

Isambard Kingdom Brunel

- The engineer behind the industrial revolution

Early life

Isambard Kingdom Brunel was born in Portsmouth in 1806 and is seen as one of Britain's most influential people during the 19th century. His groundbreaking discoveries in the infrastructural sector paved the way for the industrial revolution as we know it today. He was born into a fairly rich family, with a french father and a english mother, and in an early age he took a interest for his father's occupation: Engineering. Here he received praise for his work, and was encouraged to continue studying engineering. After being educated at the University of Caen Normandy and Henri-IV, he began working with his father as an assistant to an engineer in the building of a tunnel under Thames river. Brunel's talent became noticeable as he invented a safer way to build under rivers when he was only in his early twenties.¹

The railways

During the Thames project the railways began to become a major form of transportation across Britain. In 1833 Brunel was appointed Chief Engineer of the Great Western Railway, which sought to connect London with Bristol via rail. This became his Magnum Opus and he started immediately to survey the enormous area all by himself to plan for the rails. The work took five years before any train could go on it, but the work that Brunel had produced was magnificent. The engineering of bridges, tunnels and aqueducts were revolutionary for its time and this really benefited the transportation times. In 1841 the route was only 275 km, in 1924 it had stretch approximately 22 times bigger with 6111 km of overall track. Parallel to his track building he also had some projects. In 1837 he built the largest steamship in the world , and he also built the first metal ship in 1843.^{1 2}

Brunel was also the creator of much more. He built the Paddington Station in London, introduced a new gauge for trains and train tracks which made transportation both quicker and smoother, a field hospital for the Crimean War and so much more.³

Legacy

To say that he was revolutionary was an understatement. He defined modern transportation and engineering as we know it. Most of his work still stands today, and the bridges and tunnels he created 150 years ago are still in use. His worked paved the way for the Industrial revolution. By improving the British infrastructure it helped workers relocate to bigger towns and transporting goods from city to city. Before the invention of trains most goods were transported via horse-drawn wagons or boat, which was extremely ineffective if compare to the likes of trains. Due to Britain's mine industry its trade in for example coal grew and help the British economy

¹ https://en.wikipedia.org/wiki/Isambard_Kingdom_Brunel#Early_life -

² <http://www.biographyonline.net/business/brunel.html>

³ <https://www.youtube.com/watch?v=4NIqsB511zY> - "Isambard Kingdom Brunel - Pushing the Boundaries"

stay afloat. This was especially useful in the time of colonial empires, where funding to keep up the colonies was key.⁴

Even though the industrial revolution started in Great Britain, it quickly spread to other regions of the world. Factories popped up in places like France, The US, Germany and so many more. This drastically transformed most Western European and North American countries from a farming society to,an and factory society, where most people lived and worked in big cities.⁴

Question

If I ever got the possibility to ask Mr. Brunel a question, i would undoubtedly ask him: Which investment are you most proud of and why? Brunel, begin a person of inventing, had a lot of different inventions of his life time, and he was definitely a workaholic. So to hear him tell us what he thought was his proudest invention and why would give us some perspective on how the great minds thought. Would his proudest invention be a bridge that still stands today or a small station that help the local population or one of his boats? We'll probably never know, but what we do know is that the answer currently would be of importance.

⁴ <http://www.history.com/topics/industrial-revolution>