

## عنوان مقاله:

Numerical Simulation of Local Scour around Underwater Pipeline based on FLUENT Software

## محل انتشار:

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## خلاصه مقاله:

This paper proposed a new methodology which was based on computational fluid dynamics for predicting the scouring process of underwater pipeline. By redeveloping a commercial CFD computer code, the governing equations for the flow model was solved by finite volume method and wall shear stress which acted as the key parameter to judge the incipient motion of sediment was firstly calculated. Then the morphological change of the sandy bed was simulated by dynamic mesh technology. Based on the comparisons between experimental results and numerical results, it was confirmed that present numerical modeling method can simulate the flow field and scouring process around underwater pipeline accurately. Besides, the influence of gap ratios on the scour behaviors was investigated by the present simulation.

## کلمات کلیدی:

Underwater pipeline, Local scour, User defined function, Numerical simulation, Fluent

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1384876>

