

THE MAKING OF THE NEWCASTLE INDUSTRIAL HUB

This article charts the formation of the Newcastle Industrial Hub, (NIH), identifies the men who controlled it in its journey from Australian regional obscurity before 1915, to be the core of Australian steel manufacturing and technological development by 1950. This article begins with the question, "What is an Industrial Hub"? I argue that the Newcastle Industrial Hub was a collection of steel making, downstream steel fabrication, heavy engineering companies, together the necessary logistic support facilities to provide the sea borne and heavy rail transport facilities required to provide the ingress of raw material and the distribution of finished steel products. These logistic support operations included the provision of fresh water, electric energy and the technical education to required to develop a educated workforce.

The development of the Newcastle Industrial Hub began in 1909 with a letter written by the general manager of BHP, G.D. Delprat to the company's board where he forecast the eventual closure of the Broken Hill mine, but promised a future more prosperous if the company turned to steel manufacturing. The board accepted Delprat's proposal, sending him to the United States to identify the best steel making technology. During this journey he engaged the engineer David Baker to conduct a reconnaissance to assess the best location for the new steel plant. Baker advised that Newcastle, an existing coal port with good coking coal, suitable land to build the plant, fresh water and adequate labour force available. BHP accepted Baker's advice appointing him to build the new plant, manage its start up and then to be the new plant's manager.

Baker developed a plan for the new steelworks based on the latest American technology and the first Blast Furnace was blown in on 25 August 1915. By 1921 BHP had been joined by three new downstream steel fabrication companies, the Commonwealth Steel Co. which manufactured forged steel products, Ryland Bros. which manufactured wire products and Lysaght which manufactured flat steel sheet and corrugated iron products.

Led by Harold Darling, Chairman of the BHP board and Essington Lewis, BHP's Chief General Manager, the steelworks and each of the downstream steel fabrication companies during the 1920s developed and consolidated their manufacturing and financial positions. In parallel with this growth the Newcastle based public utilities and heavy engineers which provided the underlying logistical support base for steel manufacture developed in parallel. A combination of organisational changes, government support in the form of tariffs and the introduction of improved technologies, lowered the manufacturing cost of steel manufacture and increased the Australian industries competitive position. This was a factor which enabled the NIH to survive and recover from the Great Depression of the early 1930s.

In May 1932 steel production reached its nadir of 179,312 tons, growing to 414,000 tons in May 1934, then growing to 1,000,000 tons by 1939. It has been argued that Australia's economic recovery from the great depression was to a large extent was driven by the steel industry expansion, the great bulk of which was located in Newcastle. In 1934 the steel tube manufacturer Stewarts & Lloyds began operations in Newcastle and each of the other steel fabricators increased production of their products.

The great Depression was immediately followed by a boom in industrial growth in the Australian steel industry. In parallel with this manufacturing growth, from 1935 the NIH was progressively prepared for war. BHP installed a shell making plant in 1936 and in 1938 Stewarts and Lloyds purchased a shell making plant which was operational in February 1940. While the growth in the steel industry was welcome the scourge of unemployment still affected Newcastle and Australia for the remainder of the 1930s.

Expansion in the steel industry was matched by Newcastle's public utilities which provided the logistic base on which the manufacturing centre had grown. Between 1933 and 1941 Electricity generation at the Zarra Street power station grew by 80 per cent to 57 mW. However, the most spectacular growth in public utilities was in Technical Education with the building of the Tighes Hill Technical College between 1936 and 1942.

The declaration of war in September 1939 found all elements of the NIH ready to manufacture and develop where necessary the wide range of steel products required for war. War encouraged innovation in the NIH with a number of special products, including armour plate steel developed by the BHP steelworks and Lysaght. However, the advent of war saw labour shortages develop and between 1942 and 1945 female workers were recruited to work alongside men in the steel industry.

While the advent of war encouraged innovation possibly the most spectacular product developed in Newcastle during the war was the manufacture of Tungsten Carbide tools. Turning, milling and drilling are among the most important and basic operations conducted in the engineering industry. Tungsten Carbide tools had first been developed in Germany during the late 1920s and their performance lowered machining times by more than 60 per cent, but the secret of their manufacture was tightly held. BHP tried unsuccessfully to gain access to the manufacturing secret in 1939, but given the war situation the company decided to develop their own. The development work began in December 1940 and by December 1941 Tungsten Carbide tipped tools were being made successfully. The success of this innovative effort conducted by a steel company in a city not recognised nationally as a research centre should be regarded as a manufacturing triumph.

However such technological triumphs were not matched in the area of industrial relations and between 1943 and 1949 industrial disputes were a burden for the steel and coal industries and for the city of Newcastle. In July 1943 munitions production began to slow and with the advent of peace the steel and heavy engineering industry had to struggle with change. A strike which encompassed the steelworks and all of the steel fabricators in 1948 saw government take a strong line against the union movement with troops being used in the coal mines.

By the beginning of 1950 most of the industrial issues were over, but in that year Harold Darling died and Essington Lewis retired. With the loss of these two men the Australian steel industry went to sleep, not waking again until the 1960s.

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