

**REMARKS AT THE NYRSTAR HOBART ZINC WORKS  
ENGINEERING HERITAGE MARKER CEREMONY BY THE  
HONOURABLE PETER UNDERWOOD AC, GOVERNOR OF  
TASMANIA, RISDON - TUESDAY, 23<sup>RD</sup> APRIL 2013.**

I must say that I am an admirer of the work of Engineers Australia (Tasmanian Division), through its Engineering Heritage Group, and I feel honoured to have been asked to unveil the Engineering Heritage Marker for the Electrolytic Zinc Works here in Hobart. I think that Engineering Heritage makes a real contribution to our history by celebrating and identifying with markers significant engineering places, plant and other artefacts in this State. This is the third Engineering Heritage Marker that I have been privileged to unveil. The other two were at the Paper Mill at Boyer, to recognise the first machine to produce paper from hardwood, and the other to recognise the importance of the Tasmanian Transport Museum at Glenorchy.

The awards fall into two categories: Engineering Heritage National Landmarks and Engineering Heritage Markers. The importance of them as markers of significant engineering developments in the past is evident from the criteria that the prospective awardees must satisfy. Engineering Heritage Markers are only attached to sites, locations, collections and artefacts of engineering significance which have changed the way in which society lives or functions,<sup>1</sup> and I am sure that you will all agree that the Nyrstar Hobart Zinc Works – or just simply the Zinc Works, as all Tasmanians affectionally know it – is a worthy recipient of an Engineering Heritage Marker.

The Zinc Works, now in its 95<sup>th</sup> year of continuous production, owes its existence to a visionary called James Gillies. Mr Gillies was a

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<sup>1</sup> <https://www.engineersaustralia.org.au/tasmania-division/engineering-heritage-tasmania>

metallurgist who developed a flotation process at Broken Hill and had taken out a patent for this process of producing zinc by electrolysis. Now it appears that, not only was Gillies a visionary, but he was also a good negotiator, for he managed to persuade the Tasmanian government of the day to grant his company the rights to build a dam and a power station in the centre of Tasmania to generate electricity for his zinc processing plant, yet to be built. Both the dam and the power station were built, but Gillies' company ran out of money before the latter came on line. However, in 1914 the government stepped in and took the project on. Gillies continued work to build a zinc and carbide plant at Electrona, but as we all now know, only the carbide plant was built.

Now, at that time, most of the world's zinc production was carried on in Belgium, Germany and the USA, with Britain sourcing most of its requirements from Belgium. Australian concentrates from Broken Hill were processed in Europe, so the outbreak of the war in 1915 totally changed the picture for zinc in Australia. Amalgamated Zinc, the company that owned huge piles of concentrate in Broken Hill, but because of the war had nowhere to process it, started to look closely at Gillies' process of electrolytic production of zinc. Enter Mr Herbert Gepp. He was the manager of Amalgamated Zinc and was then touring America trying to find ways of economically disposing of the big pile of concentrate at Broken Hill. When he heard of Gillies' process, he immediately investigated its feasibility. In the course of doing that, he found that the Tasmanian government was willing to sell large blocks of power at very cheap rates to a company that would use large quantities of electricity such as an electrolytic zinc company.

Now, I interpolate here to say that there is reliable evidence to support the claim that the electricity prices that were offered in 1915 to manufacture zinc were very low, but my recollection is that, even as much as forty or fifty years later, the government spin doctors were still relying on these low prices to boast to the whole world that Tasmanian water power generated electricity was the cheapest in the world, but they omitted to add, but only for those who contracted to use huge blocks of it; for householders, the price was quite different!!

However, it was all good news for the establishment of an electrolytic zinc company here in Hobart. On 2<sup>nd</sup> June 1916, the Electrolytic Zinc Company of Australasia was formed and Mr W L Baillieu was elected as Chair of the Board. Four months later, work began on the Risdon site, a location chosen because of the availability of land, deep water to establish a port and a work force living close by. Mr Gepp returned from America and early in 1917 was appointed the General Manager of the works on a princely salary of £1,500 - but he did get free electricity on top of that!!

The first production was experimental and rolled off the plant on 9<sup>th</sup> February 1917. Its success led to the first industrial, but small scale, plant designed to produce 113 kilos of zinc a day commencing operation on 10<sup>th</sup> March 1917. The rest, as they say, is history.

The Zinc Works has been, and still is, an influential force in Hobart. At times, it has employed a huge work force and paid wages to hundreds of people who spent them in and around the city. Today, the Hobart smelter is one of the world's largest zinc smelters in terms of production volume. Last year it employed 499 people and produced

272,000 tonnes zinc metal. It is focused on high value added products for export to growing markets in Asia.<sup>2</sup> Its product is an essential ingredient in a hugely diverse range of goods and equipment. According to the International Zinc Association, over 11 million tons of zinc are produced annually worldwide. Fifty per cent of this amount is used for galvanising to protect steel from corrosion. Approximately 17% goes into the production of zinc base alloys, mainly to supply the die casting industry and 17% to produce brass and bronze. Significant amounts are also utilized in rolled zinc applications including roofing, gutters and down-pipes. The remainder is consumed in compounds such as zinc oxide and zinc sulfate.

These first-use suppliers then convert zinc into a broad range of products. Main application areas include: construction, transport, consumer goods, electrical appliances and general engineering.<sup>3</sup>

I am sure that everyone here will agree that the Engineering Heritage Group has rightly identified Nyrstar Hobart Zinc Works as a site of engineering significance which has changed the way in which society lives or functions and is, as I say, a fitting recipient of an Engineering Heritage Marker.

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<sup>2</sup> <http://www.nyrstar.com/operations/Documents/Fact%20Sheet%20HOBART%206-2-13.pdf>

<sup>3</sup> [http://www.zinc.org/basics/zinc\\_uses](http://www.zinc.org/basics/zinc_uses)