

**O 139. PHYSICAL MODELING FOR DEVELOPMENT OF ENERGY DISSIPATING
STRUCTURES**

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ABSTRACT: Energy dissipating structures are constructions that transfer the water from upstream to downstream safely by reducing the energy of the flow. They are generally used in irrigation channels, discharging from a dam bottom outlet, at the foot of the spillway structures and in dissipating the energy of water in a similar situations. The main principle of energy dissipating pools is to keep the hydraulic jump in the channel while flow regime is changing from super critical to sub critical. In this study, the channel was set up to investigate the energy dissipating blocks which were placed at the downstream of the ogee spillway in the energy diispating pool. In this study, trapeze section energy dissipator blocks test setup was used to increase the energy dissipating rate. During the experimental studies, Froude similarities were used for modelling flow rate, flow depth and rating curve. Finally, the effect of the shape of the blocks on energy dissipating along the channel was figured out.

Keywords: Energy dissipating pool, energy dissipating blocks, spillway design, ogee design, open channels