

Small Categories Series

Bridges

The first bridges made by humans were probably spans of cut wooden logs or planks and eventually stones, using a simple support and crossbeam arrangement. A common form of lashing sticks, logs, and deciduous branches together involved the use of long reeds or other harvested fibers woven together to form a huge rope capable of binding and holding together the materials used in early bridges.

The Arkadiko Bridge is one of four Mycenaean corbel arch bridges part of a former network of roads, designed to accommodate chariots, between the fort of Tiryns and town of Epidauros in the Peloponnese, in southern Greece. Dating to the Greek Bronze Age (13th century BC), it is one of the oldest arch bridges still in existence and use.

The greatest bridge builders of antiquity were the ancient Romans. The Romans built arch bridges and aqueducts that could stand in conditions that would damage or destroy earlier designs. Some stand today. An example is the Alcántara Bridge, built over the river Tagus, in Spain. The Romans also used cement, which reduced the variation of strength found in natural stone. Brick and mortar bridges were built after the Roman era, as the technology for cement was lost (then later rediscovered).

During the 18th century, there were many innovations in the design of timber bridges by Hans Ulrich Grubenmann, Johannes Grubenmann, and others. The first book on bridge engineering was written by Hubert Gautier in 1716. A major breakthrough in bridge technology came with the erection of the Iron Bridge in Shropshire, England in 1779. It used cast iron for the first time as arches to cross the river Severn. With the Industrial Revolution in the 19th century, truss systems of wrought iron were developed for larger bridges, but iron does not have the tensile strength to support large loads. With the advent of steel, which has a high tensile strength, much larger bridges were built, many using the ideas of Gustave Eiffel. In 1927 welding pioneer Stefan Bryła designed the first welded road bridge in the world, the Maurzyce Bridge which was later built across the river Słudwia at Maurzyce, Poland in 1929.

The Kurilpa Bridge in Brisbane, Australia is one of the longest footbridges in the world. An amazing network of pedestrian bridges is suspended 120 feet over Telok Blangah Hill Park near Singapore.

The bridge near Castrop-Rauxel, Germany, doesn't go anywhere! The highway was never completed.

