INDONESIAN MINING JOURNAL

ISSN 0854 - 9931 Volume 13, No. 2, June 2010

Abstract Index

Permana, Darsa (R&D Centre for Mineral and Coal Technology)
Implementation Impact of Law No. 4 Year 2009 on Mineral and Coal Mining Towards Mineral and Coal Business Development
IMJ, Vol. 13, No. 2, June 2010,
P. 47 - 54

The issuance of Law No. 4 Year 2009 on Mineral and Coal Mining has certainly an impact on the management of mineral and coal mining operations throughout Indonesia as the law brings lots of new issues related to the regional autonomy that is contradictive to the previous issued regulation, i.e. Law No. 11 Year 1967 regarding centralized Main Guidelines on Mining.

Surveys to several regions and business operation show that various problems have occurred. It needs early action to avoid bigger problems that will create a negative impact to the investment climate in mineral and coal mining sector, and will eventually hinder the improvement of people welfare.

Keywords: Law No. 4 Year 2009, Law No. 11 of 1967, mineral and coal mining, regional autonomy

Subari and Suripto (Centre for Ceramics)
Marble Waste and Fly Ash Utilizations for Fine Ceramic Raw Materials
IMJ, Vol. 13, No. 2, June 2010,
P. 55 - 59

The possibility of using marble waste and fly ash taken from a textile industry as raw materials for producing fine ceramics was studied. Besides those two materials, clay was also used as the formed agent for ceramic body. There were four compositions noted as T1, T2, T3 and T4 that consist of marble waste 10 %, fly ash 10 – 25 % and clay 65 – 80 %. They were formed by the method of slip casting.The tests pieces of these fine ceramic bodies were then fired at temperature of 600 °C. The glaze were applied to the bodies and further fired at temperature of 1150 °C in a gas kiln. Characterization results of those four composition tests show that the composition of T2 (70 % of clay, 10 % of marble waste and 20 % of fly ash) gives the best result.

Keywords: Ceramic, marble waste, fly ash

Suseno, Triswan (R&D Centre for Mineral and Coal Technology)
Trends in Supply/Demand for Indonesian Coal Period 2005 - 2025
IMJ, Vol. 13, No. 2, June 2010,
P. 60 - 67

In 2008, Indonesia mineable coal reserve was recorded around 7.12 billion tons. During that year, around 231.18 million tons were exploited. Of such a figure, 69.44 million tons went to domestic market and the rest belonged to export. Yet, in 2025 the need of coal for local consumption may reach 192.33 million tons that include 99.86 million tons for steam power plant, 30.58 million tons for cement industries, and 17.59 million tons for textile industries. Pulp and other industries may consume 2.92 million tons and 41.39 million tons respectively. It is assumed that in 2025, Indonesian coal export will increase to 260.92 million tons

Coal export is assumed to increase figuring Coal Mining Agreement as the biggest exporter (94.03%). The rest goes to Mine authority (3.55%) and State-owned Enterprises (2.43%). However, the possibility of unrecorded coal utilization for ether domestic use and export reaches 51.66 million tons. As a result, it is presumed that Indonesian coal production in 2025 is around 504.92 million tons. The production rate during 2010-2025 is 4.9% per annum.

According to the above condition, the mineable coal reserve of 7.12 million tons will probably be finished for about 18 years. In addition, the coal-steamed power that operates until now has an age of 26 years.

If the reserve is not well-managed, it will immediately be finished in the shorter time. That is why, it needs an anticipative step of a policy concept that can maintain a sustainability of the domestic coal stock by implementing a limited export.

Keywords: Production, consumption, export, projection, mining age

Sulistyohadi, Fahmi and Hudaya, Gandhi K.
(R&D Centre for Mineral and Coal Technology)
Study of Additive, Size Fraction and Coal Concentration for Coal Water Fuel
IMJ, Vol. 13, No. 2, June 2010,
P. 68 - 74

Coal Water Fuel (CWF) is one of energy diversifications. It enables the coal to substitute fuel oil by existing installations because CWF could flow similar to the flow of liquid.

Selections of additive, coal size fraction, ratio coal and water of CWF were studied in laboratory scale. Arutmin coal, processed with Upgraded Brown Coal (UBC) technology, was grouped to -60 and -200 meshes and then are mixed with water and small quantities of additive. Size fraction, coal concentration and additive type were varied to investigate their effects on CWF behavior.

Results from concentration and penetration tests show that the best additive for CWF with size fraction - 200 mesh is DBS (Doacely Benzene Sulfanat) with optimum coal concentration is 51% using size - 60 mesh indicate, that the most stable CWF was resulted from CWF using DBS with optimum coal concentration 55 %.

Results of using different size fraction that show the decrease of concentration and penetration rate from CWF with size fraction - 200 mesh is relatively constant compared to the CWF with size fraction – 60 mesh.

Keywords: Coal water fuel, additive, concentration, penetration

Santoso, Binarko (R&D Centre for Mineral and Coal Technology)
Petrographic Properties of Palaeogene Southern Banten Coal Seams with Regard to Geologic Aspects
IMJ, Vol. 13, No. 2, June 2010,
P. 75 - 82

The Palaeogene coal deposits occur in three coalfields in the Banten Province, that are distributed in Bayah, Cihideung and Cimandiri. The Bayah coals (Eocene Bayah Formation) mainly comprise vitrinite and subordinate inertinite and are of sub-bituminous A to high volatile bituminous A ranks (0.60-0.79%). The Cihideung coals (Eocene Bayah Formation) are of sub-bituminous A to medium volatile bituminous ranks (0.53-1.23%) and composed mainly of vitrinite. The Cimandiri coals (Oligocene Cijengkol Formation) are composed of variable proportions of vitrinite in the main and inertinite in very minor amounts. The rank of the coals is sub-bituminous A and high volatile bituminous A varying between 0.64% and 0.83% in vitrinite reflectance. Evaluation of these coals indicates that they tend to have similar coal petrographic properties and were formed in a littoral-neritic environment. Some of the coals, especially the Cihideung coals, show the highest vitrinite content and higher rank (0.99-1.23%), which is high A-medium volatile bituminous, due to an intrusive activity. Most of the coals have high contents of mineral matter (pyrite), mainly in the Bayah coals (2-13%), and this indicates that the coals were influenced by marine incursion during their deposition.

Keywords: type, rank, coal and depositional environment

Daulay, Bukin, Umar, Datin F., Santoso, Binarko and Suganal (R&D Centre for Mineral and Coal Technology)
Evaluation of Kalimantan Coal Quality in Order to Select the Appropriate and Effective Utilization Technologies
IMJ, Vol. 13, No. 2, June 2010,
P. 83 - 93

Coal has a potential chance to be a major future primary energy source in Kalimantan due to its large resource base, easy and low cost of exploitation, good quality in terms of ash and sulphur contents and supported by appropriate infrastructure. The majority of the coal is low in rank with high moisture content and low calorific value. This part of the resource basics is still under-utilized. Most of the coal currently exploited is medium - high rank coal. Therefore, future production will inevitably move towards the low rank coal, as resources of high rank coals are depleted and become more expensive to exploit.

Coal quality, including coal petrology in terms of type and rank, mineral contents, hardgrove grindability index, sodium content can contribute to an understanding of the nature and aids in determining its utilization potential. Kalimantan low rank coal can be developed through various utilization technologies, among others, coal upgrading, hot water treating coal slurry (HWTCS), coal liquefaction, carbonization and mine mouth power plant.

Keywords: Low rank coal, utilization, upgrading, mine mouth power plant, conversion