

Pengaruh Penambahan Abu Sekam Padi terhadap Kuat Tekan, Bagian Tak Larut dan LOI Mortar Semen PCC serta pH, TDS dan Kesadahan Total Larutan Perendaman Air Laut

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Penelitian tentang pengaruh penambahan abu sekam padi terhadap kuat tekan, bagian tak larut dan LOI mortar semen PCC serta pH, TDS, kesadahan total larutan perendaman air laut telah dilakukan. Penambahan abu sekam padi 2, 4 dan 6% selain pemanfaatan limbah juga diharapkan dapat mengurangi pemakaian klinker. Penelitian ini dilakukan dengan menguji kuat tekan mortar yang direndam dalam air laut dan akuades selama 3, 7 dan 28 hari. Dari penelitian diperoleh kuat tekan mortar dengan penambahan abu sekam padi 2% dengan perendaman air laut sebesar 282 kg/cm² dan akuades sebesar 307 kg/cm². Kuat tekan ini masih memenuhi SNI sedangkan penambahan abu sekam padi 4 dan 6% tidak memenuhi SNI. Pengujian BTL dan LOI pada semen dengan penambahan abu sekam padi mengalami kenaikan begitu juga dengan pH larutan perendaman sedangkan pada variasi hari perendaman nilai pengujian TDS dan kesadahan total larutan perendaman air laut mengalami penurunan.

Kata kunci : Semen PCC, abu sekam padi, kuat tekan, air laut

Abstract

Effect of Rice Husk Ash of Insoluble Residu, LOI, pH, TDS, Total Hardness and Compressive Strength of Cement Mortar PCC with Sea Water Immersion

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It had been studied is effect rice husk ash to insoluble residu, LOI, PCC compressive strength of cement mortar and pH, TDS, total hardness of sea water immersion has been done. PCC is a mixture of clinker, gypsum, limestone and pozzolan. The addition of rice husk ash in addition to the utilization of waste is also expected to reduce the use clinker so that production rates could be smaller. Research was conducted to test the compressive strength of mortar is a mixture of cement, water and sand at a certain ratio. Mortar immersed in aquadest and sea water for 3, 7 and 28 days. From the research mortar compressive strength with the addition of rice husk ash 0, 2, 4 and 6% with sea water immersion decrease when compared with aquadest immersion. Insoluble residu and LOI in the cement has increase. On testing the pH, TDS and total hardness immersion solution also increase the variety of rice husk ash but with variation of immersion day decrease of TDS and total hardness.

Keywords: PCC, rice husk ash, compressive strength, sea water

