

## **BAB 5**

### **KESIMPULAN DAN SARAN**

#### **5.1 Kesimpulan**

- Parameter dari pemodelan Mohr Coulomb tidak dapat dipakai untuk memodelkan Hardening-Soil
- Dari hasil analisis menggunakan metode elemen hingga pada *O-Cell* Hardening-Soil didapatkan kecenderungan displacement pada *Cell Top* terlalu kecil dan *Cell Bottom* terlalu besar jika dibandingkan dengan hasil lapangan dan hasil model *Mohr-Coulomb*
- Daya dukung ultimit dari pengujian O-Cell lebih rendah dibandingkan dengan Kentledge baik untuk model Moh-Coulomb maupun Hardening-Soil.
- Daya dukung ultimit yang dihasilkan dari model Hardening Soil lebih rendah dibandingkan model Mohr Coulomb.

#### **5.2 Saran**

Perlu dilakukan sejumlah pengujian tanah seperti uji triaxial, *pressuremeter*, *direct shear*, dan uji lainnya untuk memperoleh nilai parameter tanah yang dapat digunakan dalam pemodelan *Hardening-Soil*, sehingga mengurangi kekeliruan.

## DAFTAR PUSTAKA

- Baca, M., Rybak, J. (2015). *Osterberg test as an alternative pile testing method*
- Brinkgreve, R.B.J. (2002). *PLAXIS. Netherlands : A.A. Balkema Publishers*
- Crowther, Carroll L. (1988). *Excavations in Plaxis, Power Point Presentation File, Delf, the Netherlands. Load Testing of Deep Foundations. United States :*
- England, Melvin. (2010). *Static Load Testing, O-Cell Bi-Directional Testing, State of The Art, Power Point Presentation File, Fugro, Loadtest.*
- Fellenius, B.H. (2001). *The O-Cell – An Innovative Engineering Tool. Geotechnical News Magazine, Vol 19, No. 2 pp 32-33.*
- Hannigan, P.J., Goble, G.G., Thendean, G., Likins, G.E., and Rausche, F. (1998). *Design and Construction of Driven Pile Foundations, Workshop Manual-Volumes I and II, US Department of Transportation, Federal Highway Administration, Publication No. FHWA-HI-97-013/014.*
- Hertlein, Bernard and Allen Davis. (2006). *Nondestructive Testing of Deep Foundations. England : John Wiley & Sons Ltd.*
- Huat, Bujang B.K., Shukri Maail, and Azlan A.Aziz. *Piles and Non Destructive Test. Malaysia : University Putra Malaysia, John Wiley & Sons, Inc.*
- Lim, A., Ou, C.Y. (2017). *Stress paths in deep excavations under undrained conditions and its influence on deformation analysis. Tunnelling and Underground Space Technology, Vol 63, pp 118-132.*
- Linmas, V.V., Rahardjo, P.P (2015) *Comperative Study Of Large Diameter Bored Pile Under Conventional Static Load Test And Bi-Directional Load Test, Malaysian Journal of Civil Engineering Vol 27, No. 1 pp 1-18*
- Osterberg, J.O. (1998). *The Osterberg Load Test Method For Bored and Driven Piles the First Ten Years, Proceedings : 7<sup>th</sup> International Conference and Exhibition on Piling and Deep Foundations. Vienna : Westrade Group Ltd.*
- Prakash, Shamsher, Hari. D.S. (1990). *Pile Foundations in Engineering Practice.*
- Rahardjo, Paulus P. (2012). *Pile Dynamics 2012. Bandung : Parahyangan Catholic University.*
- Rahardjo, Paulus P. (2013). *Manual Pondasi Tiang 4<sup>th</sup> ed. Bandung : Parahyangan Catholic University.*
- Rahardjo, Paulus P., Aris Handoko, and Stefani Wiguna. (2013). *Bi-directional Static Load Test Results and Finite Element Modeling of The Behaviour of*

*Large Bored Pile in Loose to Medium Alluvial Sand*, Proceedings : *PILE* 2013.  
Bandung : Parahyangan Catholic University.

Reese, L.C., O'Neill, M.W., *Drill Shaft : Construction Procedures and Design Methods* Publication No. FHWA-HI-88-042, Federal Highway Administration.

Russo, G. (2012). *Experimental Investigations and Analysis on Different Pile Load Testing Procedures*. Italy : University of Napoli Federico II

Schmertmann, John H. and John A. Hayes. (1997). *The Osterberg Cell and Bored Pile Testing, Proceedings: 3<sup>rd</sup> International Geotechnical Engineering Conference*. Egypt : Cairo University.