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METHODOLOGY DEVELOPMENT OF RESISTIVITY MEASUREMENT FOR LANDFILL MINING



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My Master studies were performed during 2017-2019 and aimed at assessing the feasibility of resistivity measurement in the situation of landfill mining. This included investigating resistivity procedures to evaluate waste properties before landfill mining and assessing the relationship between resistivity and waste composition, moisture content and heating values.



The study-site of these investigations is the Phatthalung landfill.



In this research work, the configuration and spacing setting for the experiments were based on the Schlumberger configuration.

Following the completion of the resistivity measurements, 44 representative waste samples were excavated and analysed in terms of waste composition, moisture content and low heating value.



The results showed that the amount of plastic bag to be processed as RDF displayed a strong correlation ($R = 0.68$) with resistivity whereas a moderate correlation was observed with soil moisture content ($R = -0.43$).



As a part of this research, I had an opportunity to visit Japan to participate to the 10th Asia-Pacific Landfill Symposium Tokyo 2018 (APLAS Tokyo 2018) and deliver a presentation on the topic “Application of Resistivity Measurement for Assessing the Plastic Material in Landfill”. Also, the results of this research work were published in three international conference proceedings.