# SARI

Bendungan Matenggeng merupakan bendungan yang dibangun berpasangan dengan Bendungan Leuwikeris untuk memanfaatkan aliran sungai untuk kesehjateraan masyarakat sekitar lokasi bendungan seperti penyediaan irigasi air, pemanfaatan air baku, dan pengadaan listrik. Sampai saat ini, proses pembangunan bendungan masih mencapai tahap perencanaan yang membutuhkan penyelidikan geologi teknik untuk mengetahui karakteristik geologi teknik lokasi konstruksi bendungan termasuk daya dukung batuan serta sudut pemotongan lereng aman. Aspek yang dianalisis meliputi aspek geomorfologi, aspek struktur geologi, aspek batuan dan tanah, serta aspek hidrologi. Metode penelitian dilakukan dengan pemeteaan geologi teknik skala 1:12.500, penentuan kualitas massa batuan inti serta penentuan daya dukung batuan dan sudut pemotongan lereng aman.

Karakteristik geologi teknik daerah penelitian terdiri atas 5 satuan yakni satuan batupasir tuffan lapuk sedang, satuan batupasir tuffan lapuk tinggi, satuan batupasir tuffan lapuk sangat tinggi, satuan breksi andesit tuffan lapuk rendah, dan satuan breksi andesit tuffan lapuk sedang. Kualitas massa batuan permukaan GSI terdiri dari kelas *fair rock, poor rock,* dan *very poor rock.*. Daya dukung batuan pondasi berdasarkan konversi GSI ke RMR berkisar antara 280-30 $T/m^2$ dengan nilai sudut pemotongan lereng aman berkisar dari 55-40$^o$.

**Kata kunci**: Bendungan Matenggeng, karakteristik geologi teknik, kualitas massa batuan, *Geological Strength Index*, daya dukung batuan pondasi, sudut pemotongan lereng aman.

# ABSTRACT

Matenggeng Dam is a dam built in pairs with the Leuwikeris Dam to utilize the river flow for the health of the community around the dam location, such as providing water irrigation, utilizing raw water, and supplying electricity. Until now, the dam construction process is still at the planning stage which requires engineering geological investigations to determine the technical geological characteristics of the dam construction site including the rock bearing capacity and safe slope cutting angle. The aspects analyzed include geomorphological aspects, geological structural aspects, rock and soil aspects, and hydrology aspects. The research method was carried out by geological engineering with a scale of 1: 12,500, determining the quality of the core rock mass and determining the bearing capacity of the rock and the angle of safe slope cutting.

The technical geological characteristics of the study area consist of 5 units, namely medium weathered tuffan sandstone units, high weathered tuffan sandstone units, very high weathered tuffan sandstone units, low weathered tuffan andesite breccia units, and medium weathered tuffan andesite breccia units. The quality of the GSI surface rock mass consists of fair rock, poor rock, and very poor rock. The bearing capacity of the foundation rock based on the conversion of GSI to RMR ranges from 280-30 T / m2 with safe slope cutting angle values ranging from 55-40$^{o}$.

**Keywords** : Matenggeng Dam, engineering geological characteristics, rock mass quality, Geological Strength Index, foundation rock bearing capacity, safe slope cutting angle.