## Development of new WILL method

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Large-scale disasters such as heavy rains and huge earthquakes continue to increase. Therefore, countermeasures to stabilize large embankments are required. As a stabilization countermeasure, ground improvement methods such as the middle mixing method are increasing. However, when targeting long embankments and large valley fills, as the scale of construction increases, the construction speed must also increase. Against such a background, we have developed a new WILL method with improved stirring performance by adding a high-pressure discharge function to the conventional WILL method. As a result of verification by test operation and a large-scale field test, it was confirmed that the construction speed of the improved type has increased by about 40% compared to the conventional type, and the quality of the soil improvement by the improved type is equal or superior to that of the conventional type.