

A REVIEW OF EXPERIMENTAL AND THEORETICAL STUDIES OF COAL DISCREPANCY

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Abstract

This paper investigates the factors that contribute to the coal discrepancy phenomenon, not only in terms of quantity but also in quality or coal properties. A conceptual model of coal discrepancy was developed based on contextual contributing factors of discrepancy in the coal mining industry using a literature review, questionnaire and enriched by empirical data. The study was also completed by the field experiment to check the discrepancy in quality in each mining phase. The result is then processed using linear regression to obtain the coefficient correlation and equation that show the discrepancy trend. The study analyzed some significant contributing factors that impacted coal discrepancy in the mining industry, not only from internal companies, such as equipment parameters (physical availability, utilization, and productivity), geological model, and changes in design, but also changes in mining sequence due to concerns external to the company, such as environmental issues, land issues, and market demand. As the originality of this study, it enriches the existing body of knowledge by providing a novel framework of coal discrepancy and its contributing factors from internal and external sources. It also discusses the discrepancy issue in the quality or properties of coal by providing some equations based on empirical study to estimate the discrepancy level in each mining phase.

Keywords: Coal Discrepancy, Mine Reconciliation, Coal Mined, Coal Quality & Change Sequence.
