

# Variation of stream power with seepage in sand-bed channels

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## **Abstract**

Downward seepage (suction) increases the mobility of the channel. In this study, experimental investigations were carried out to analyse the suction effect on stream power along the downstream side of the flume. It was observed that stream power has a major influence on the stability and mobility of the bed particles, due to suction. Stream power is found to be greater at the upstream side and lower at the downstream side. This reduces the increment in the mobility of the sand particles due to suction at the downstream side. Thus, there is more erosion at the upstream side than the downstream side. It was also found that the amount of deposition of sand particles at the downstream side, because of the high stream power at the upstream side, is greater than the amount of erosion of sand particles from the downstream side.

**Keywords:** friction slope, seepage, sediment transport, stream power, suction