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Experimental Study of Local Scour Depth around Cylindrical Bridge Pier

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Abstract : The failure of bridges due to excessive local scour during floods poses a challenging problem to hydraulic engineers. The failure of bridges piers is due to many reasons such as localized scour combined with general riverbed degradation. In this paper, we try to estimate the temporal variation of scour depth at nonuniform cylindrical bridge pier, by experimental work conducted in hydraulic laboratories of Gaziantep University Civil Engineering Department on a flume having dimensions of 8.3 m length, 0.8 m width and 0.9 m depth. The experiments will be carried on 20 cm depth of sediment layer having d₅₀=0.4 mm. Three bridge pier shapes having different scaled models will be constructed in a 1.5m of test section in the channel.

Keywords : scour, local scour, bridge piers, scour depth
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