ANALISIS STABILITAS DAN PELAKSANAAN *CONSOLIDATION DAM* PROYEK *DIVERSION CHANNEL* KALI PUTIH KABUPATEN MAGELANG

(*ICB CIVIL WORK PACKAGE NO. 1: CONSTRUCTION OF DIVERSION CHANNEL IN PUTIH RIVER*)

PUJI RACHMAWATI

14/368426/SV/06896

INTISARI

Bencana banjir lahar merupakan masalah yang sangat merugikan bagi masyarakat yang berada di daerah dekat sungai. Untuk mengurangi kerugian yang di timbulkan maka di bangun *Diversion Channel* yang terdiri dari bangunan *Revetment, Groundsill,* dan *Consolidation Dam*.

Tujuan dari studi ini adalah untuk menganalisis pelaksanaan dalam pembangunan *Consolidation Dam*, menganalisis stabilitas *Consolidation Dam* terhadap guling dan geser pada proyek *Diversion Channel* Kali Putih.

Berdasarkan analisa dan pembahasan pelaksanaan pembangunan *Consolidation* Dam terdiri dari beberapa pekerjaan antara lain pekerjaan pembersihan, pekerjaan tanah, pekerjaa bekisting, dan pekerjaan pengecoran. Perhitungan anggaran untuk pelaksanaan pembangunan *consolidation dam* sebesar Rp22.004.325.799,32. Analisis stabilitas *Consolidation Dam* menggunakan kondisi banjir dan banjir lahar dengan beban mati dan gaya hidrostatik. Hasil analisis stabilitas struktur *consolidation dam* memiliki nilai stabilitas yang baik antara lain terhadap keamanan geser masing – masing 1,69 dan 2,03 > 1,2. Tegangan maximum pada pondasi *consolidation dam* masing masing kondisi = 192,10 kN/m^2 dan 128,10 kN/m^2 < daya dukung tanah yang diijinkan = 588 kN/m^2 . Analisis terhadap gempa tidak digunakan karena tinggi *consolidation dam* < 15 m sesuai syarat yang ada pada Pd T 12-2004-A.

Kata kunci : *Consolidation Dam,* stabilitas, *Diversion Channel*

STABILITY ANALYSIS and IMPLEMENTATION METHOD of KALI PUTIH CONSOLIDATION DAM DIVERSION CHANNEL PROJECT MAGELANG DISTRICT (ICB CIVIL WORK PACKAGE NO. 1: CONSTRUCTION OF DIVERSION CHANNEL IN PUTIH RIVER)

PUJI RACHMAWATI

14/368426/SV/06896

ABSTRACT

Lava flood is the issues that are very detrimental for people who were in the area near the river. To reduce losses of the impact then to build Diversion Channel which consists Revetment, Groundsill, and Consolidation Dam is needed.

The purpose of this study is to analyze the implementation of Consolidation Dam construction, analyze the overturning stability and shear stability of Consolidation Dam on Kali Putih Diversion Channel Project.

Based on the analysis and discussion, the work implementation consists of land clearing work, soil work, formwork and concrete work. The amount of budget calculation for the implementation of consolidation dam construction is Rp22,004,325,799.32. Stability analysis of Consolidation Dam using lava floods and flood conditions with dead load and hydrostatic pressure. The results of the analysis is consolidation dam has good stability against shear failure among 1.96 and 2.02 > 1.2. The maximum tension of the consolidation dam Foundation of each condition = 192,1 kN/m^2 and 128,10 kN/m^2 < permitted soil bearing capacity = 588 kN/m^2. The analysis against earthquake is not used because of the height of dam consolidation < 15 m according to existing terms on Pd T 12-2004-A.

Keywords: Consolidation Dam, stability, diversion channel