of Coal: 1.3 Occurrence: 1.4 Coal Utilization and Coal Types: 1.4.1 Lignite: 1.4.2 Subbituminous Coal; 1.4.3 Bituminous Coal; 1.4.4 Anthracite; 1.5 Resources; 1.6 Reserves; 1.6.1 Proven Reserves; 1.6.2 Inferred Reserves; 1.6.3 Potential Reserves; 1.6.4 Undiscovered Reserves; 1.6.5 Other Definitions; References; 2 Classification; 2.1 Introduction; 2.2 Classification Systems; 2.2.1 Geological Age; 2.2.2 Banded Structure; 2.2.3 Rank; 2.2.4 Coal Survey (National Coal Board, U.K.) 2.2.5 International System 2.2.6 Coal as an Organic Rock; 2.2.7 A Hydrocarbon Resource; 2.3 Coal Petrography; 2.3.1 Vitrinite Group; 2.3.2 Liptinite Group; 2.3.3 Inertinite Group; 2.4 Correlation of the Various Systems; References; 3 Recovery, Preparation, and Transportation; 3.1 Introduction; 3.2 Coal Recovery; 3.2.1 Surface Mining; 3.2.2 Underground Mining; 3.3 Coal Preparation; 3.4 Size Reduction; 3.4.1 Rotary Breaker; 3.4.2 Roll Crusher; 3.4.3 Hammer Mill; 3.4.4 Impactor; 3.4.5 Tumbler; 3.5 Coal Cleaning; 3.5.1 Effect of Composition and Rank; 3.5.2 Methods; 3.6 Coal Drying 3.6.1 Rotary Dryers 3.6.2 Fluidized Bed Dryers; 3.6.3 Microwave Dryers;

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## Sommario/riassunto

The most complete and up-to-date handbook on power generation from coal, this book covers all of today's new, cleaner methods for creating electricity from coal, the environmental challenges and concerns involved in its production, and developing technologies. It describes new technologies that could virtually eliminate the sulfur, nitrogen, and mercury pollutants released when coal is burned for electricity generation. In addition, the text details technologies for greenhouse gases capture from coal-fired power plants, as well as for preventing such emissions from contributing to global warmi