UVATERV

BRIDGE AND STRUCTURAL DESIGN

MOTORWAY – BRIDGE OVER THE TISZA RIVER

Hungary



Client:

North-Est Hungary Motorway Investment and Operating Ltd,

Hungarian Bridge Construction Consortium, M3 Motorway Project Bureau

Technical data:

Total length of the bridge: 405 m (together with the floodplain, bridges)

River bridge spans: 72 m + 112 m + 72 mWidth of the bridge: 1,285 + 10,5 m + 0,565 + 0,87 + 0,565 + 10,5 m + 1,285 = 25,57 m.

Consultancy services provided:

Design for Approval
Tender design
Execution designs
Technical supervision
As-built designs, Instructions for the operator

Bridge structure: two parallel girder bridges with wedged steel supports acting with the rc plate.

Innovative characteristics of the bridge:

- The innovative structure of the rc deck slab and the method of its dimensioning allowed to omit completely the interim temporary supports and to minimize the relocation/moving of the supports, timeand work consuming activities.
- The construction of the deck slab started with the concreting of the sections above the piers.
- Almost all connections are welded
- First application of large thickness (v $_{\rm max} =$ 100 mm) boom plates
- The steel structures of the bridges (2x1050 t) were mounted on the riverside and floated as 1 completed piece to their place in longitudinal and transversal direction, by means of floating and lifting engines.



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Longitudinal floating



River bridges view from the bottom, after removal of the form panels