

KAJIAN HIDRAULIS BANGUNAN PENGENDALI BANJIR KOTA SURAKARTA PADA PINTU AIR PUTAT KALI BORO

Ruhban Ruzziyatno
12194/PS/MPBA/03

Telah dipertahankan di depan Dewan Penguji
Pada tanggal 31 Maret 2005

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ABSTRACT

Boro river is one of the main drainage system of Surakarta city which drains into Bengawan Solo river. The primary problem when flood occur is the higher water level of Bengawan Solo than Boro River and than backwater occur and inundates Boro River.

The objective of the study is to obtain operational method of Boro river floodgate to control both inflows and outflows not only during flood but also normal condition. It also aims to know Boro rivers floodgate operational function to reduce Boro catchment area inundation. Boro river water level variation and Bengawan Solo river water level variation, were used for the simulation of Boro river floodgate routing. The simulation used 10-year inflows, 50-year inflows, and 100-year inflows return period and Boro water level variation are +82.50 m, +83.00 m and +84.00 m.

The results of the study show that the effective opening of floodgate are 0.35 m - 0.55 m for +82.05 m of Bengawan Solo water level, 0.50 m – 0.65 m for +82.55 m of Bengawan Solo water level and 0.70 m – 0.85 m for +83.48 m of Bengawan Solo water level, for reducing water level of Boro river flooding.

Keywords : *Flood - drainage systems - floodgate - flow routing.*