

BELGRADE BRIDGES ACROSS SAVA RIVER AS MONUMENTS OF TECHNICAL DEVELOPMENT IN BRIDGE ENGINEERING

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SUMMARY

The paper deals with remarkable bridges across Sava River in Belgrade that can be treated as the monuments of technical development of bridge engineering. The first one is Branko's Bridge, built in 1956 (as steel plated continuous beam structure, with 261 m main span – exrecord in its category), widened in 1978, on the piers and abutments of former suspension bridge (built in 1934, largely damaged in 1941 & destroyed in 1944). The second one is Gazelle Bridge, built in 1970 (refurbished in 2012) as steel shallow-frame structure, with 250 m main span - ranked at 3rd place in its category. The third one is double-track Railway Bridge, built in 1979 as the steel cable-stayed structure, with 254 m main span. This is the first cable-stayed bridge for railway traffic only. The fourth one is Ada Bridge, built in 2011 as cable-stayed structure with 376 m main span (steel) & 250 m (back span), having original single cone shaped 200m high concrete pylon.

Keywords: *Bridge Engineering, Structural Engineering, Technical Developments.*

1. INTRODUCTION

Belgrade is situated at the mouth of Sava River to the Danube [1]. Belgrade City centre is on the right bank of Sava River and New Belgrade is on the left bank. Actually among 4 roadway and 2 railway bridges across Sava River in Belgrade town, the following remarkable bridges can be treated as the original monuments of technical developments in bridge engineering: Branko's Bridge, Gazelle Bridge, double-track Railway Bridge and Ada Bridge (Fig. 1). The rest 2 old bridges, with piers in the river, will be removed and renewed.



Fig. 1. Bridges across Sava River (AB-Ada Bridge, RB-Railway Bridge, GB-Gazelle Bridge & BB Branko's Bridge).