Lateral Drain Method

The Lateral Drain Method aims to improve ground consolidation by exerting negative pressure at the ends of plastic board drains buried in ultra-soft ground to forcibly drain abundant moisture on the ground. The drain is buried horizontally in multiple stages using a special drain laying pontoon.

Features

- ★ An increased amount of soil can be accomodated as the volume of dredged material decrease
- ★ Reduce the tensile strengths of net and sheet in the earth covering work when used in the surface of ultra-soft ground compared with the conventional method.
- ★ Reduce the moisture content of dredged material to a lower level than the liquid limit and becoming easier to handle during transporting by dump truck.

Working Procedure

Preparation Work

- Installation of winch and reactive heavy-duty machine
- Setting and installation of pontoon for drain laying
- Fitting of pontoon with winch

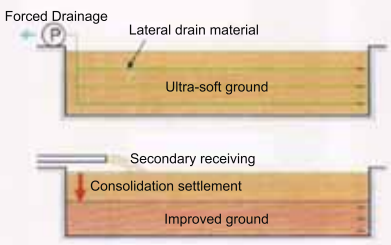
Burrying Work

- Loading of drain material onto pontoon
- Fitting of suction hose
- Driving of mandrel
- Burrying of Drain
- Cutting and capping of drain
- Drawing of mandrel
- Demobilization of machine and pontoon
- Drain laying completed

Drainage Work

- Fitting of header pipe
- Loading of negative pressure
- Drainage
- Work completed

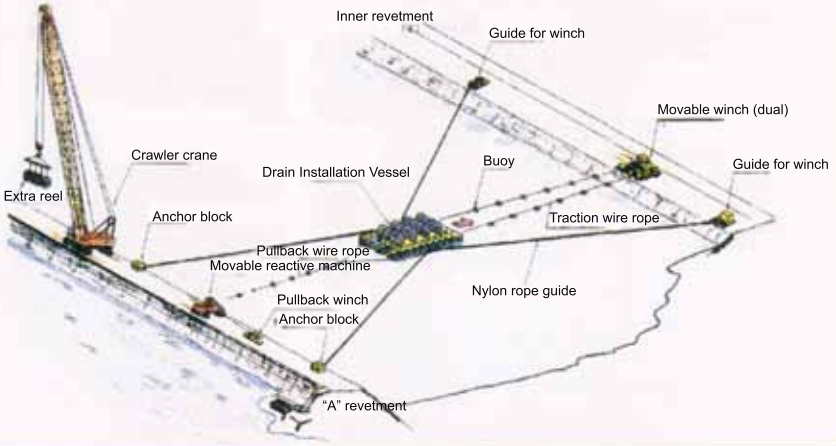
Equipment to be Used



Increase of earth amount to be received

Pontoon for drain laying
(4-stage 4-raw simultaneous laying type)

Whole System (drain being laid)



Completed Projects Record

Project Name	Duration	Project Site	Client	Objective	Soil to be Handled	Improvement Area / Thickness of Layer	Particulars of Drain Material
Tokuyama Soda K.K. Soil Improvement Work	88.12~89.7	Yamaguchi	Tokuyama Soda K.K.	To increase shear strength (Bearing Capacity)	Soda Ash	40,000m²/4.5m	Sectional configuration: 100 m(w)x 3, 6, 12 mm(t) / Arrangement: Pitch 1.5 m x 3 stages / Maximum length of laying: 200 m
Magaribuchi Dam Sediment Dredge Work	90.3~90.7	Fukuoka	Fukuoka City	To increase shear strength (Handling)	Organic Clay	25,000m²/2.8m	Sectional configuration: 150 m(w)x 6 mm(t) Arrangement: Pitch 0.7 m x 4 stages Maximum length of laying: 125 m
Ashida River Bed Excavation Work	92.12~94.7	Hiroshima	Hiroshima Prefecture	To increase shear strength	Organic Clay	7,000m²/4.0m	Sectional configuration: 100 m(w)x 6 mm(t) Arrangement: Pitch 0.7 m x 3, 4, 5 stages Maximum length of laying: 50 m
Itsukaichi Area Waterfront Land Preparation Work	95.10~96.10	Hiroshima	Hiroshima Prefecture	Reduction of capacity	Marine Clay	186,000m²/2.4~4.8m	Sectional configuration: 100 m(w)x 10 mm(t) Arrangement: Pitch 1.2 m x 4 stages Maximum length of laying: 250 m