

Zeitschrift: IABSE structures = Constructions AIPC = IVBH Bauwerke
Band: 3 (1979)
Heft: C-10: Bridges I

Artikel: The railway cable-stayed bridge over the river Sava in Belgrade (Jugoslavien)
Autor: Hajdin, N. / Jevtovi, Lj. / Cretkovi, S.
DOI: <https://doi.org/10.5169/seals-15843>

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](#)

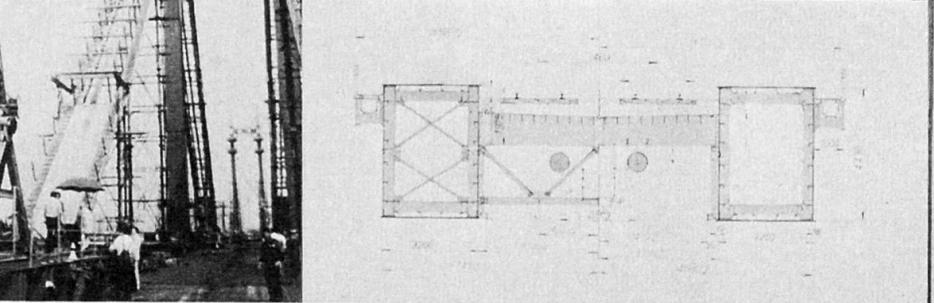
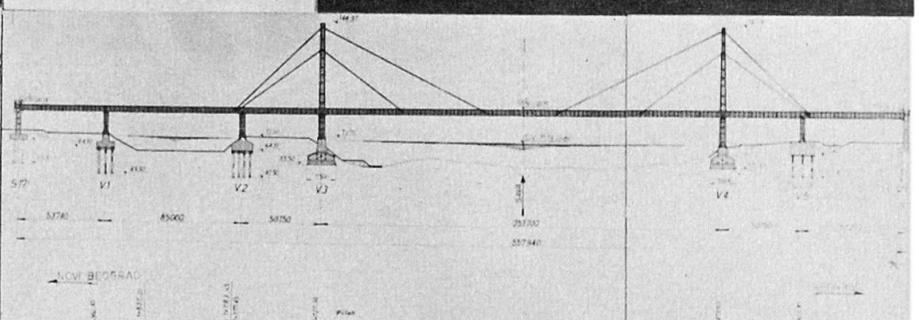
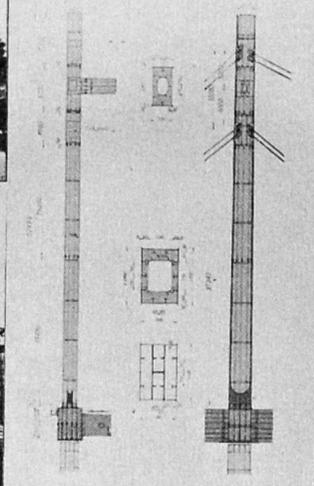
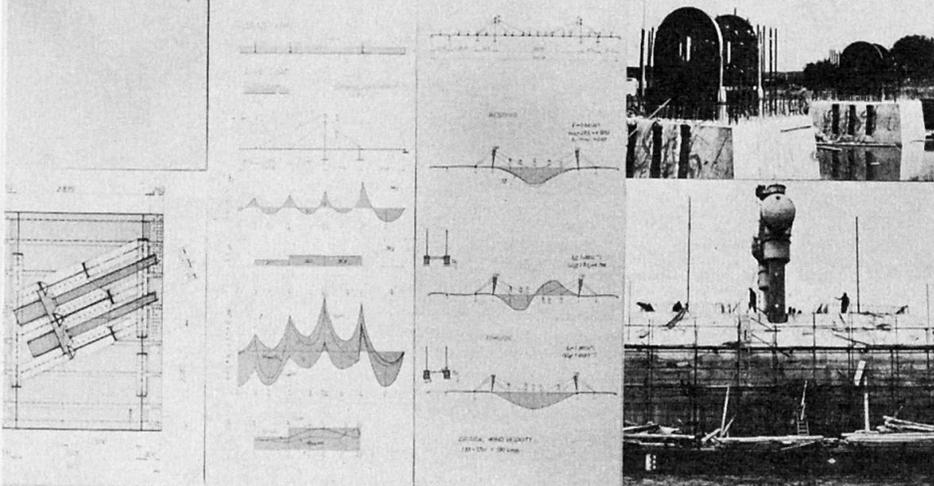
Download PDF: 14.04.2026

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

THE RAILWAY CABLE-STAYED BRIDGE OVER RIVER SAVA IN BELGRADE

n. hajdin, lj. jevtović, s. cvetković, v. matić

CITY OF BELGRADE AND RAILWAY TRANSPORT
 CONSULTING ENGINEERS BELGRADE
 ARCHITECTS: MILICA R. RADOVIĆ
 ENGINEERS: MILICA R. RADOVIĆ, L. PETROVIĆ
 CONSULTANTS: MILICA R. RADOVIĆ, L. PETROVIĆ
 CONTRACTOR: MOŠTOVARADSKA
 DESIGNER: MILICA R. RADOVIĆ
 EXECUTION: MILICA R. RADOVIĆ
 PHOTOGRAPHERS: MILICA R. RADOVIĆ
 DRAWING: MILICA R. RADOVIĆ



THE FREE VIBRATIONS OF THE BRIDGE ARE SHOWN IN THE FIGURE 2. THE CABLE CONSISTS OF 240 TO 260 COLD DRAWN PRESTRESSED WIRES DIA 7 mm, WITH U.T.S. UP TO 170 kgf/cm² AND FATIGUE STRENGTH OF 35 kgf/cm² (FIG. 7) WEBS OF THE GIRDERS, THE CROSS AND LONGITUDINAL STIFFENERS ARE JOINED BY HIGHTENSION BOLTS ON THE SITE. ALL OTHER CONNECTIONS ARE JOINED BY FIELD WELDING (FIG. 6). REF. STAHLBAU H. 4/1978. IABSE CONGRES, TOKYO 1978.

THE RAILWAY DOUBLE-TRACK BRIDGE CROSSES THE SAVA RIVER IN BELGRADE. IT IS A PART OF AN 2 km LONG BRIDGE SYSTEM CONSISTING OF PRESTRESSED CONCRETE STRUCTURE AND MAIN STRUCTURE DESIGNED AS STEEL CABLE-STAYED BRIDGE. THE BRIDGE HAS A TOTAL LENGTH OF 555 m, WITH ONE CENTRAL SPAN OF 254 m (FIG. 10, 11). DECK STRUCTURE CONSISTS OF TWO BOX GIRDERS CONNECTED BY AN ORTHOTROPIC PLATE (FIG. 12). TWO TOWERS ON EACH SIDE OF THE MAIN SPAN ARE FIXED AT THE BASE IN THE CORRESPONDING BOX GIRDER (FIG. 9).

THE BALLAST WAS USED FOR TWO REASONS:
 • TO DIMINISH THE NOISE IN THE SURROUNDING AREA
 • TO ACHIEVE MORE CONVENIENT RATIO BETWEEN THE DEAD AND THE LIVE LOAD AND HEREWITH TO OBTAIN GREATER STIFFNESS OF THE CABLES IN THE SAGGED CONFIGURATION. UNDER DEAD LOAD THE SYSTEM BEHAVES AS A CONTINUOUS BEAM SUPPORTED AT THE POINTS OF CABLE ATTACHMENT (FIG. 1).

