

New Zealand Insulators and Temuka Pottery

New Zealand Insulators came into being on the 20th Feb 1924, when the National Electric and Engineering Co. (NEECO) took over the Dominion Porcelain and Tile Co and renamed it. Dominion Porcelain and Tile had been formed from the Canterbury Pipe and Tile Co in 1922, and that in turn from the Temuka Pipe Co, which succeeded Hoare and Page in about 1909. Hoare and Page was a brick making company of Temuka, and William Hoare (Senior) had been employed previously as a brickmaker by Joseph Whitehead, who established a brickworks in Temuka in 1868. William Hoare started his own brickworks in 1894 on the land at the south of the present factory, and it is probable that Whitehead's original brickworks was nearby – the town board discussed road conditions on "Ewan Road leading to Whiteheads brickyard" in 1888, and NZI's factory is at the end of Ewan Rd. William Hoare's son, William, was employed by the various owners of what had been his father's company and then continued with NZ Insulators for all his working life – the first of many employees who spent their entire working lives with the company.

In 1916 the Temuka Pipe Co had been purchased by John Redpath, who also bought a small porcelain insulator manufacturing company in Christchurch and persuaded its owner, William Brown, and his family, to move to Temuka to set up insulator manufacturing there. Since the clays on the Temuka site were unlikely to have been suitable for insulator manufacture, the clay deposit found at Kakahu in 1903 may well have influenced the move to insulator manufacture. Other factors were restriction of supply from overseas due to the war, and a vast demand for telephone insulators, as may be seen in any photograph of a city centre around that time.

The Browns were successful in their efforts to establish insulator manufacture, and moved on in 1917 to work with Peter McSkimming at Benhar. A skilled ware thrower, James Johnston, and his son Hector had also been recruited by Redpath, and acted as joint managers at Temuka until 1922. They introduced pressing as a means of forming insulators – a method still in use for smaller ware, and an indication that production was reaching high levels.

In about 1918 Redpath sold the company to R. H. Taylor, who started developing other electrical products, for which he needed additional capital. NEECO, who were probably a major customer by this time, bought a substantial shareholding, and finally took over the company in 1924, retaining Taylor as manager until 1927, when he moved to the head office in Wellington. It is likely that the developments of the Taylor era included the rewirable fuses which became a major part of production in later years, and which may be found in one type or another – usually un-noticed – on the fuse-board of almost every New Zealand house built up to about 1980.

From 1927 the company was managed by J. G. (Jock) Ritchie, who, in about 1930 was succeeded by Arthur Rodin Toplis. Toplis, as well as being an innovative manager, was a skilled craftsman and experienced potter. He diversified into producing pottery, assisted by the works chemist, O. C. Stevens, a graduate of Otago who had joined the company in 1924. Toplis probably had a difficult time on joining the company, since orders fell to such a low level in 1931 that the factory closed for a time. At this time it appears some 35 men were employed. Government assistance meant the factory reopened for three months but subsequently work was reduced to three days per week for only six men. Even at that time the ability of NZI to produce a wide range of products was evident. An order for 1000 firebricks was being filled, and the manufacture of road markers considered. Toplis himself produced a number of promotional items over these quiet years, which are collectors items today. The range of clays and other raw materials used was increasing and dependence on the Kakahu clay reduced.



NZI circa 1950.

In 1932 a large order for insulators resulted in a five and a half day working week for two months for 30 men, but subsequently business was slight. In 1936, however, the closure of New Zealand Potteries in Wellington opened the way for establishment of Temuka Pottery on a commercial scale, especially for electric jugs, and Toplis's work in devising clay mixes, glazes and setting up moulds was rewarded. In 1939, however, Toplis unfortunately died and D. J. Walker was appointed as a temporary manager. In 1940 a Mr Miller was appointed, but was not a success and soon left. R. H. Taylor, the previous owner, was then appointed. The business was left with considerable debt after the Miller era, and only 14 people were employed. In 1942 Thomas Norman Lovatt was appointed as general manager and energetically set about revitalising the plant, raising production levels and employing up to 40 people.

He was helped by the government declaring the factory an essential industry following the adoption of British Standard designs for communications insulators, and the company rapidly became a major supplier of telephone and telegraph insulators, many being exported to India. Although restricted in what the factory could produce during the war years, Lovatt contrived to include a wide range of pottery, though much was institutional or destined for the armed forces. The 'Railway cup' is one such item, though it appears it was in production well prior to the war.

In 1943 an electric tunnel kiln was installed, one of few in the world at the time. Few details survive, but it is likely that it was only used for firing glazed pottery and similar items not requiring a high temperature, and the majority of the firing was in coal fueled bottle kilns or chamber kilns. In 1945 the company erected a laboratory for the testing of materials and for experimental work, which is still in use today. Clays from Kakahu, Mt Somers and Nelson were in use and Ron Jones, then the works chemist, spent time at the Nelson clay mine testing clay on site.

In August 1945 a major flood occurred in Temuka, and much of the stock of coal and timber held at the factory was swept away. None-the-less, production recommenced within three days, and the company also used its drying facilities to help local people dry bedding which had been caught in the flood.

The factory's only fatality recorded in all its years of operation occurred in 1946, when a Mr Higginbottom had his clothing caught in a pulley, and was thrown against the concrete floor.

From about 1946 to 1950 a new building was constructed for processing the clays and other minerals. This was a three-storey brick and concrete building of massive construction to carry heavy machinery, and the enormous amount of reinforcing steel which went into the huge beams has subsequently caught out many plumbers and electricians seeking to attach equipment to them. It is still in use for its intended purpose today and is something of a landmark in this town of low buildings.



NZI staff, 1940's



New Zealand Insulators Staff 1958

In 1950 a major fire destroyed most of the buildings – though not the new millroom - and the company took advantage of the rebuilding to construct an oil-fired tunnel kiln with a view of changing from the old bottle kilns. The tunnel kiln was operational by 1954 and the nine bottle kilns started to disappear. A potential work force of 250 people is mentioned in this era, showing the considerable growth of the company.

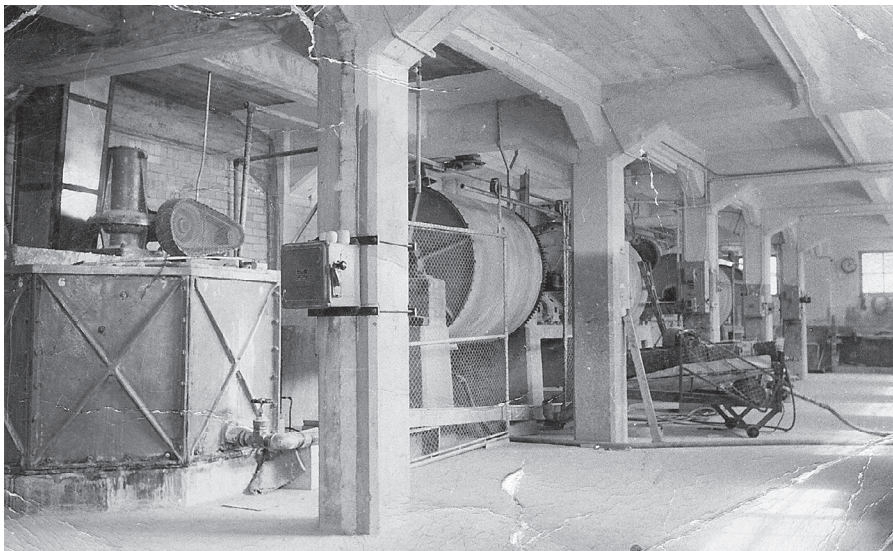
A further fire in 1959 damaged the electric kiln, which was not reinstated, but the second oil-fired tunnel kiln being built by factory personnel was completed and put into service. This saw the end of the bottle kilns. Three had survived to 1958, but only one was being used at this time, and had been converted to oil firing.



NZI lathes circa 1950

The expanding economy of the early 1960s, together with the increasingly technical complexity of the electrical products meant that the Temuka site was suffering labour and space shortages, and so a new factory was built at Ashburton in 1965 and the manufacture of metal and plastic components and assembly of fuses, lampholders, etc was moved there. The Temuka plant concentrated on the ceramic ware and was the head office. Specialist staff were recruited from many places. Between 1963 and 1967 a new office block was built at Temuka and a tool-room and drawing office in 1965. Production of fuses, on increasingly automated plant, was around 1.8 million per year at this time, and was increasing. From the early 1960s the company had been making floor and wall tiles (as distinct from the roof and drainage tiles of its earliest years) and supplied the majority of those lining the Lyttleton road tunnel.

In 1966 Tom Lovatt retired, and Ron Guthrie, an engineer, replaced him. In 1967 Cable Price Downer took over NEECO, and made NZI an independent company within the CPD group. A greater concentration on the technical products at the Ashburton plant did not result in any contraction at Temuka, and, though tiles were phased out in the early 1970s, the flagging pottery business was revived with a range of ware designed by Jack Laird, of Nelson. This became very popular, and a separate pottery manufacturing plant was established adjacent to the insulator factory. In 1972 a factory shop was opened in the town. Guthrie left in 1977, joining the list of people who exchanged Temuka for McSkimmings at Benhar, and was succeeded by Ross Murray, previously the sales manager and a world class golfer.



NZI Mill Room circa 1951/52. Ball mills on right, 1 ton of balls put in with clay. Blunger (square) on left.

Increasing production, the need for larger insulators, the oil crisis of the late 1970s and quality problems with the pottery glazes combined to cause the building of 11 electric batch-firing kilns. The first of these was completed in 1981, the last in 1986, and the last oil fired kiln was demolished in that year. Specialised electric dryers were also installed over this time, allowing larger insulators such as those made for the North Island trunk line electrification, (for which NZI supplied all the insulators) to be made successfully.

In 1986 production of pottery peaked at 102,000 items made in August, as well as large quantities of insulators and electrical components, and over 400 people were employed between the two factories. Over the 1970s and 80s more machinery for clay processing was installed, and the factory's dependence on a single pugmill had been relieved with the addition of two new machines. Computerisation was being used to assist with accounting, wages calculation, sales and production control.

In 1980 and 81 the company had a further try at making wall tiles, in this case the mosaic tiles which were then fashionable. It was not a success, since the tile merchants had been importing very low cost products with high mark-ups on them, and were able to reduce this when faced with competition.

Following the 1986 peak, sales of pottery and insulators declined slowly. Ross Murray retired in 1989, was succeeded by Bruce Matheson, and he in turn by John Barr from 1990 to 1994. The large 'support' work force, which had enabled the factory to do most of its own ancillary work was reduced, and the payment of bonus rates discontinued. The company was split into three divisions – Power Technology and Pottery at Temuka, and Low Voltage at Ashburton, each being fairly autonomous. The company had been bought by the Brierley group when they took over CPD in 1988, and was made a part of the Skellerup group in 1993, then Maine Investments in 1996.

Robin Heron, who had been manager of the Power Technology division in 1994, took control of the pottery division as well in 1995 and became Chief Executive in 1997, effectively reuniting the company. Also in 1997 he obtained an agreement with NGK, a very large Japanese insulator company, to manufacture a range of products for them, and this has been a mainstay of the insulator business in recent years. Other business accrued as competitors such as Nielson in Australia withdrew from insulator manufacture and as the ability of NZI to make large insulators improved. In this respect insulators rated for 110kV were made from 2003 onwards.

Pottery sales declined steadily as the original ware became unfashionable. New designs based on hand-painted decoration of white ware by Royce McGlashen (1989), Paul White (1990) and Christopher Vine (1993) gave some impetus to the market, and the pottery staff themselves have shown considerable skill in producing fashionable ware. The loss, however, of slow cooker liners, which were a major production item, in 2002 to cheap Chinese sources, was a serious blow to sales already struggling with imports at a fraction of the cost of manufacture. Because ware forming became uneconomic with the low levels of production, biscuit ware was sourced from outside the company and was glazed, decorated and fired at Temuka. In 2009 the pottery shop moved from Mendelson's Barn – a historic Temuka building, where it had been since 1996 – to the factory itself.

In 2007 the low voltage division, now more concerned with importing than manufacturing as its licences from overseas manufacturers ran out, was returned to Temuka and the Ashburton factory closed, placing the whole company again under the one roof.

After Maine Investments in 1996, ownership was, for a number of years, in the hands of private investment companies. New Zealand Insulators is now part of the TIRI Group, a group of 12 New Zealand companies owned by New Zealand-based American businessman, Tom Sturgess. Other high profile companies in the group include Masport, A&G Price and Pacific Wall Coverings. The Company has a much broader market base and product offering than ever before, with a large number of agency products sourced from off-shore. This has meant the company is now a distributor as well as a manufacturer.

Markets include lines companies, Transpower, electrical wholesalers, electrical manufacturers and government departments. Over 30% of the company's products are exported.

In 2009 NZ Insulators is the sole survivor of several insulator manufacturers in the South Pacific, and one of very few world-wide (excepting China). Similarly the pottery division has seen such giants overseas as Wedgwood go into receivership while remaining in business itself, though on a reduced scale. Survival under the conditions of the last decade is considerable cause for pride.



NZI 25 Club – employees who worked for 25 years or more. Back left: Doug Coskerie, Colin Hall, David Simpson, Ron Braddick, Ken Lee, Colin Murray. Front: Bill Jones, Boyd Scott, Helen Bradshaw, Phyllis Gray, Des Quinn, Harold Moore.

The help of many of NZI's employees, past and present, and the contribution of the late Joyce Squire, who searched newspapers and directories for items relating to NZI, is acknowledged. Gail Henry's book 'New Zealand Pottery' (Reed publishers, 1999) also provided much information and gives a much fuller account of the pottery designs than is mentioned here. For those seeking more information on Temuka and other potteries of New Zealand it is essential reading.

It is regretted that the hundreds of people whose contributions have built the company cannot all be individually acknowledged, so a policy of naming only the General Managers has been generally followed.

- article supplied by NZI

The making of NZ Railway cups and saucers at the NZI factory

Once the ingredients had been weighed they were all tipped into a ball mill which was lined with specially fired bricks and it was ground for 12 hours. After milling, the slip was run over a vibrating screen and pumped through a magnet to remove any minerals from the slip and put in a holding tank. It was then pumped from the tank in canvas-lined filter presses and left to set. The clay was removed from the press and put through a pug and extruded through a metal die and formed into round rolls of clay.



It was then taken to the Cup Department where the clay was put in plaster moulds which were located on trays on an electric drier which was turned around to the jolly operator who shaped the cups with a metal profile. The moulds with the shaped cups then were moved around the rotating drier passing under the electric elements which were on the top of the drier. As the complete round of trays moved to the other side of the drier, they were dry enough to remove from the mould and be placed in wooden boxes and the moulds were then filled with more clay to repeat the process. The same process was used for the making of saucers.



After a period in the curing room the cups were brought out to the palleting lathes to be turned into the outside shape of the cup.

The cups were then taken to the women who put the handles on them with slip which was made from broken cups and they were left to dry prior to being put into saggars to be biscuit fired.

After biscuit firing the cups were stamped with NZR on the side and Temuka Pottery on the bottom. The cups were taken to the dipping tubs and immersed in white glaze before being fired then taken to the packing shed for dispatch.

A total of 2500 cups and saucers were made each eight-hour working day. – **Bob Martin**