عنوان مقاله:

(A Method Leading to Reduction in Scour around Hydraulic Structures (A review

محل انتشار:

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خلاصه مقاله:

Scour is a natural phenomenon by the action of alluvial flow that removes sediment around or near structures in the flowing water. This means that the lowering of the bed by erosion of water such that there is a tendency to expose the bases of a structure. It is the result of the erosive action of flowing water, excavating and transporting the material from the bed and banks of streams and around piers and abutments of bridges. Scour was the main cause of failure of marine structures in world. In this study, try to review some previous studies related to erosion. Many researchers have conducted various studies to predict the maximum depth and the diameter of scour hole. Vertical piles have been generally used in flumes to investigate the effects of scour. In some studies, techniques to reduce scour depth were used, making use of splitter plates and the necks of the piles. Helical wires or cords spirally wrapped around the stack to resemble a stack of threads are also used to reduce erosion. Using special techniques, scour depth has been reported to reduce by modifying the flow field around the piles. Prediction of scour depth is difficult as there are many uncertainties associated with it. Several methods of protection of erodible soils around the foundations of marine structures have also been adopted and the methods of this type sometimes costly. Therefore considered further studies are needed to predict the scour depth effectively and to find cost effective ways to reduce erosion

کلمات کلیدی:

Scour, Hydraulic structures, sediment, erosion, Local scour