

# Two special chinese timber bridges

Autor(en): **[s.n.]**

Objektyp: **Article**

Zeitschrift: **IABSE congress report = Rapport du congrès AIPC = IVBH  
Kongressbericht**

Band (Jahr): **11 (1980)**

PDF erstellt am: **23.09.2024**

Persistenter Link: <https://doi.org/10.5169/seals-11290>

## **Nutzungsbedingungen**

Die ETH-Bibliothek ist Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Inhalten der Zeitschriften. Die Rechte liegen in der Regel bei den Herausgebern.

Die auf der Plattform e-periodica veröffentlichten Dokumente stehen für nicht-kommerzielle Zwecke in Lehre und Forschung sowie für die private Nutzung frei zur Verfügung. Einzelne Dateien oder Ausdrucke aus diesem Angebot können zusammen mit diesen Nutzungsbedingungen und den korrekten Herkunftsbezeichnungen weitergegeben werden.

Das Veröffentlichen von Bildern in Print- und Online-Publikationen ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. Die systematische Speicherung von Teilen des elektronischen Angebots auf anderen Servern bedarf ebenfalls des schriftlichen Einverständnisses der Rechteinhaber.

## **Haftungsausschluss**

Alle Angaben erfolgen ohne Gewähr für Vollständigkeit oder Richtigkeit. Es wird keine Haftung übernommen für Schäden durch die Verwendung von Informationen aus diesem Online-Angebot oder durch das Fehlen von Informationen. Dies gilt auch für Inhalte Dritter, die über dieses Angebot zugänglich sind.

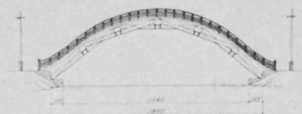
# TWO SPECIAL CHINESE TIMBER BRIDGES

TANG HUAN CHENG



*Rainbow Bridge*

This is a Chinese national art treasure, the Long-jingyuan "River Side Street" (The Long Jing Festival). The bridge was constructed in year 1332, and was first repaired and enlarged by order in year 1953.



Dimensions of the bridge as determined from sketches of drawings by traditional methods in Long-jingyuan are shown on picture. Calculated by scientific construction, the timber arch segment is about 85 cm in diameter. The total materials required is 13,422 m<sup>3</sup> including about 1000 steel wire plates.

*Combined Beam-Arch Construction*



The bridge structure consists of two basic systems, system A and B. Both systems are suitable construction, as they are well supported by the construction and timber bridge. The structure is designed as two rigid arch, but each system is built as a structural beam. It is named as "Combined Beam-Arch Construction of timber bridge".



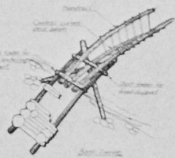
*Bow-Bow Bridge*

In the North-west of the construction structure, China, during the historical times, there are some interesting timber bridges constructed by means of the wood. The construction was the famous "Bow-Bow" from "Bow-Bow" bridge.

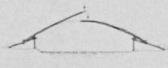
Load length 12-15 m



The bridge was built by constructed with three curved beams connected with 1000 steel wire plates. The whole bridge is built in a new way in the shape of a bow and triangular shape in the case structure. Bow-Bow bridge is a special structure.



The construction of the bridge is based on the principle of long-tapered beams and supported in the middle on each side, and constructed out of the river. The gap between the two beams is filled with the construction of timber beams. During the construction phase, the construction beams are strong with timber bridge, the Bow-Bow bridge is finally completed.



The Bow-Bow bridge design is built from 100 to 150 m long. It is a traditional timber beam construction.

*Conclusion*

There are interesting special Chinese timber bridges are constructed with traditional methods in some simple structural and design of bridge. Their construction process could be used in the bridge design with new material and technology for new construction purposes.