

عنوان مقاله:

Combined structures design against bridges scouring (Case Studies: Asalem and Kalachay bridges in the north of Iran)

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نویسندگان:

Shervin Faghihirad - *department of hydraulic engineering and hydro-environment*

F Amiryazdani - *Senior Researcher, Water Research Institute, Tehran, Iran*

خلاصه مقاله:

Various countermeasures are proposed to control scouring around bridge piers. In the present research, a comprehensive study has been carried out to achieve scouring around two bridges in the north of Iran. The research presents a new set of combined structures against bridges scouring. A 1D numerical model is used for predicting depth of total scouring. According to the numerical results, the supercritical regime is observed in downstream of the bridges. For computing local pier scour Froehlich equation has been selected in the numerical model. Economical comparisons among different proposed combined structures have been done to introduce the best scenario for constructing. The results reveal that making Reno Mattress layer around the piers and Sabo works are needed to control scouring for two case studies. The experiences indicate that every armoring layer has to be situated under active bed layer of the river and better to cover vast area.

کلمات کلیدی:

Scouring, Bridge, Sabo works, numerical modelling

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