

## Walker steam engine 942 of 1907

A recently completed project at Sovereign Hill has been to enrich the underground mine tour experience by improving access to the mine. An inclined tram journey was chosen as the most effective method to replace the walking track leading down the hillside. As part of the inclined tramway exhibit, Sovereign Hill's Steam Operations team restored and installed a 1907 Walkers Limited steam engine adjacent to the winding gear of the tramway. This horizontal engine has a cylinder bore of 11-inches and a stroke of 20-inches. It is fitted with Meyer expansion gear driven by twin eccentrics off the main crankshaft. The engine carries the maker's number 942 cast into the main frame.

The firm of Walkers began life in Ballarat. John Walker was born in Cheshire, England, in 1823. He arrived in Victoria in 1859 and settled in Ballarat. In 1863 he started the Union Foundry in partnership with Thomas Braddock, William Thomas Sandry and James Ferguson Wood.<sup>1</sup> A branch was opened in Maryborough, Queensland in 1868, and the business prospered. In 1878, the Ballarat part of the business was sold to John Hickman and, thereafter, Walker concentrated his efforts in Queensland. As well as the sugar industry around Proserpine, Mackay and Maryborough, Walkers also serviced the growing mining and shipbuilding industries.<sup>2</sup> John Walker retired in 1879 and died in Maryborough on 2 August 1907,<sup>3</sup> the year and location in which this engine was made. Eventually, the engine found its way into the collection of E. M. Baldwin, an engineer in Sydney and was later purchased by Sovereign Hill and installed at the head of the inclined tramway above the mine in late 2008.

The engine as obtained was essentially complete but in run-down condition. The first step in the restoration was to strip down the engine components and clean them thoroughly. What emerged from the years of grime and neglect was an aesthetically pleasing engine (at least to the eye of the steam engineer). Worn components were identified and a list of tasks and priorities was drawn up. As would be expected, the wearing parts required the most work. The original bearing shells were re-used by being freshly built up with white metal, bored out to size and then carefully hand-scraped to match their respective journals, just as would have been done when the engine was first built. The cross-head slides were also carefully honed and set-up correctly. The original piston rings were very worn, so these were set aside for conservation and a new set of rings manufactured and installed. Apart from this work, the rest of the original fabric of the engine could be retained.

Finally, after months of hard and exacting work the engine was ready for its first test run. After lubrication had been attended to and the engine carefully warmed through, Steam Operations manager Craig Ashman took the throttle and the engine was turned over for the first time in many decades. After a few minor adjustments, the engine now runs smoothly every day at Sovereign Hill. The inclined tramway has been a major and very successful addition to what is already Australia's greatest mining museum. The whole of the restoration and commissioning of the Walker engine was carried out "in-house" and the Staff of Sovereign Hill's Steam Operations are most proud of their accomplishment.

### References

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<sup>1</sup> *The Ballarat Star*, Thursday 28 March 1867, page 2.

<sup>2</sup> *The Queenslander*, Wednesday 30 Nov 1938, Page 37.

<sup>3</sup> *The Telegraph*, Monday 5 August 1907, page 7.