

# International Journal on Advanced Science, Engineering and Information Technology



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## #3967 Summary

SUMMARY REVIEW EDITING

### Submission

Authors	Hanafiah Hanafiah, Saloma Hasyim, Devin Yuwenka, M Emirzan Firdaus
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### Submission Metadata

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### Title and Abstract

**Title** The Effect of Water-Cement Ratio on Sulfate Resistance of Self-Compacting Concrete with Bagasse Ash

**Abstract** Previous study showed so many factors will contribute to the durability of concrete, such as cement content, water cement ratio, admixtures to be used, compaction dan curing methods. Two types of admixtures for concrete mixture can be used, e.g. chemical admixture and mineral admixture. Materials can be categorized as mineral admixture such as fly ash, silica fume, risk husk ash, and bagasse ash. Sulfate resistance of concrete is one of the examples of chemical durability of concrete. Self-Compacting Concrete (SCC) known as concrete which can flow within its self-weight and without forming honeycombing, segregation and bleeding, even with no compaction. In this experimental work, bagasse ash was used in concrete mixture as partial replacement of cement with the percentage of 10%, 15% and 20%. The variation of w/b were used e.g 0.275, 0.300 and 0.325. For the purpose to stipulate the sulfate attack on concrete, the cylinder specimen with size of 100 x 200 mm and magnesium sulfate solution with 5% and 7% molarity were used. To observe the percentage of concrete weight loss, all the specimen were immersed in this solution within 28 days. The result showed that the value of compressive strength for the specimen with w/b = 0.275 and 15% bagasse ash was up to 67.240 MPa for 28 days and 68.096 MPa for 56 days without immersion in magnesium sulfate solution. The highest percentage of concrete weight loss is 3.030% yielded from the specimen with w/b = 0.325 and 0% bagasse ash which was immersed in 7% molarity of magnesium sulfate solution.

## Indexing

**Keywords** self compacting concrete; magnesium sulfate; bagasse ash

**Language** en

## Supporting Agencies

**Agencies** —

## References

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## #3967 Review


SUMMARY **REVIEW** EDITING

### Submission

Authors Hanafiah Hanafiah, Saloma Hasyim, Devin Yuwenka, M Emirzan Firdaus 

Title The Effect of Water-Cement Ratio on Sulfate Resistance of Self-Compacting Concrete with Bagasse Ash

Section Articles

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### PeerReview

#### Round 1

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AM

ICONBUILD 2017:

We have reached a decision regarding your submission to International Journal on Advanced Science, Engineering and Information Technology, "The Effect of Water Cement Ratio on Sulfate Resistance of Self-Compacting Concrete with Bagasse Ash".

Our decision is to: Revision Required

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