



West Australian Public Works Department 0-6-0PM NW 3 "Kaiser" (Rhnrthaler 161 of 1912) at the Department of Transport workshop, Wyndham port on 27 September 1992. Photo: Jeff Austin

## Dyckerhoff locomotives in Australia

by Arnold Lockyer

Just prior to World War 1, two 3ft 6in gauge 0-6-0PM locomotives arrived in Australia from Germany. They were built by Ruhrthaler Maschinenfabrik Schwarz & Dyckerhoff GmbH of Mulheim/Ruhr, whose agent was Ironside Sons & Dyckerhoff, which was, in turn, a joint venture between Ruhrthaler and FM Hawthorn in London.

Although quite different in size, both were classed as 'New Century' type. The larger (B/N 163 of 1914), a 100 HP (75 kW) machine, was purchased by the South Australian Railways, to work on their Eyre Peninsula Division, whilst the smaller (B/N 161 of 1912), a 35 HP (26 kW) unit, was for the West Australian Public Works Department, for use on the jetty tramway at Broome. It became NW 3 on the PWD roster and acquired the nickname 'Kaiser'.

In 1915, it was transferred to Wyndham. This was brought about because a new jetty, with a 3ft 6in gauge tramway, was being constructed at Stony Point, about one mile north of the town jetty, to serve the meat works.<sup>1</sup>

At this stage, it would appear that the jetty and tramway were under the control of the PWD but in 1919, due to friction between Government Departments, the officer in charge of local PWD operations was given a cheque for £500 and told that his services were no longer required. Control of the area then passed over to the Agriculture Department, though it appears that the tramway remained with the PWD.

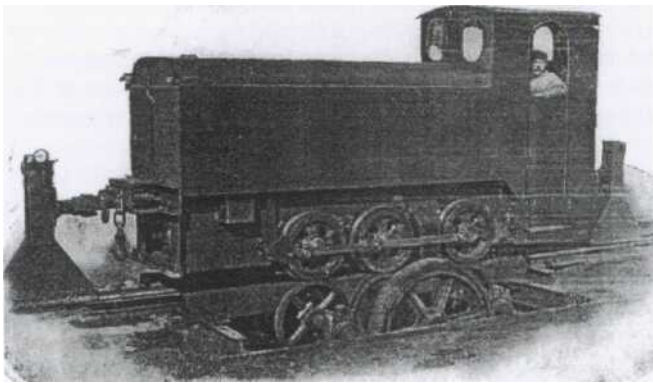
Very little is known about the operation of 'Kaiser' at Broome or at Wyndham. It must have been considered sufficiently useful to justify its transfer in 1915. However, when photographed at Wyndham by Colonel John Goggs in October 1944, it was festooned in weeds and appeared to be set aside. This was at a time when two much older steam locomotives there were still in regular use, so perhaps 'Kaisers' performance had ultimately not been up to expectations.

The best evidence we have as to the difficult nature of operating a 'New Century' locomotive comes from an eyewitness account of the first mainline trial undertaken by the SAR unit. This formed part of an article entitled "The first Internal Combustion Engine used by the South Australian Railways" by WC Gillespie, which appeared in the February-March 1958 edition of *Railways Institute Magazine*.



163 of 1914 at Port Lincoln in 1915, ready for its trial trip to Wanilla. In the cab is fitter Ern 'Curly' Fox who, according to GW Gillespie, was "the only man who was game to drive the engine".

From *Railways Institute Magazine*, Feb-March 1958



161 being tested at the works prior to despatch to Western Australia, as seen in an early catalogue published by FM Hawthorn "Sole Agent for Great Britain & Colonies". John Browning Collection

"Designed to work on lines where water was scarce, it might have saved water but unfortunately it used nearly as much kerosene<sup>2</sup> as the average [steam] engine uses water. The driving power consisted of two cylinders placed horizontally and, when the engine was working, the vibration was terrific. The transmission was by means of a clutch worked by a hand wheel which had to be turned about ten times to put the engine into neutral. By the time the driver had engaged the clutch, started the engine moving, and declutched again, the engine had moved a minimum distance of approximately ten yards.

For this reason the engine was useless for ordinary yard shunting, as the only way it could be coupled to another vehicle with safety was to stop the engine short and push the vehicle on to it. After a few trials in the Port Lincoln yard, the engine was parked in the Loco sheds and practically forgotten.

However, early in 1915 it was decided by the authorities that a trial trip was to be made as far as Wanilla, a reducing station 24 miles away from Port Lincoln. A train was made up consisting of two bolsters of rails and a blue brake [van], total weight 58 tons. A start was made about 9 am one morning when there was no other train on the track. [Fitter/ Curly Fox was driving, accompanied by an expert from the firm who had supplied the engine. Eric Herbst was the guard and the writer was sent out as an observer, armed with a large turnip watch and a note book.

The first four miles out of Port Lincoln, which is mostly uphill, was carved out in the even time of one hour, but the next mile, which was all downhill, took only four minutes. This was the fastest the engine ever travelled under its own power. Coomunga, 14 miles from Port Lincoln, was reached in just under four hours. After a short spell to report progress to Port Lincoln, where everyone was getting anxious, a start was made for the next siding, Pearlah. As the train was started

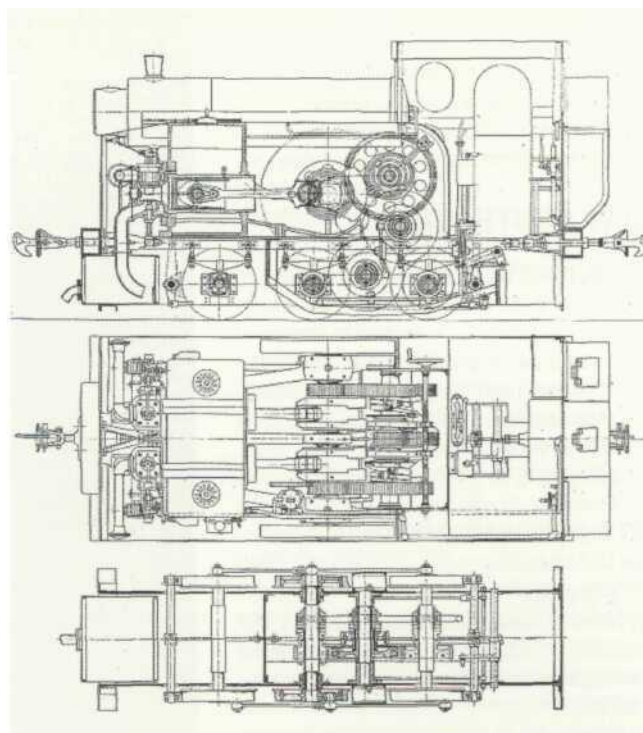


161, 'Kaiser', at Wyndham in October 1944. Photo: John Goggs

the engine jumped nearly a foot in the air and stopped. An examination disclosed that the expert, who was driving at the time, had started the engine in top gear. A fresh start was made, but we had not gone far when the engine developed a hot box on the front driving axle. This was cooled down [and] a fresh start made, but the bearing was red hot before we had gone a hundred yards. As it looked as though we could not go on, we decided to return to Coomunga, detach the loading and go home.

Accordingly, the train struggled back to Coomunga, the loading was put off, the axle cooled down again and a start made for Port Lincoln. About 6 pm, we had reached Duck Ponds, and still had nearly eight miles to go. As our prospects of reaching home under our own steam appeared to be very poor, the train (what was left of it) was pushed into the siding and a request was made by telephone, to Port Lincoln, for an engine, which was duly sent out and we were hauled home, arriving just twelve hours after we had left.

It was afterwards ascertained that the driving axle of the combustion engine was badly bent. The engine did not run again, but was cased up and sent back to Islington, where I believe it ended its days providing power for machinery in the workshops."



General arrangement drawing of 163, showing the two horizontal cylinders, as well as the flywheels, drive gears and the troublesome handwheel-operated clutch. John Browning Collection

'Kaiser' was more fortunate. After many years of disuse, and several years on display in a park at Kununurra, it was brought back to Wyndham, to be preserved in company with its old stablemate Hudswell Clarke 0-6-0ST PRESTON (379 of 1891).<sup>3</sup>

'Kaiser' may not have fulfilled its maker's hopes and expectations, but it was a worthwhile attempt to introduce a new and different type of motive power, one that would ultimately triumph - though not for a few decades. Today, it provides us with a fascinating link to the pioneering days of internal combustion locomotives.

## Notes

1. See "North West Coastal Tramways: Wyndham" by Ian Crellm and Frank Stamford, in *Light Railways* 59, January 1978.
2. The fuel used was most likely 'power kerosene', which is a mixture of kerosene and mineral turps, often used in petrol engines of the period.
3. See *Light Railways* 151, February 2000, page 31.