

A & G PRICE LTD

Record Report by John La Roche, January 2012

GENERAL INFORMATION

LOCATION

Beach Road,
Thames

REGION

Thames Valley / Coromandel

ACCESS INFORMATION

The works are not open to the public.

SUMMARY

A & G Price Ltd. in Thames has the largest foundry in the country and is New Zealand's premier heavy engineering company. The company has been manufacturing high quality iron, steel and brass products since it was established in 1871.

Alfred Price (1838–1907) learned about pattern-making and building textile machinery before he emigrated from England to Auckland in 1863. A few years later his brother George followed him to New Zealand and the two established A & G Price Ltd at Onehunga in 1868. The business had grown sufficiently by 1871 to expand and open a Thames works.

In Thames A & G Price made stamper batteries, Pelton wheels, pumps and other machinery for the goldfields of the region. The Onehunga works supplied flax milling machinery and built railway carriages and wagons for the government. However, the Onehunga factory was closed when their railway contract was completed in 1874, and all work was shifted to Thames.

In its very early days A & G Price was able to design and construct much of the manufactured equipment needed to service New Zealand's requirements. By 1896 the Thames premises had electric lighting from a Pelton wheel powered generator. Picking up where the Onehunga works left off, the Thames factory manufactured railway engines even before the Thames branch railway was completed in 1898.

A & G Price Ltd. has made a major contribution to New Zealand's progress in its over 140 years of operation, through the design and construction of steam and diesel locomotives, road graders, rock crushers, boilers, marine engines, mining, sawmilling and forestry equipment. An example of the importance of the company is that between 1904 and 1928 they manufactured 123 steam locomotives for the New Zealand Railways Department.

Still operating today (2012), A & G Price is perhaps the oldest and longest running engineering works in New Zealand. It continues to work in the field of pattern-making and can cast up to 10,000 kilograms (kg) in iron, 6,000 kg in steel, 2,500 kg in stainless steel, and up to 1,300 kg in non-ferrous alloys. Other activities include metallurgy testing and development, and the heavy machine shop has capacity to handle items up to 40 tonnes, six metres (m) in diameter and 10 m long. A recent development has been making the specialised keels for America's Cup and Whitbread/Volvo Ocean Race yachts.

HISTORICAL NARRATIVE

A & G Price Ltd is possibly the oldest engineering company in New Zealand, having been founded in 1868 by brothers Alfred and George Price who immigrated to New Zealand in 1863 and 1867 respectively.

BUILDING A & G PRICE LTD: ONEHUNGA AND THAMES

Alfred was born in 1838 at Stroud in Gloucestershire where he was apprenticed as a pattern-maker at Dudbridge Engineering Works, Rodborough. After arriving in Auckland in December 1863, Alfred went to work for James McIntyre at the Clyde Iron Works in Onehunga and then later as engineer on the steamer *Woodpecker*. He returned to England in 1867 to marry Kate Alder and soon after returned to New Zealand with his new wife and younger brother George. The two brothers then found work as first and second engineers on the *Huntress*, taking machinery from Onehunga to the New Zealand west coast goldfields.

Early in 1868 the two brothers established the engineering firm of A & G Price Ltd at Onehunga, at first making flax machines. Flax was a major export commodity in 19th century New Zealand, reaching over 6,000 tonnes in 1873. Alfred and George Price had developed their own design of machine to separate the fibres from flax leaves. By 1873 there were 300 flax mills in New Zealand, most using A & G Price's flax dressing machines which were judged to be the best on the market. They had to build their own foundry for making the machine and water wheel parts. Water wheels were a common source of motive power for machinery. In January 1870 disaster struck when they lost their foundry in a fire, but it was quickly rebuilt to the brother's requirements using heart Kauri. This building was demolished in 1957.

In 1871 A & G Price Ltd branched out from Onehunga, building a works in Thames (then as known as Grahamstown) when the gold fields were at their peak. Here they manufactured the stamping batteries, steam engines and other equipment needed by the gold mining companies of the region.

Pumping machinery to dewater deep shafts at the goldmines required specialist equipment. The first "Big Pump" was manufactured and brought in from Australia to dewater down to 183 m, but it was not long before another pump was needed and A & G Price manufactured a pump that eventually went down to 195 m.

The timber industry in the Coromandel and Northland areas required steam engines, ironwork and timber jacks which Prices specialised in making. It was estimated that Prices manufactured nearly 25,000 timber jacks during their first 100 years to 1968. During World War II Price's timber jacks were used to help clear rubble from the bomb-damaged buildings in London.

POWERING INDUSTRY FROM THAMES

After the closure of the Onehunga works in 1874, Thames became the base of operations for the company who continued to design and manufacture their established products.

Waterwheels, and the more efficient Pelton wheels introduced in 1884, were important source of motive power made by A & G Price. Each had the advantage of requiring little attention and no expensive fuel (in comparison to steam engines). Therefore, the company soon had orders from all over New Zealand and Australia. Of the 26 crushing plants in Thames in 1884, only six remained using steam power when Pelton wheels were introduced.

However, A & G Price Ltd also manufactured steam engines and boilers from 1875 when they supplied the compound steam engines and boilers for the *Durham*, a 55 tonne coastal steamer that was being rebuilt at Devonport. The company also supplied a 1.8 m diameter screw propeller for this vessel. Price's engineers installed all the equipment after it had been shipped to Devonport.

By 1881 Prices were building ships at Thames. The first was the paddle steamer *Patiki* which had a wooden hull on steel frames. The second ship built at Thames, launched in 1883, was the 20 tonne *Despatch* which was the first triple expansion engined ship built in New Zealand. This ship described as "elegantly and commodiously fitted up for accommodation of travellers" was built for the Waihou River passenger trade. In 1891 the *Despatch* was purchased by Captain Alexander Campbell and renamed *Ethel 1* for service on the Waitemata, and later on the Kaipara Harbour.

In the 1890s, after the Waihi Gold Mining Company had amalgamated most of the small mines in the district, A & G Price became a major supplier, providing a 100 horsepower steam engine to drive the stamper battery, mine cages and other equipment. Prices also erected large stamper batteries at Waikino and Karangahake.

A & G Price were also involved in manufacturing items in relation to World War II. Product included triple expansion steam engines for mine sweepers, parts for brengun carriers, winches for hauling out flying boats, steelwork for aircraft hangars and portable gantries for servicing heavy guns.

Two sets of stone crusher jaws in manganese steel weighing 5.5 tonnes each were made in 1952 for Winstone's quarry in Auckland. Over subsequent years many large castings have been made at the Thames works. The company has made all sorts of equipment for the timber milling industry, including the wood preparation plant at the Kawerau paper mill.

A & G PRICE'S RAILWAYS WORK

Price's first contract from the Public Works Department (PWD) was to build railway carriages and wagons at Onehunga. The first three first class carriages cost £192-14-0 each, seven second class were £162-4-0 each and twelve wagons at £100 each.

In 1883 the company's first steam locomotive was built and was designed to haul rock to the stamper battery at Wairongamai. This locomotive continued to be used for many years by the Kauri Timber Company, followed by the PWD in Picton and Arthurs Pass.

In December 1898 the Auckland to Thames railway was opened and, after much lobbying, Prices won a government contract from New Zealand Railways (NZR) to build ten Wf class engines, each of 44 tonnes. The contract required completion within 30 months at a cost of £28,000.

With the North Island Main Trunk (NIMT) railway nearing completion in the early 20th century there was a need for powerful locomotives. A & G Price won the contract to build 30 A Class locomotives which had a top speed of 102 kilometres per hour and were able to haul goods trains of up to 711 tonnes. The first engine, delivered in December 1907, was used to haul the first train over the NIMT from Taumarunui to Auckland in 1908.

The one hundredth steam engine to be built by A & G Price was Ab 705. This was part of an order for 20 Class Ab engines completed between 1922 and 1926.

Prices also built 22 geared locomotives for bush tramways. These included their 16 wheeler locomotives used on tramways at Mamaku and Ongarue where they had to negotiate tight curves.

By 1939, the advantages of diesel engines were being recognised. Prices built two diesel shunting engines for NZR and two others for Whakatane Board Mills and a Wanganui timber company. Soon more diesel locomotives were built for the New Zealand Air Force and Army, the Ministry of Works, coal mines, freezing works, chemical works, cement works and Kinleth paper mill.

After World War II Prices built 500 Lc class wagons for NZR, as well as overhauling steam locomotives, until 1964 when the change-over to diesel locomotives was completed. They continued to do a great deal of work for NZR until the mid 1980s when the department was privatised.

THE COMPANY TODAY

In 1949 A & G Price amalgamated with William Cable & Company, and then in 1954 came the merger with Downer & Company. When A & G Price Ltd celebrated its centenary in 1968 it was a member of the Cable Price Downer Group.

Today (2012) the plant employs 135 highly skilled foundry tradesmen, machinists, fitters, welders and engineers. The company has capacity to produce castings up to 10,000 kilograms (kg) in iron, 6,000 kg in steel, 2,500 kg in stainless steel, and up to 1,300 kg in non-ferrous alloys. They continue to have a pattern-making workshop and a range of metallurgy testing equipment to identify, formulate and test metallic combinations for a variety of specialised uses. A full design and drafting office facility is provided with highly skilled craftsmen in all departments. The heat treatment department provides a wide range of stress relieving, annealing, water quenching and oil quenching and hardening facilities. The heavy machine shop has capacity to handle items up to 40 tonnes, six metres (m) in diameter and 10 m long. A recent development has been making the specialised keels for America's Cup and Whitbread/Volvo Ocean Race yachts.

THE LEGACY OF ALFRED AND GEORGE PRICE

A & G Price Ltd have made a huge contribution to New Zealand's economy and society by designing and manufacturing a wide range of equipment using local labour and materials. The company has been a major employer in Thames, but the products they have made have benefited a large proportion of New Zealand's population.

Alfred Price served as a member of Thames Borough Council and together with John Watson, the company Accountant and Secretary, they supported the Thames School of Mines by serving on its committee, and building the test plant, furnace and model crusher. In this way they contributed to training future mine managers not only in New Zealand, but also in many other parts of the world including New South Wales, Victoria, Western Australia, London, Malaya and Mexico.

The present company continues the more than 140 year old tradition of being able to design and make almost anything in metal to the highest quality standards, serving not only New Zealand industry, but world-wide markets.

This place has been registered by the New Zealand Historic Places Trust as a Category 1 historic place (Register no. 128):

[A & G Prices Foundry: New Zealand Historic Places Trust registers information](http://www.historic.org.nz/TheRegister/RegisterSearch/RegisterResults.aspx?RID=128)
(<http://www.historic.org.nz/TheRegister/RegisterSearch/RegisterResults.aspx?RID=128>)

REFERENCES

'A & G Price Ltd., Thames,' New Zealand Geared Locomotives, URL: <http://www.trainweb.org/nzgearedlocomotives/price.html> (accessed 1 February 2012)

IPENZ, *Engineering to 1990*, Engineering Publications Co Ltd, Wellington 1990

Isdale, Alistair M., 'Price, Alfred - Biography,' from the Dictionary of New Zealand Biography. Te Ara - the Encyclopedia of New Zealand, URL: <http://www.TeAra.govt.nz/en/biographies/2p29/1> (updated 1 September 2010)

Judd, Warren, and Quinn, Peter, 'Men of Steel,' *New Zealand Geographic*, Vol. 34 April-June 1997

Vennell C W, *Men of Metal. The story of A & G Price Ltd, Auckland & Thames 1868-1968*; Wilson & Horton, Auckland, 1967

A & G Price website, URL: <http://www.agprice.co.nz>