

Title : Coal Petrography and Proximate Analysis of K-Zone and Q-Zone Coal, Mae Moh Mine,
Mae Moh District, Lampang Province

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ABSTRACT

The study investigates the quality and depositional environment of the K- and Q-Zone coals distributed in the C1 pit in Mae Moh mine. Fifteen coal samples were collected: eight from the K-Zone and seven from the Q-Zone. The analysis was conducted through proximate analysis and coal petrography. Proximate analysis results indicate that coal from the K-Zone has an average composition of 18.85 weight percent of moisture, 7.09 weight percent of ash, 33.90 weight percent of volatile matter, and 40.16 weight percent of fixed carbon, while the coal from the Q-Zone contains an average of 16.19 weight percent of moisture, 11.55 weight percent of ash, 34.98 weight percent of volatile matter, and 37.28 weight percent of fixed carbon. These indicate that the K-Zone coals exhibited better quality than the Q-Zone coals due to lower ash content, higher volatile matter, and higher fixed carbon values. However, both coal zones are of good quality, as minimal inorganic mineral contamination implies a depositional environment with limited sediment transport. Coal petrography analysis reveals that both K- and Q-Zone coals are predominantly composed of vitrinite, followed by a moderate amount of liptinite and a discriminate amount of inertinite, with minimal mineral matter. These findings indicated a forest swamp characterized by the accumulation of tree trunks, leaves, and plant spores, with limited sediment influx to the mire.

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