6 CHAPTER VI

CONCLUSION AND SUGGESTION

6.1 <u>Conclusion</u>

The suitable numerical method to predicting the behaviour of *Candi Prambanan* based on the literature review conducted by author is based on Discrete Element, to be more specific is the Discontinuous Deformation Analysis (DDA). Since *Candi Prambanan* as a masonry structure shows highly non-linear behaviour, DDA is the suitable method to fully capture the behaviour of *Candi Prambanan* under earthquake load. DDA shows advantages that cannot be overcome by another method such Finite Element Method (FEM) and DEM (Distinct Element Method).

Joint as the weakest part of the masonry structure is the paramount factor that induce the failure of the masonry structure. Two major joint properties that govern the shear and normal strength of the masonry are joint cohesion and joint friction angle. Hence, the failure criterion of the joint follows the Mohr-Coulomb failure criterion.

6.2 <u>Suggestion</u>

Further research towards the application of DDA for analysing the masonry structure under earthquake need to be conducted. Numerical test using DDA also need to be conducted to validate the result of this literature study. Moreover, detailed geometry of *Candi Prambanan* is needed to truly describe the behaviour of *Candi Prambanan* under earthquake load. Further investigation regarding to the movement of the Yogyakarta Earthquake 2006 need to be conducted to validate the capability of DDA in analysing the *Candi Prambanan* under earthquake load.

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