7. Development of the CSG Mixing Plant

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Recently, we have large expectation for the CSG method under the social background, such as the reduction of public works expenditure and the protection and preservation of natural environment. The CSG method(Cemented Sand and Gravel Method) is the construction method using CSG materials, which consist of field generation material river bed grits and excavation rock, cement, water, and these materials are mixed by simple mixing plant.

The CSG mixing system has been developed, which mixes by gravity and motor-driven paddles. Mixing performance test was carried out, and we obtained these results. We confirmed that the CSG using wide grain size field generation material, which has excellent performance, became to have good manufacturability. Effective mixing performance was obtained by change of paddle rotational frequency, inclination and mixed quantity of mixing plant. In addition, the CSG method was applied to the upstream temporary cofferdam bank. As the result, stabilized manufacturing of CSG and excellent quality of density and strength was confirmed.

Key words : CSG, mixing plant, field generation material, mixing performance, CSG compressive strength