

ABSTRAK

Hendricho Giovanni Manik, NIM. 5193250016: Analisis Efektivitas *Grouting* Pada Proyek Pembangunan Bendungan (Studi Kasus : Proyek Pembangunan Bendungan Lau Simeme Paket – I).

Pondasi Proyek Bendungan Lau Simeme Paket – I selama masa konstruksi terindikasi memiliki nilai permeabilitas 10^{-4} sampai 10^{-2} cm/detik. Penelitian ini bertujuan untuk mengetahui bagaimana efektivitas *grouting* pada Proyek Pembangunan Bendungan Lau Simeme Paket – I. Data yang digunakan merupakan data Pengujian Air Bertekanan (Water Pressure Test), Investigasi Geologi, dan Instrumentasi Geoteknik. Hasil dari data tersebut dilakukan perhitungan analisis efektivitas *grouting*. Hasil dari analisis perhitungan efektivitas *grouting* pada Proyek Pembangunan Bendungan Lau Simeme Paket – I didapatkan Nilai efektivitas tertinggi pada PT - 2 dengan CH - 6 sebesar 89.66% dan Nilai efektivitas terendah pada PT - 4 dengan CH – 9 sebesar 87.40%. Kondisi batuan sebelum *grouting* pada Pilot Hole Bagus dan Kondisi Batuan setelah *grouting* pada Check Hole diklasifikasikan Bagus Elevasi Ground Water Level pada hulu pondasi terbesar adalah 192.05 (P 3.3) sedangkan nilai terendah Ground Water Level adalah 188.04 (P 2.3) dan Nilai terbesar Elevasi Ground Water Level pada hilir pondasi sebesar 188.51 (P 2.4), sedangkan nilai terendah pada hilir pondasi adalah 186.93 (P 3.2).

Kata Kunci : Pondasi Bendungan, Efektivitas, *Grouting*, *Water Pressure Test*, Piezometer, *Rock Quality Design*.

ABSTRACT

Hendricho Giovanni Manik, NIM. 5193250016: Analysis of Grouting Effectiveness in Dam Construction Projects (Case Study: Lau Simeme Dam Construction Project Package - I).

The foundation of Lau Simeme Dam Project Package - I during the construction period was indicated to have a permeability value of 10^{-4} to 10^{-2} cm/sec. This study aims to determine the effectiveness of grouting in the Lau Simeme Dam Package - I Construction Project. The data used are data from Water Pressure Test, Geological Investigation, and Geotechnical Instrumentation. The results of the data were calculated to analyze the effectiveness of grouting. The results of the grouting effectiveness calculation analysis in the Lau Simeme Dam Construction Project Package - I obtained the highest effectiveness value at PT - 2 with CH - 6 of 89.66% and the lowest effectiveness value at PT - 4 with CH - 9 of 87.40%. The rock condition before grouting at Pilot Hole is Good and the Rock Condition after grouting at Check Hole is classified as Good. The Ground Water Level elevation at the upstream of the largest foundation is 192.05 (P 3.3) while the lowest value of Ground Water Level is 188.04 (P 2.3) and the largest value of Ground Water Level elevation at the downstream of the foundation is 188.51 (P 2.4), while the lowest value at the downstream of the foundation is 186.93 (P 3.2).

Keywords: *Dam foundation, effectiveness, grouting, water pressure test, Piezometer, Rock Quality Design.*