

Toby Wardman

Writing sample

Press release for the National Railway Museum

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National Railway Museum acquires priceless “missing link”

A national museum has purchased an unique and mysterious artefact which scientists believe may help to unlock the engineering secrets of the Industrial Revolution.

The National Railway Museum in York has acquired what could be one of the oldest steam locomotive models in the world—an item whose true origins are shrouded in mystery.

The working model, known as Sans Pareil (‘Without Equal’), was bought with the support of the Heritage Lottery Fund and the Friends of the National Railway Museum.

Historians agree that the model dates from the early part of the 19th century. But there the agreement ends.

Originally believed to be the work of Timothy Hackworth, one of the competitors in the seminal Rainhill Trials of 1829, research now suggests that Sans Pareil may be far older. In fact, there is evidence that it may have been designed by the grandfather of the railways himself, Richard Trevithick.

Trevithick, famed for building the world’s very first steam locomotive in 1804, is also credited with the engineering advances that made locomotives small enough to be able to pull carriages, laying the foundation for the modern railway system.

Specialists at the National Railway Museum suspect that Sans Pareil may be one of Trevithick’s earliest working prototypes, when he was experimenting with a double-cylinder boiler for the first time.

If so, it is the forerunner not only of the modern railways but of virtually all modern engines, including cars and aeroplanes. As such, it could be the technological equivalent of evolution’s ‘missing link’ - which would make it utterly priceless.

To solve the puzzle, scientists and historians will examine the model’s design and manufacture in detail. Analysis of the metal used in its construction will reveal where the model was built and may provide clues as to its origins. Engineers will also compare the model’s design with other machines from the 1800s, and investigate its machinery marks.

Richard Trevithick was interested in whether steam locomotion would be effective at high altitudes, so the model may also have visited Peru for experiments in the Andes. An analysis of boiler residues may reveal whether Peruvian water was ever used in the model.

Jim Rees, Rail Collections Manager at the National Railway Museum, said:

“This is a fantastic item to be acquired for the nation. It will help us to understand the earliest powered transport and give us a better understanding of the railways which paved the way for the Industrial Revolution.

“This may be one of the first model railway engines in the world—but this model was not built as a toy. It was to test new engineering concepts.

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“The Sans Pareil model is very different in design to Hackworth’s locomotive of the same name which took part in the 1829 Rainhill trials. But we know that Trevithick used the same name in his own early work. If this is indeed Trevithick’s work, it is one of his earliest designs, experimenting with the working relationship between two cylinders. It could be a very exciting discovery indeed.”

Dr David Gwynn of Govannon Consultancy, an industrial archaeologist commissioned to inspect the model for the Museum, agrees:

“The double immersed cylinder on Sans Pareil resembles other locomotives by Trevithick and is similar to those used around 1811. That particular design concept was never used by Hackworth.”

Fiona Spiers, Heritage Lottery Fund Manager for Yorkshire and the Humber, said:

“This intriguing piece of British engineering is a great example of our industrial legacy. Helping the National Railway Museum to buy it for the nation’s collection is a fantastic way to ensure that future generations can learn about the importance of this part of our history.”

The model will go on display at the NRM this Monday until September. It will then be despatched to laboratories elsewhere in the UK for analysis. The results will be presented at the 2008 Early Railways Conference in London, following which Sans Pareil will go on public display in York.

Notes for editors

Sans Pareil model

- The purchase of Sans Pareil for the National Collection cost just over £92,000 and has been made possible by a £51,000 grant from the Heritage Lottery Fund and a £30,000 donation by the Friends of the NRM.
- The model was purchased by Jonathan Minns in the 1960s and has been on display at the British Engineering in Hove. It was due to be sold at auction on 10 May but was sold to the NRM in advance.
- Sans Pareil is built of brass, copper and wrought iron complete with double cylinder and copper boiler.

Richard Trevithick

- The inventor and engineer Richard Trevithick (1771-1833) was responsible for building the world’s first steam locomotive. The original Penydarren locomotive made its first journey on 21 February 1804, hauling ten tons of iron, 70 passengers and five wagons on the nine-mile journey from Penydarren to the Merthyr-Cardiff Canal.
- The original locomotive was never preserved, but a full-sized working replica was built by the Welsh Industrial & Maritime Museum (WIMM) in 1981. The replica engine is owned by the National Museums and Galleries of Wales and is on display at the Waterfront Museum, Swansea.

The Rainhill Trials and Timothy Hackworth

- Steam locomotive mechanical engineer Timothy Hackworth (1786 - 1850) worked in Shildon, County Durham and was briefly employed by George Stephenson.

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- Timothy Hackworth's full-size engine, also named Sanspareil, was one of the five competing engines in the Rainhill Trials, a competition run in October 1829 by the directors of the newly built Liverpool and Manchester Railway. It was set up to find the best way to pull carriages on the railway. Despite being over weight, Sanspareil was allowed to compete in the competition but was forced to withdraw with a cracked cylinder. The only engine to complete the tests and win the prize money of 500 guineas was Rocket built by George and Robert Stephenson.
- Hackworth's 1829-built Sanspareil is on show at Locomotion: the National Railway Museum at Shildon.