

The Phoenix Foundry tandem compound engine

The source of the tandem compound engine driving the battery at Sovereign Hill was the City of Ballarat's quarry in Learmonth Street, Alfredton. On 17 April 1905, the City of Ballarat accepted a tender for £800 from the Phoenix Foundry for the construction of an engine and boiler for the Alfredton quarry. The Foundry had been closed for some months, so this was a welcome opportunity for some much-needed work. The work would employ about 50 hands.¹ The Alfredton quarry was officially opened on Monday 5 March 1906. The plant was described as:

The breaker was one of Baxter's patent improved knapping motion machines, which broke a good sample of metal, and required small power to drive it. The boiler was an internally fired return tube, dry back marine type. The main engine was a high pressure compound and both the boiler and engine were made at the Phoenix Foundry. The winch was a compound one, of usual mining type and large drums, purchased from Messrs Cameron and Sutherland. The elevator and screen were of the strongest and best, and made by Jacques Bros of Richmond.

The plant listed above was valued at £2800, and the engine was christened the 'Ada' by the Mayor's daughter, Ada Whykes.² The 'dryback' boiler was fitted with one water bridge and two Galloways in the Adamson's flanged furnace tube, and forty-two 3½in return tubes. It was allowed a working pressure of 110psi.³ In July 1906 a second stone crusher was added to the plant, and the office was fitted up with a bunk and chimney for the comfort of the caretaker.⁴ In his annual report for 1905-1906 the mayor of Ballarat stated that the quarry was proving as 'useful and economic' as had been anticipated.⁵

The engine is 'tandem' in that the cylinders are placed in line and 'compound' in that the steam is successively expanded in two stages. It is believed the engine was out of use by the mid-1930s and was donated to and removed by Sovereign Hill in the early-1970s and placed in its present position in the battery house in 1973. The engine must have been one of the last items produced at the Phoenix Foundry (along with a winder for the Victoria United Mining Company), the Phoenix Foundry being placed into voluntary liquidation in October 1906. The engine has been repainted (although originally the cylinder cladding would have been blued steel) and new piston rods and main bearings have been fabricated. Otherwise it is a remarkably original example of its type and the only Phoenix stationary engine known to have been preserved.

References

¹ *The Age*, Tuesday 18 April 1905, page 6; Saturday 20 May 1905, page 10.

² *The Ballarat Star*, Tuesday 6 March 1906, page 1.

³ PRO, VPRS 7854/P2, unit 8, BIA 0706.

⁴ *The Ballarat Star*, Thursday 2 August 1906, page 2; Saturday 18 August 1906, page 8.

⁵ *The Ballarat Star*, Tuesday 28 August 1906, page 3.