

Soil Classification Based on Cone Penetration Test (CPT) Data in Western Central Java

Publons ID	(not set)
Wos ID	WOS:000433116500004
Doi	10.1063/1.5028062
Title	Soil Classification Based on Cone Penetration Test (CPT) Data in Western Central Java
First Author	
Last Author	
Authors	Apriyono, A; Yanto; Santoso, PB; Sumiyanto;
Publish Date	2018
Journal Name	ENGINEERING INTERNATIONAL CONFERENCE (EIC2017)
Citation	2
Abstract	<p>This study presents a modified friction ratio range for soil classification i.e. gravel, sand, silt & clay and peat, using CPT data in Western Central Java. The CPT data was obtained solely from Soil Mechanic Laboratory of Jenderal Soedirman University that covers more than 300 sites within the study area. About 197 data were produced from data filtering process. IDW method was employed to interpolated friction ratio values in a regular grid point for soil classification map generation. Soil classification map was generated and presented using QGIS software. In addition, soil classification map with respect to modified friction ratio range was validated using 10% of total measurements. The result shows that silt and clay dominate soil type in the study area, which is in agreement with two popular methods namely Begemann and Vos. However, the modified friction ratio range produces 85% similarity with laboratory measurements whereby Begemann and Vos method yields 70% similarity. In addition, modified friction ratio range can effectively distinguish fine and coarse grains, thus useful for soil classification and subsequently for landslide analysis. Therefore, modified friction ratio range proposed in this study can be used to identify soil type for mountainous tropical region.</p>
Publish Type	Book in series
Publish Year	2018
Page Begin	(not set)
Page End	(not set)
Issn	0094-243X
Eissn	
Url	https://www.webofscience.com/wos/woscc/full-record/WOS:000433116500004
Author	Dr.Eng ARWAN APRIYONO, S.T, M.Eng