

ABSTRAK

Self Compacting Concrete (SCC) adalah beton mutu tinggi yang dapat memadat sendiri. Di Indonesia, SCC sedang marak dikembangkan dan diharapkan bisa memanfaatkan bahan material dari keberagaman geografis di Indonesia yang memiliki kuat tekan awal tinggi dan berkelanjutan dengan mempertimbangkan aspek lingkungan, sosial, dan ekonomi. Dengan masalah tersebut penelitian ini bertujuan untuk memanfaatkan bahan material abu sekam padi sebesar 5%, 10%, dan 20% sebagai filler agregat halus dalam beton SCC, yang dinilai dari kuat tekan, *flowability*, dan *workability* dari beton SCC tersebut. Dengan bahan additive superplasticizer BASF Masterease 3500 untuk f_c' SCC 28 hari 54 Mpa, kuat tekan maksimal berada pada campuran abu sekam padi 10%, yaitu sebesar 49,6215 Mpa. Sedangkan, dalam pengujian uji *slump flow*, campuran abu sekam padi 5% memiliki nilai *slump flow* tertinggi yaitu, 720,50 mm. Beton SCC dengan filler abu sekam sebesar 5% sebagai agregat halus mampu meningkatkan *workability* beton SCC.

Kata Kunci : *Self Compacting Concrete* (SCC), kuat tekan, workabilitas

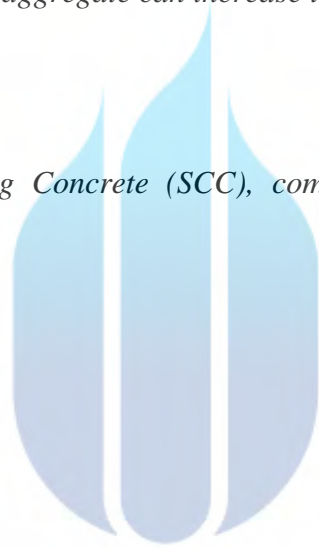


UNIVERSITAS
MERCU BUANA

ABSTRACT

Self Compacting Concrete (SCC) is a high strength concrete that can compact itself. In Indonesia, SCC is being developed and is expected to be able to utilize materials from geographical diversity in Indonesia which have high initial compressive strength and are sustainable by considering environmental, social and economic aspects. With this problem, this study aims to utilize 5%, 10%, and 20% rice husk ash as a filler for fine aggregate in SCC concrete, which is assessed from the compressive strength, flowability, and workability of the SCC concrete. With BASF Masterease 3500 superplasticizer additive for f_c' SCC 28 days 54 Mpa, the maximum compressive strength is at a mixture of 10% rice husk ash, which is 49.6215 Mpa. Meanwhile, in the slump flow test, the 5% rice husk ash mixture had the highest slump flow value, 720.50 mm. SCC concrete with husk ash filler of 5% as fine aggregate can increase the workability of SCC concrete.

Keywords: *Self Compacting Concrete (SCC), compressive strength, environmental, workability*



UNIVERSITAS
MERCU BUANA