

# THAMES IS TOWER BRIDGE

ВЫПОЛНИЛ РАБОТУ: НАКАРЯКОВ ЕТОР



**Tower Bridge is the lowest bridge located in the Thames (it is the first one to be found if you climb it from the North Sea) and the only one of all bridges that is drawbridge.**



# history of tower bridge



**In the second half of the 19th century, due to the increased horse and pedestrian traffic in the port area in the East End, a new question arose about the construction of a new ferry east of "London Bridge". Built in 1870, the Tower Subway tunnel served as a subway for a short time and eventually became used only for pedestrian traffic. In 1876, a committee was formed to work out a solution to the problem. A competition was organized, for which more than 50 projects were submitted. It was not until 1884 that the winner was announced and a decision was made to build the bridge, proposed by jury member G. Jones. After his death in 1887, construction was led by John Wolfe-Berry.**

**Construction work began on June 21, 1886 and continued for 8 years. On 30 June 1894, the bridge was inaugurated by Prince Edward of Wales and his wife Princess Alexandra.**

**In a short time, the pedestrian galleries of the bridge acquired the "glory" of a gathering place for pickpockets.**



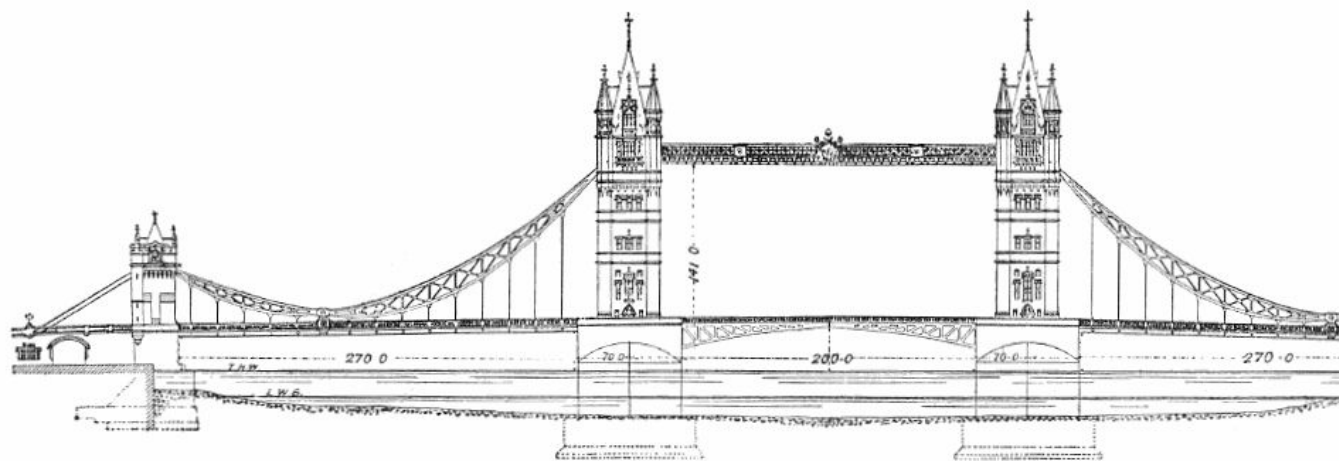
It is a drawbridge with a length of 244 m with two towers with a height of 65 m placed on intermediate supports. The central span between the towers, 61 m long, is divided into two lifting wings weighing more than a thousand tons, which can be raised at an angle of  $83^\circ$  for the passage of ships. Each of the more than a thousand-ton wings is equipped with a counterweight that minimizes the necessary force and allows you to spread the bridge in one minute. The span is driven by a hydraulic system, initially water, with a working pressure of 50 bar (750 psi). The water was pumped by two steam engines with a total capacity of 360 hp. The system was developed by engineer Hamilton Owen Rendel, who worked for the company "W. G. Armstrong Mitchell". In 1974, the system was completely updated — the oil hydraulics have an electric drive.



**For pedestrians, the design of the bridge provided for the ability to cross the bridge even during the separation of the span. For this purpose, in addition to the usual sidewalks located on the edge of the roadway, pedestrian galleries were constructed in the middle part, connecting the towers at a height of 44 meters. Access to the gallery was via staircases located inside the towers. Since 1982, the gallery has been used as a museum and observation deck.**

**Only for the construction of towers and pedestrian galleries, more than 11 thousand tons of steel were needed. In 1886, Jones died, and George D. Stevenson took over the project management . To better protect the metal structure from corrosion, the towers were faced with stone, the architectural style of the structure is defined as Victorian Gothic . The total cost of the design was 1,184,000 pounds.**





*The Tower Bridge.*

Length of Bridge with its approaches	• • •	2680 feet.
"    Northern approach	• • •	1050 "
"    Southern approach	• • •	800 "
Width between N. and S. abutments.	• • •	830 "
"    of central span . . . . .	• • •	200 "
"    of side spans, each . . . . .	• • •	270 "

Depth of River at high water under central span,	•	33½ feet.
"    "    lowest tides "    "    "	•	12 "
Clear headway at high water when the leaves are down (varies from one part of the bridge to another)	•	20 to 29½ feet.
Clear headway in centre span at high water with the leaves raised . . . . .	•	143 feet.











THANK YOU FOR YOUR ATTENTION

