ABSTRAK

Bendungan Ameroro dibangun oleh Balai Wilayah Sungai (BWS) Sulawesi IV, Ditjen Sumber Daya Air Kementrian PUPR dengan kapasitas tampungan 44,44 juta m^3 dalam rangka peningkatan Daerah Irigasi (DI) di Kabupaten Konawe. Bendungan Ameroro didesain dengan tipe urugan yang memiliki tinggi puncak mencapai 82 meter, panjang bendungan 324 meter, dan lebar 12 meter. Pada bangunan pelimpah memiliki elevasi ambang 122,50 meter dengan tipe Ogee, saluran pengelak berupa conduit beton ganda, dan tipe bangunan pengambil Submerged Intake Tower. Penelitian ini bertujuan untuk menganalisis stabilitas lereng bendungan Ameroro. Penelitian tesis ini adalah kajian stabilitas lereng dengan menggunakan beberapa metode; (a) Spencer Method (b) Metode Elemen Hingga. Penelitian ini mengambil studi kasus penelitian di Bendungan Ameroro Kabupaten Konawe, Provinsi Sulawesi Tenggara, Indonesia. Data primer dari penelitian ini berupa dokumentasi dari kondisi di lapangan. Dari hasil analisa stabilitas lereng, didapatkan faktor keamanan pada lereng yang terdapat di Bendungan Ameroro sebesar 1,79 kondisi lereng relatif stabil. Dan dari hasil perbandingan analisis stabilitas lereng dengan metode spencer yaitu 1,347 sedangkan untuk nilai faktor keamanan metode elemen hingga dengan software Plaxis 2D sebesar 1,67. Jadi nilai lower bound SoF = 1,347 dari perhitungan metode spencer dan nilai upper bound SoF = 1,67 dari perhitungan analisis software PLAXIS 2D.

Kata Kunci: stabilitas; lereng; bendungan ameroro

ABSTRACT

The Ameroro Dam was built by the Sulawesi IV River Basin Center (BWS), Directorate General of Water Resources of the Ministry of PUPR with a storage capacity of 44.44 million m^3 in order to increase the Irrigation Area (DI) in Konawe Regency. The Ameroro Dam is designed with the urugan type which has a peak height of 82 meters, a dam length of 324 meters, and a width of 12 meters. The spillway building has a threshold elevation of 122.50 meters with the Ogee type, a dodger channel in the form of double concrete conduits, and a Submerged Intake Tower retrieval building type. This study aims to analyze the slope stability of the Ameroro dam. This research studies slope stability using several methods; (a) *Spencer* Method (b) Finite Element Method. This research takes a research case study in Ameroro Dam, Konawe Regency, Southeast Sulawesi Province, Indonesia. The primary data from this study is in the form of documentation of conditions in the field. The results of this study state that from the results of the slope stability analysis, it was found that the safety factor on the slopes contained in the Ameroro Dam was 1.79. Slope conditions are relatively stable. And from the results of the comparison of slope stability analysis with the spencer method and finite element method, the safety factor value of the spencer method was 1.347, while the safety factor value of the finite element method with PLAXIS 2D software analysis was 1.67. So the lower bound SoF value = 1.347 from the spencer method calculation and the upper bound SoF value = 1.67 from the PLAXIS 2D software analysis calculation.

Keywords: stability; slope; ameroro DAM