Pipe Mixing Method

The Pipe Mixing Method adds solidifier slurry directly to cohesive soil by pipe pumping and kneads the cohesive soil and solidifies with the effect of pumping energy. The target strength of improved soil reaches to about $qu=100 \text{ kN/m}^2$.

**Features**

- ★ Direct mixture of solidifier slurry into a clay plug raises the efficiency of kneading.
- ★ Dredged material can be recycled for good use.
- ★ An existing pneumatic pumping pontoon can be used.
- ★ Mass disposal of dredged material is possible and ground improvement after reclamation not required.

**Working Procedure**

1. Lifting of Cohesive Soil
2. Pneumatic Pumping
3. Detection of Clay Plug
4. Addition of Solidifier
5. Kneading in Pipe
6. Driving in

**Equipment to be Used**

![Pumping System Diagram]

- Compressed Air
- Clay Plug
- Vibration Boxer
- Feeding Pump
- Personal Computer
- Slurry Adding Station
- Energy Gas Tank
- Reclamation, etc.

**Completed Projects Record**

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<tr>
<th>Project Name</th>
<th>Duration</th>
<th>Project Site</th>
<th>Client</th>
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<th>Treatment Capacity / Volume of Treated Soil</th>
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<tr>
<td>Execution Test of Soft Soil Solidification Method</td>
<td>98.8~98.10</td>
<td>Aichi</td>
<td>Transport Ministry</td>
<td>To acquire knowledge of treated soil characteristics</td>
<td>$300 \text{m}^3/\text{h} \div 5,000 \text{m}^3$</td>
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<tr>
<td>Chuboku Electric Power Co. Onoda Power Plant Dredging Work for Anchorage in front of Coal Unloading Pier</td>
<td>99.7~</td>
<td>Yamaguchi</td>
<td>Chuboku Electric Power Company</td>
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<td>$200 \text{m}^3/\text{h} \div 10,000 \text{m}^3$</td>
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<td>Nagoya Port Third Port Island, Turbidity Preventive Work (Phase 3)</td>
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<td>$1,000 \text{m}^3/\text{h} \div 87,590 \text{m}^3$</td>
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