

The Life & Times of IKB

Isambard Kingdom Brunel was born on 9 April 1806, in Portsmouth, the son of the French engineer, Marc Brunel and Sophia Kingdom.

Marc Brunel had been driven into exile from France because he opposed the French Revolution. He made his name as an engineer in New York before coming to England to take up a post in Portsmouth Dockyard. In 1803 he pioneered mass production techniques with his machinery for the production of pulley blocks in the Dockyard's Block Mills.

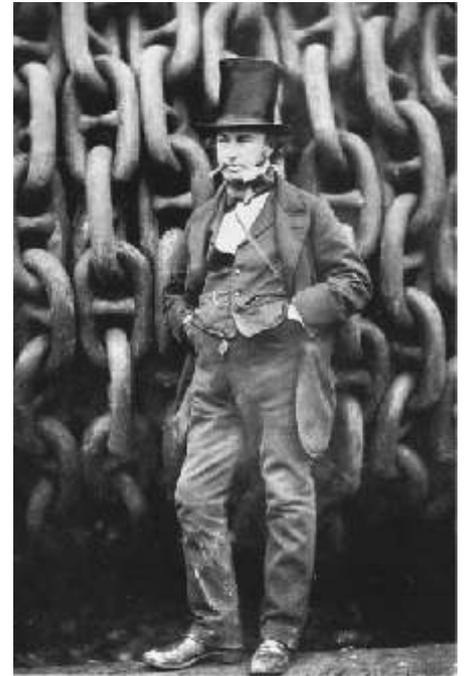
Marc Brunel eventually left Portsmouth for London where he ran a sawmill. But, in his spare time he continued to plan grand engineering projects. Unfortunately for the Brunel's the sawmill burned down in 1814 and by 1821 Marc was bankrupt and found himself locked up in a debtor's prison.

Luckily his engineering schemes had begun to be noticed by then and a government grant of £5,000 meant things began to look up. You can only guess what his engineering colleagues must have thought when Brunel started to use the money to study worms!

But, Marc Brunel had the last laugh as the slimy creatures he was so keen on were teredo worms. These tropical wood-boring worms are notorious for reducing ships hulls to match wood quicker than you can say 'Isambard Kingdom Brunel'. From their habits and anatomy Marc devised a shielded tunnelling device for use in constructing railway and other tunnels.

By 1825 he had secured backing to start the digging of a tunnel under the Thames at Rotherhithe. It was with this project that his son, Isambard, made his debut as a professional engineer. Isambard's first great project was highly dangerous work and it almost cost him his life when he was caught in a tunnel flood and badly injured.

The work was made even more difficult by the owners' decision to lower spectators into the tunnel at a shilling a time to watch the digging. Despite two serious incidents the tunnelling went surprisingly smoothly. Occasionally, however, the roof would collapse, flooding the tunnel. When this happened everyone, spectators and all, had to be evacuated as quickly as possible. Unfortunately this sometimes had to be done in the dark because the Irish navvies doing the digging thought that if they put all the lights out, the water gushing through the roof wouldn't be able to find them and drown them!



Isambard Kingdom Brunel (1806 - 1859)
by Robert Howlett 1857

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Isambard was a multi-tasker and while overseeing work on the tunnel he also developed a range of other projects. He had plans for an atmospheric engine and started working out how to bridge the Avon Gorge at Clifton, Bristol. The Clifton bridge scheme helped him to make his name with the merchants of Bristol and also helped to get him a good position with the railway company planning a service between Bristol and London.

In fact, at the centre of Isambard Kingdom Brunel's career was his involvement with the railway. It was his idea to adopt the name of Great Western Railway (GWR) instead of the rather more boring London to Bristol Railway.

In 1833, at the age of just 27 he was appointed Chief Engineer of the GWR and was responsible for the building of the link between London and Bristol. The GWR's lines eventually reached as far as the West Country and the Midlands. Building these lines was hard enough and led to such wonderful constructions as the viaducts at Hanwell and Chippenham, the Maidenhead Bridge and the Box Tunnel. To cap it all he even designed the Temple Meads station at the end of the line in Bristol.

But Isambard didn't want to end the line in Bristol. His grand plan was that the GWR should terminate in New York! Obviously a steam train wasn't going to cross the Atlantic but a giant steam ship was another matter. To this end he designed the massive *Great Western*, followed by the even more technically advanced *Great Britain* and *Great Eastern*.

Isambard's successful launch of the *Great Western* brought the Brunel family back into the employment of the Admiralty. He was now recognised as the the man to speak to if you wanted to build an iron ship powered by steam driven screw propellers. In 1841 he was appointed consulting engineer to projects designed to trial screw propulsion in warships and played a role in the trialling of screws in existing ships and in the building in 1843 of the *Rattler*.

His involvement with the armed forces also extended into the Crimean War. On hearing of the difficulties encountered by Florence Nightingale's nurses he designed, built and delivered a prefabricated hospital that could be set up to treat wounded soldiers wherever it was needed.

Great engineering, however, was not always great business. Brunel's engineering ingenuity could be ruinously expensive. His great ocean liners did not make money. Worry about spiralling costs during the construction of the *Great Eastern* and its disastrous maiden voyage, along with the injuries from his early days building the Thames Tunnel and his prodigious cigar habit probably contributed to Brunel's early death.

While Brunel may not have made his employers and their investors much money, he did show what imagination and drive could achieve and he set the marks at which others could aim.

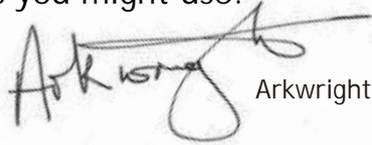


Be an IKB Date Detective

So, you think you know something about the life and times of IKB? Think you've got what it takes to fill in the blanks in the time line below?

You'll have to do some detective work to fill in the answers, so think about the kind of information sources you might use.

Good luck.



Arkwright Watt, Ace History Detective

- 9th April 1806 IKB born in
- 20 July 1824 IKB starts work on the Thames Tunnel at.....
- 10 June 1830 IKB elected a fellow of The Society
- 31 March 1831 IKB appointed engineer to the Bridge
- 7 March 1833 IKB appointed engineer to the
Railway
- 5 July 1836 IKB gets married to
- 19 July 1837 *SS Great* launched
- 25 March 1843 Tunnel finally opened
- 19 July 1843 *SS Great* launched
- 13 Sept 1847 First atmospheric trains run between and
Teignmouth
- 31 Jan 1858 *SS Great* launched
- 15 Sept 1859 IKB dies
- 8 Dec 1864 Bridge opened as a tribute to IKB



IKB Date Detective - Answers

No cheating! So if you haven't filled in the answers yourself yet don't look at this page.

9th April 1806	IKB born in Portsmouth (Britain Street)
20 July 1824	IKB starts work on the Thames Tunnel at Rotherhithe
10 June 1830	IKB elected a fellow of The Royal Society
31 March 1831	IKB appointed engineer to the Clifton Bridge
7 March 1833	IKB appointed engineer to the Great Western Railway
5 July 1836	IKB gets married to Mary Horsley
19 July 1837	<i>SS Great Western</i> launched
25 March 1843	Thames Tunnel finally opened
19 July 1843	<i>SS Great Britain</i> launched
13 Sept 1847	First atmospheric trains run between Exeter and Teignmouth
31 Jan 1858	<i>SS Great Eastern</i> Launched
15 Sept 1859	IKB dies
8 Dec 1864	Clifton Bridge opened as a tribute to IKB

