

Zeitschrift: IABSE structures = Constructions AIPC = IVBH Bauwerke
Band: 2 (1978)
Heft: C-4: Structures in the USSR

Artikel: Bridge over the Oka River in Ryazan
Autor: [s.n.]
DOI: <https://doi.org/10.5169/seals-15095>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 06.07.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>



2. Bridge over the Oka River in Ryazan

Designer: Design Institute Giprotransmost

Contractor: A constructional organization of Glavmostostroi

Sphere of application: the bridge is meant to have 4 lanes for vehicular traffic and pedestrians

Bridge full width: 18.0 m including 15-m-wide roadway

Static system: the river-bed part (58.2 + 2 x 84.0 + 58.2 m) is spanned by a frame-suspension superstructure. The bank parts (viaducts) have spans 32 and 64 m long.

Materials used per m² of the bridge:

Materials	Left-bank viaduct	Right-bank viaduct	River part of the bridge	Average amount
Concrete for superstructure (m ³ /m ²)	0.33	0.33	0.51	0.38
Concrete for piers (m ³ /m ²)	0.44	1.184	1.33	0.87
Metal total (kg/m ²)	111	163	169	140
including high-strength wire (kg/m ²)	18.7	17.1	23.7	19.6

Traffic opened: in 1972

The bridge is erected of precast prestressed concrete units. The transporting of 32 and 64 m long precast T-beams widely used by the contractor increased the erection rate. The prefabrication of the beams and other elements was well developed by concrete plants.

The mentioned T-beams (fig. 2) were used for suspended spans in the bridge river part having a frame suspension superstructure (fig. 1). The frame cantilevers were assembled of box-section elements (fig. 2) 3 and 5 m long, manufactured on the site near the bridge.

Epoxy adhesive joints were used between the adjacent elements.

High-strength tendons consisting of 48 d = 5 mm wires located in closed ducts were used for the preliminary squeezing of the cantilevers, a considerable number of inclined tendons being threaded into the box webs. The ducts were arranged with the help of duct-formers pulled out afterwards. 32 m and 64 m long T-beams were used for viaduct spans.

To improve maintenance conditions and to make the traffic more comfortable, each 7 - 8 spans are united into a continuous structure with expansion joints arranged only at the ends of the unit. The viaduct roadway made of concrete having hydrophobic additives without using a hydro-isolation layer.

The 2-pillar viaduct piers are precast and cast-in-place, with a cap.

The river piers are solid, with massive section, but above the water level they are hollow, with box section.

The river piers and part of right-bank piers have massive reinforced concrete well foundations. The foundations of the left-bank viaduct piers and the abutments are mounted on reinforced concrete piles (section 40 x 40).

The erection of precast units on the viaducts was carried out by gantry cranes K-451M, the erection of river spans, by cranes C П K-65 (fig. 3).

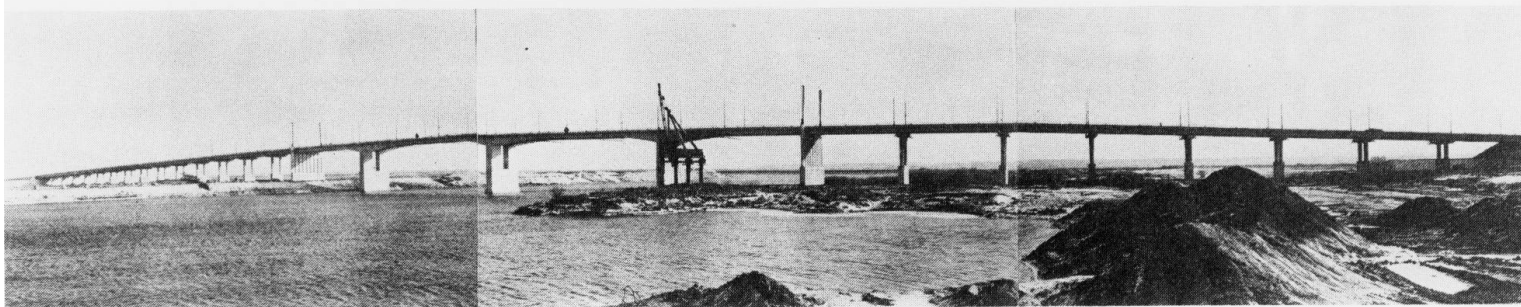


Fig. 1 The bridge scheme

