DESIGN OF GROGOL EMBANKMENT DAM KEDIRI DISTRICT
EAST JAVA

Student’s Name : 1. Reza Febrivia Luciana
                 3108 030 008
                 2. Riyan Benny Sukmara
                 3108 030 161

Faculty : Civil Engineering and Planing Faculty of ITS
Counsellor Lecture : Ir. Ismail Sa’ud

Abstract
In the dry season, mostly in rural areas often experience drought Tarokan. Rivers in the rainy season there are a lot of water during the dry season to be reduced and the water in the Magersari village Kediri district had difficulty getting clean water, especially for basic water requirements.

Embankment dam capacity planning is based on rainfall data. To get the data flow of water into the ponds, the rainfall data is converted into water discharge data. Spillway planning based on analysis of flood discharge unit plans to use synthetic hidrograf of Nakayasu. Main dam use embankment type. Once the design is obtained embung construction, stability control is carried out in order to secure the building against a dangerous condition.

From the results obtained by analysis of flood discharge plan 20 years return period multiplied by 1.2, so we got the result by 57.74m³/s, and volume amounting to 15.227.08 m³ and is at elevation +86.98m (summit of spillway elevation), flood faces elevation at +88.79m, the height of dam’s top is +90.79m, the elevation of the riverbed at an altitude of +82m, 2.00m high surveillance is taken, the dam height 8.79m, 4.50m wide crow's dam, the up stream’s slope is 1:3, down stream’s slope 1:3. Construction stable against the forces that occur at dangerous conditions. Storage there, able to supply the basic water needs (drinking water) on projected population by 2030, amounting to 1071 souls with the water needs of 60 l/person / day

Keywords: Dams, Embankment Dam, Grogol Dam, Grogol Embankment Dam.
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