

## WATER WONDERLAND

Even after you see it, it is still hard to believe! Water Bridge in Germany.... What a feat! Taking six years to build and costing around half a billion Euros, the massive undertaking will connect Berlin's inland harbour with the ports along the River Rhine. At the centre of the project is Europe's longest water bridge measuring in at just under a kilometre at 918 metres. The huge tub to transport ships over the Elbe took 24,000 metric tons of steel and 68,000 cubic metres of concrete to build.



The water bridge will enable river barges to avoid a lengthy and sometimes unreliable passage along the Elbe. Shipping can often come to a halt on the stretch if the river's water mark falls to unacceptably low levels.

This channel-bridge over the River Elbe joins the former East and West Germany, as part of the Unification Project. It is located in the city of Magdeburg, near Berlin. The photo was taken on the day of inauguration.

A plan for joining the two canals was conceived as far back as 1919, and construction on such a project began during the 1930s, but World War II and then the post-war division of Germany put the project on hold until after German reunification was achieved in the 1990s.

### QUESTION:

To those who appreciate engineering projects, here's a puzzle for you armchair engineers and physicists. Did that bridge have to be designed to withstand the additional weight of ship and barge traffic, or just the weight of the water?

### ANSWER:

It only needs to be designed to withstand the weight of the water! Why? A ship always displaces an amount of water that weighs the same as the ship, regardless of how heavily a ship may be loaded.