

Application of woven waste tires gabion wall as slope reinforcement for preventing landslide in laboratory

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Abstract	This study presents the application of woven waste tires as slope reinforcement for preventing slope failure, reducing construction costs and minimizing environmental hazards associated with the increasingly large amount of waste tires in Indonesia. To this end, we performed laboratory experiments using five stripe distance variations of woven tires - i.e. 3, 4, 5, 6, and 7 cm as ribs of a gabion wall. Five gabion wall samples sized 50 cm x 50 cm x 25 cm each were made. Each sample was fastened using one of these woven tires. A loading test was conducted on each gabion wall sample and the strength was determined from the maximum capacity before failure. The correlation between the gabion wall strength and strip distance - boulder diameter ratio was used to infer the most effective model. The result suggests that the strip distance - boulder diameter ratio of 0.4 is optimum with a corresponding strength value of 1718 kg.
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