

Properties of Norwegian clays, Canadian clays and offshore clays

Xue Zhang

Created on 01/07/2018

**Cur represents the residual undrained shear strength and St denotes the sensitivity.*

Refer to “Xue Zhang, Scott W. Sloan, Eugenio Onate. Dynamic modelling of retrogressive landslides with emphasis on the role of clay sensitivity. *International Journal for Numerical and Analytical Methods in Geomechanics*. **2018**, DOI: 10.1002/nag.2815.” for more information.

Norwegian Clay	Cur (kPa)	0.12	St	120
		0.35		50
		0.24		63
		0.15		110
		0.5		30
		0.24		100
		0.53		35
		0.25		100
		0.35		100
		0.83		48
		0.2		85
		4		8
		2.5		4
		17		3
		0.2		130
		0.7		100
		0.35		42
		0.2		300
Canadian Clay		0.063639		420.9194
		0.142873		423.6376
		0.061358		344.5188
		0.155404		269.2737
		0.202312		201.6834

		0.300792		195.7788
		0.142272		179.2157
		0.199112		150.9721
		0.261912		121.0662
		0.409645		117.7441
		0.300397		111.2254
		0.595842		102.3429
		0.360653		92.41304
		0.381034		71.81247
		0.347477		57.70992
		0.500428		62.91997
		0.60049		50.65233
		0.529725		43.7859
		0.498836		40.54967
		0.410125		37.18805
		0.696667		38.97031
		0.695331		36.23073
		0.600202		33.49039
		0.80189		32.31286
		0.920125		33.93763
		1.029381		36.35382
		0.468905		23.49649
		0.799143		25.06126
		0.898145		27.81505
		0.599717		16.73955
		0.715349		16.73637
		0.895304		18.86799
		1.016102		19.62238
		1.14722		21.64906
		1.199814		19.23378
		1.147105		18.3471
		1.050616		15.24784
		0.7975		15.01564
		0.816754		14.63549
		1.09679		13.62716
		1.097978		11.87166
		0.952757		11.21507
		1.495653		31.09023
		1.396512		22.95778
		1.491595		23.22714
		1.495192		16.06915
		1.794743		21.20417
		2.000269		19.98049
		1.794296		11.17754

		1.995966		10.51183
		2.294337		16.11144
		2.797692		10.70688
Japan (Offshore)		0.5		15
		0.5		77
Amherst (Offshore)		4		8.5
		3.5		9.428571
Burswood (Offshore)		4.5		4
		7.5		3.066667
Canada (Offshore)		0.6		33.33333
		0.5		68
Onsoy (Offshore)		2		7.5
		6		4.666667

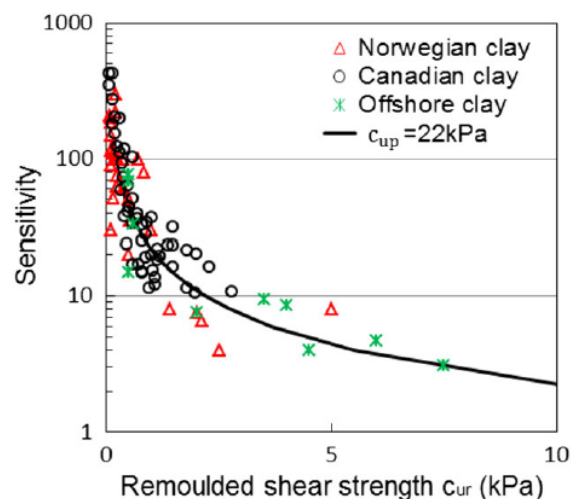


Figure. The correlation between the sensitivity and remoulded shear strength based on available data[1-4]. The solid line represents clays with peak shear strength of 22 kPa.

1. Thakur V, Degago SA. Disintegration energy of sensitive clays. *Géotechnique Letters*. 2013;3(1):20-25.
2. Mitchell RJ, Markell AR. Flowsliding in sensitive soils. *Can Geotech J*. 1974;11(1):11-31.
3. He P, Ohtsubo M, Higashi T, Kanayama M. Sensitivity of salt-leached clay sediments in the Ariake Bay Area, Japan. *Mar Georesour Geotechnol*. 2015;33(5):429-436.

4. Yafrate N, DeJong J, DeGroot D, Randolph M. Evaluation of remolded shear strength and sensitivity of soft clay using full-flow penetrometers. *J Geotech Geoenviron Eng.* 2009;135(9):1179-1189.