Sand Drain Method

The Sand Drain Method aims to accelerate consolidation settlement of the ground and strengthen its stability by perpendicular sand drains and surcharge fill. This method uses a special machine capable of driving 1 to 12 drains simultaneously.

Features

★ Sand to be used has a coefficient of permeability about $10^{-2}$ cm/sec. Ensures improvement of ground consolidation with sand mat

★ Soil to a depth of -60m in the sea can be improved using special sand drain driving pontoon

★ Usable for soil improvement on both land and sea as lots of projects have been completed

Working procedure

- Positioning
- Driving of casing
  - Vibrator is used
- Pouring of sand through the hopper at top part of the casing
- Drawing of Casing
  - Sand is discharged from casing by means of compressed air
- Repeat the cycle for the next location

Equipment to be Used

Sand Drain Driving Pontoon

Sand Drain Driver (Crawler Crane Type)

Completed Projects Record

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Duration</th>
<th>Project site</th>
<th>Client</th>
<th>Objective</th>
<th>Drain Length / Depth / Soil Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kumamoto Port Wharf site preparation</td>
<td>89.9~99.3</td>
<td>Kumamoto Pref.</td>
<td>Kumamoto Pref.</td>
<td>Consolidation acceleration and increase ground strength</td>
<td>127,700m / 35.0m / 26,110m³</td>
</tr>
<tr>
<td>Tokyo Airport ground improvement work</td>
<td>92.4~94.10</td>
<td>Tokyo</td>
<td>Transport Ministry</td>
<td>Consolidation acceleration and increase ground strength</td>
<td>509,000m / 28.0m / 7,600,000m³</td>
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<tr>
<td>Ujina inner port construction work</td>
<td>93.7~94.3</td>
<td>Hiroshima City</td>
<td>Hiroshima Pref.</td>
<td>Consolidation acceleration and increase ground strength</td>
<td>161,000m / 25.0m / 1,066,000m³</td>
</tr>
<tr>
<td>Ishinomaki Port Reclaimed Area &quot;A&quot; ground improvement work</td>
<td>96.7~97.3</td>
<td>Miyagi Pref.</td>
<td>Miyagi Pref.</td>
<td>Consolidation acceleration and increase ground strength</td>
<td>165,000m / 30.0m / 982,000m³</td>
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</tbody>
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