



The sediment carrying capacity in the medium flood river channel of lower Yellow River

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According to the concept of the medium flood river channel and the characteristics of its different segments and the water sand combination, the sediment carrying capacity has been analyzed in the medium flood river channel of the lower Yellow River. Based on the field data of channel sections and the water sand combinations, the indexes have been put forward to describe the characteristics of these channel sections and their variation regulations have been analyzed. Furthermore, the quantitative equations have been set up to demonstrate the relations between these indexes and the influencing factors, such as the water volume, the sediment concentration, the flood duration, etc. The flood discharge capacity in the medium flood river channel of the lower Yellow River rests with the channel section mode and the water-sand combinations. In order to decrease the sedimentation in the lower Yellow River, the narrow-deep channel should be adopted and the combination of relatively larger water volume and higher sediment concentration should be adopted to focus the water energy to transport sediment efficiently.

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