Deep Mixing (CDM) Method

The Deep Mixing Method uses cement-base solidifier slurry to be stirred and mixed with soft soil by a treatment mixing equipment to improve the strength of soft ground to a specified level in its natural position. The strength of treated soil is increased by hydration reaction of cement-base solidifier and water and by pozzolanic reaction of calcium hydroxide produced by hydration reaction and cohesive soil.

★ Avoid sea water turbidity since soft ground is solidified in its natural position
★ Perform with low noise, vibration and hardly affecting the neighboring existing structures
★ Powerful excavation stirring facilitates penetration into relatively hard stratum.

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### Working Procedure

1. Positioning
2. Treatment machine penetration
3. Advancing End Treatment
4. Drawing treatment machine
5. Repeat the cycle for the next location

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### Equipment to be Used

- Working Vessel at Sea
- Advancing End of Treatment Machine (Working Vessel)
- Work in Progress (on Land)

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### Completed Projects Record

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Duration</th>
<th>Project Site</th>
<th>Client</th>
<th>Objective</th>
<th>Improvement Length</th>
<th>Soil Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo Airport Joint Temporary Works</td>
<td>89.6~90.3</td>
<td>Tokyo</td>
<td>Transport Ministry</td>
<td>To increase strength of foundation ground</td>
<td>44.0m</td>
<td>66,100m³</td>
</tr>
<tr>
<td>Aomori Multi-Service Tunnel Construction Work</td>
<td>91.11~93.10</td>
<td>Tokyo</td>
<td>Rinkai Fukushin Kensetu K.K</td>
<td>To increase strength of multi-service tunnel</td>
<td>16.0m</td>
<td>53,900m³</td>
</tr>
<tr>
<td>RI Quaywall Remedial Work</td>
<td>95.8~96.10</td>
<td>Kobe</td>
<td>Transport Ministry</td>
<td>To increase strength of quaywall foundation ground</td>
<td>11.8m</td>
<td>625,200m³</td>
</tr>
<tr>
<td>Ground Improvement Work for New Sea Area Landfill Site</td>
<td>96.3~96.5</td>
<td>Tokyo</td>
<td>Tokyo City</td>
<td>To increase strength of revetment foundation ground</td>
<td>45.0m</td>
<td>493,300m³</td>
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</tbody>
</table>