



Study on the Sedimentation Roughness in the Perennial Reach of the Three Gorges Reservoir

Sichen Tong, Wei Huang, Y. P. Lan, Yang Yun, Xin Xin

National Inland Waterway Regulation Engineering Research Center, Chongqing Jiaotong University
Chongqing, China

ABSTRACT

The construction of the Three Gorges Dam plays an significant important role in the sustainable development of Chinese social economy. After its impoundment in 2003 over 90% sedimentation have occurred in the perennial reach of the reservoir which shows greatly difference with the results predicted in the last century.

Sedimentation roughness is the key parameter for calculation the backwater curve and flood inundation area. Therefore it is necessary to seek the change of roughness of the Three Gorges Reservoir(TGR).

A 1-D flow model was adopted in this paper to analysis the characteristics of the roughness especially in the perennial reach of the TGR based on 10 years operation data. Emphases was payed on the typical reaches named as straight reach, bending reach and braided reach.