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Topics; Performance, Operation, and Maintenance Experience of Coal Ultra fines Filtration with Modern High-Speed Disc Filters Dewatering Fine Coal and Tailings with a Filter Press Deep Cone Thickener at Lone Mountain Processing Plant; Centribaric Operations Update; Belt FilterPress in Coal Tailings Dewatering-A Comprehensive Economic, Design, and Process Analysis; Fine Coal Drying and Plant Profitability; Nano Drying Technology-A New Approach for Fine Coal Dewatering; Development of a Fine Coal Recovery Operation at the Centralia Mine Coal Slurry Impoundment Structures; Pressurized Fluidized-Bed Combustion Technology for Fine Coal Utilization; Index; Back Cover

Sommario/riassunto

Coal mining and preparation have had a long history in the United States and the world, serving as the engine of growth for many industries. Today, new sources of energy, increased environmental awareness, and more stringent regulations from the U.S. Environmental Protection Agency and other organizations are changing the way coal is found, extracted, and used. As a result, fine coal cleaning, dewatering, and refuse disposal are now at a major crossroads. The increased level of fines, and near-density material in the inferior seams being mined today, necessitates the development of more efficient fine coal cleaning devices. This in turn requires improvements in traditional dewatering techniques to address the need for acceptable moisture levels in plant products. Moreover, the larger volume of fine refuse being generated, coupled with harsher disposal regulations, requires upgraded treatment options. This book is a compilation of information presented at the 2012 Fine Coal Symposium, sponsored by the Coal Preparation Society of America; the Pittsburgh Section of the Society for Mining, Metallurgy, and Exploration, Inc.; and the Pittsburgh Coal Mining Institute of America. Provided by international coal companies, major research organizations, technology developers, and industry leaders, the information includes both general knowledge and in-depth discussion on the current challenges facing the industry, techniques for designing more efficient plants, and new cleaning and dewatering technologies. The book is a practical yet cutting-edge resource for plant designers, engineers, and other practitioners, and for university students and faculty.