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Hazardous sludge solidification in combination with green mussel shells: A case study of NGCC power plant of Priok

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This paper aims to introduce hazardous sludge utilization and its innovation with green mussel shells as paving block mixture components. The hazardous sludge is a side product of wastewater treatment plant operated in NGCC Priok, while green mussel shells are side product of community activity in Kalibaru, North Jakarta. Utilization dedicated to preserve the environment, reducing both hazardous sludge generations from wastewater treatment plant and potential waste from social activities in coastal area. It is also underlining the community empowerment perspective as part of modern industrial paradigm (people-planet-profit). Several laboratories analysis has been conducted, such as XRF, TCLP, LD50, structure and material testing. The best composition has been studied, resulting "Sampel_18" with mortar compressive strength of 14 days is 12.85 MPa. In comparison with the national standard, it is possible to apply Paving Block in Type C for pedestrians and non-heavy vehicles activity such as bicycle, etc.

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