

SEVEN WONDERS OF THE INDUSTRIAL WORLD



What are the seven great feats of engineering of the 19th and early 20th centuries? British author Deborah Cadbury wrote a book called 'Seven Wonders of the Industrial World' presenting the wonderful engineering marvels that, except one, can be seen and visited even today. Brought to you by Tourism-Review.com.

The Bell Rock Lighthouse

The Bell Rock Lighthouse by the Scottish engineer Robert Stevenson was created off the east coast of Scotland between 1807 and 1811. Bell or Inchcape Rock was a place which had claimed the lives of sailors and sunk ships for hundreds of years. Stevenson decided to build a lighthouse but he chose the most dangerous place of all. The Bell Rock, a large reef 11 miles out to sea, was dangerously positioned in the approach to the Firth of Forth. Moreover, the rock was underwater except for a couple of hours at low tide each day causing difficulties in both constructing a design that would stand up to the terrible storms and waves that ravaged the area. Battling against the odds, Stevenson eventually built his lighthouse, and to this day it shines out across the North Sea, the oldest offshore lighthouse still standing anywhere in the world.

The Great Eastern

The Great Eastern, a colossal ship designed by Isambard Kingdom Brunel, is the only wonder described here that has not survived to the 21st century. Launched in 1858 on Thames, it was the first ship entirely made out of iron and the most luxurious vessel of the day. With its 700 ft of length, it was also the largest ship of that time. It had the capacity to carry 4,000 passengers around the world without refueling. The design was revolutionary, incorporating a double hull that made the ship unsinkable and enormous engines as high as a house. Brunel's concept became the blue print for ship design for years to come.

London Sewerage System

In the summer of 1858 London was in the grip of a crisis known as the 'Great Stink'. The population had grown rapidly during the first half of the 19th century, yet there had been no provision for sanitation. Three epidemics of cholera had swept through the city, leaving over 30,000 people dead. And sewage was everywhere, piling up in every gully and alleyway. Leading engineer Joseph Bazalgette proposed a bold scheme to build proper sewers: 82 miles of sewage superhighway, linked with over 1,000 miles of street sewers, to provide an underground network beneath the city streets. His grand design for a sewer system eventually transformed the city into the first glittering modern metropolis, setting a standard that was quickly copied the world over.

The First Transcontinental Railroad

In the middle of the 19th century, the Transcontinental Railroad or the Pacific Railroad, reached

right across the continent and connected the Atlantic and the Pacific coasts of the USA for the first time. With two teams, one building from the east and the other from California in the west, they battled against hostile terrain, hostile inhabitants, civil war and the Wild West. Yet in 1869, the two teams' tracks were joined, shrinking the whole American continent, as the journey from New York to San Francisco was reduced from months to days.

The Brooklyn Bridge

The Brooklyn Bridge, built by the engineer John Roebling from Germany, is one of the oldest suspension bridges in the United States. Completed in 1883, it connects the New York City boroughs of Manhattan and Brooklyn by spanning the East River. With a main span of 1,595.5 feet (486.3 m), it was the longest suspension bridge in the world from its opening until 1903, and the first steel-wire suspension bridge. The foundations are sunk 70 feet below the river. At the time such a bold design seemed almost miraculous. Since its opening, it has become an icon of New York City, and was designated a National Historic Landmark in 1964 and a National Historic Civil Engineering Landmark in 1972.

The Panama Canal

The Panama Canal is a 77-kilometer ship canal in Panama that joins the Atlantic Ocean and the Pacific Ocean and is a key conduit for international maritime trade. One of the largest and most difficult engineering projects ever undertaken; the canal had an enormous impact on shipping between the two oceans, replacing the long and treacherous route via either the Strait of Magellan or Cape Horn at the southernmost tip of South America. The first attempt to construct a canal began in 1880 under the French leadership of Ferdinand de Lesseps, the builder of the Suez Canal. However after 21,900 workers died, largely from disease (particularly malaria and yellow fever) and landslides, the works stopped. The United States launched a second effort, incurring a further 5,600 deaths but succeeding in opening the canal in 1914.

The Hoover Dam

Hoover Dam is a concrete arch-gravity dam in the Black Canyon of the Colorado River, on the border between the US states of Arizona and Nevada. It was constructed between 1931 and 1936 during the Great Depression in ruthless pace set by Frank Crowe, the builder, whose eagerness to complete the project well before schedule and subsequent exploitation of the workforce (who were desperate for any employment and were forced to accept conditions of extreme hardship in the process) would result in both many deaths and the eventual construction of a new city to house the workers.

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