

The effect of sawdust as self-curing Agent in concrete

ABSTRACT

Concrete is known as the most used material for the construction industry. It is crucial to understand the properties of concrete especially on curing interaction and process. At the water shortage areas, the production of concrete is limited as approximately 230 liters of water is needed for 1 m³ of concrete. The insufficient of water resources has inhibited the building construction and development. Nowadays, researchers have studied and developed curing technology by implementing curing agents into concrete mixes. In this paper, the potential and properties of pre-wetted sawdust as curing agent is investigated and studied. Different curing regimes are implemented and tested to determine the properties of sawdust as curing agent. The results showed that the sawdust has potential to be used for curing agent as the concrete properties have been enhanced with strength index ratios ranging between 0.87 until 0.98. Moreover, the compressive strength and tensile properties were also developed with range ratios between 0.69 up until 0.98, respectively. Hence, the application of pre-wetted sawdust inside concrete is effective for concrete production and highly recommended to be implemented at the water shortage areas