BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Penelitian mengenai Pengaruh Variasi Komposisi *Superplasticizer* dan Serat Rumput Payung (*Cyperus Alternifolius*) Terhadap *Flowability* Beton Cetak 3 Dimensi (3DPC), menghasilkan kesimpulan sebagai berikut:

1. Penambahan *superplasticizer* terbukti meningkatkan nilai *flowability* 3DPC karena mekanisme kerja dari *superplaticizer* yang mencegah penyatuan antar partikel dalam beton. Semakin tinggi persentase *superplasticizer*, nilai *flowability* meningkat.
2. Penambahan serat rumput payung (*Cyperus alternifolius*) menunjukan pengaruh terhadap nilai *flowability* 3DPC karena serat menyerap air dalam beton sehingga kadar air bebas menurun. Semakin tinggi persentase serat, maka nilai *flowablity* beton cenderung menurun.

5.2 Saran

Saran untuk penelitian selanjutnya adalah:

1. Diperlukan peningkatan alat uji *extrude* sehingga beban yang digunakann mendekati penggunaan di lapangan.
2. Diperlukan pengujian terhadap *extrudability* dan *buildability* dari beton agar memenuhi persyaratan material beton untuk 3D *printing*.

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