

SLOPE PROTECTION JATIGEDE DAM PROJECT SUMEDANG, WEST JAVA, INDONESIA

Reinforced Soil Walls and Slope Reinforcement

Problem

Jatigede Dam, a mega project originated by the partnership between the Indonesian and Chinese governments in order to comply with the power supply requirement of 110 MW and the irrigation of 90.000 Ha of agricultural soil. The lithology around the area of Jatigede Dam consist of residual soil, clay stone and volcanic breccia localized on the base layer at various depths between 10 to 20 m. The problem to be prevented and mitigated was the Landslide Hazard induced by the loss of friction between the soil and stone layers, happening during the rise of ground water level. This issue had to be tackled with appropriate measure as it had the potential to undermine slope stability and therefore compromise the performance of Dam's operation.

Solution

The problem was solved with the implementation of a combo between Maccaferri Terramesh® System and bore piles. The bore pile structure purpose is to oppose the sliding and sinking forces and Terramesh® System to protect and stabilize the slope. The Terramesh® System is widely used in Indonesia and it is in fact the most detailed and complete reinforced soil system present on the market, with the possibility of using either just the double twist wire mesh reinforcement or combining it with facing elements of high-strength polyester Geogrids (Macgrid WG). The Terramesh® facing, consisting in a gabion structure, has permeable characteristic that allow excess water to drain out preventing erosion processes, this is achieved with the implementation of Mactex Non-woven geotextile placed behind the gabion, that act as a filter/separator keeping fill material made of smaller particles within the structure.

Client: MINISTRY OF PUBLIC WORKS

Designer / Consultant: INDRA KARYA KSO METTANA

Contractor: PT. WASKITA KARYA & WIJAYA KARYA

Products used (Qty.)

- Terramesh

N/A

Date of construction: 11/2012 - 04/2013



During Construction



Finished Structure



Finished Structure