

Table-3.1 The Results of Soil Test

Investigation name : Laboratory soil test of the samples off North Izu-Ogasawara

Test Date : Oct of 2009

Technician : NUMAKURA Keiichi

Core No. & Sec. No. (Depth)		KY09-04 PC01 (1.5~1.8m)	KY09-04 PC01 (2.5~2.8m)	KT09-04 PC01 (3.5~3.8m)			
General	moist density $P_t$ g/cm <sup>3</sup>	1.615	1.654	1.584			
	dry density $P_d$ g/cm <sup>3</sup>	1.027	1.055	0.982			
	soil density $P_s$ g/cm <sup>3</sup>	2.670	2.674	2.638			
	natural water content $W_n$ %	57.3	57.0	61.3			
	void ratio $e$	1.601	1.541	1.686			
	degree of saturation $S_r$ %	95.5	99.1	95.9			
Particle-size	rock material (75mm<) %						
	gravel material <sup>1)</sup> (2~75mm) %	0	0	0			
	sand material <sup>1)</sup> (0.075~2mm) %	11	9	8			
	silt material <sup>1)</sup> (0.005~0.075mm) %	65	69	63			
	clay material <sup>1)</sup> (<0.005mm) %	24	22	29			
	maximum particle size mm	9.50	4.75	2.00			
	uniformity coefficient $U_c$	18.2	18.8	12.5			
	coefficient of curvature $U_c'$	1.15	1.50	1.02			
	50% particle size $D_{50}$ mm	0.0190	0.0240	0.0115			
	20% particle size $D_{20}$ mm	0.00394	0.00416	0.00295			
Consistency characteristics	liquid limit $W_L$ %	51.2	55.8	53.7			
	plastic Limit $W_p$ %	30.6	33.3	37.0			
	plasticity Index $I_p$	20.6	22.5	16.7			
	consistency index $I_c$	-0.326	-0.114	-0.245			
Classification	classification name of earth material	silt with sand (high liquid limit)	silt with sand (high liquid limit)	silt with sand (high liquid limit)			
	classification symbol	( MH-S )	( MH-S )	( MH-S )			
Unconfined compression test	unconfined compression strength $q_u$ kN/m <sup>2</sup>	54.4	79.6				
	unconfined compression strength $q_u$ kN/m <sup>2</sup>	70.4	55.1				
	module of deformation $E_{50}$ MN/m <sup>2</sup>	0.71	1.31				
	module of deformation $E_{50}$ MN/m <sup>2</sup>	0.88	0.81				
Triaxial compression test	test condition			UU			
	total stress (normally consolidated region)	$C$ kN/m <sup>2</sup>		16.0			
		$\phi$ °		0.0			
	total stress (over consolidated region)	$C$ kN/m <sup>2</sup>					
		$\phi$ °					

Special note

1) It shows the percentage of the soil material which is less than 75mm diameter and which eliminate the rock material.

[ 1kN/m<sup>2</sup>  $\approx$  0.0102kgf/cm<sup>2</sup> ]