**Essays on Mount Crosby - Mephan- Ferguson Pipelines**

There is a famous pipe in these parts, which I suppose is not so surprising given that water has been our main export (no pun intended) for 123 years and it can almost be said that, so far as Brisbane is concerned, all pipes lead to Mount Crosby.

The first mains laid were heavy cast iron ones of about 600mm diameter. There is nothing wrong with them, except perhaps that they are heavy and expensive and at the time of their making had to be brought from the United Kingdom. But when it came time for more water to leave Mount Crosby for the taps of Brisbane, a different and more famous type of pipe was selected.

Between the early pipes and these ones, everything had changed with the advent of steel - though it took a while for a successful design to exploit the lightness and strength of the new material. Steel pipes are not cast, but bent into shape, and that was a tricky business for our early makers of pipe.

Not too tricky for the famous firm of Mephan-Ferguson, whose namesake invented a way to make pipe segments out of two half cylinders of steel, joined together by a slotted longitudinal bar pressed tight to make a waterproof seal (see diagram). The idea is said to have come to Ferguson late one night when, on opening a drawer at his desk, he noticed the dove-tail joint that carpenters used to hold the bottom to the sides. Next day he made a steel dove-tail joint suitable for holding his pipe halves together - and before long he was mass producing pipes.

Undoubtedly, Mephan-Ferguson's idea was a good one, but it was made famous by the courage of West Australian Engineer-in-Chief C.Y. O'Connor who chose the untested locking bar design for his incredible Perth to Coolgardie pipeline (constructed 1898-1903). At the time, the only alternatives to large cast iron pipes were welded or riveted types. Welded pipes were in their infancy and riveted pipes often had problems with leakage, so O'Connor, who liked the locking bar design, insisted that the tender documents for his pipeline seek quotations not only for welded or riveted pipes but also for "any other type of pipe".

More than 60,000 Mephan-Ferguson pipe segments were used in the Perth to Coolgardie main; enough to make it famous worldwide and to demonstrate the superiority of the design over its competitors. Many water authorities took note, including our own Metropolitan Water Supply and Sewerage Board, and before long Mephan-Ferguson design pipes were being laid in connection with the Mount Crosby water supply scheme. To the best of my knowledge none are still in use, but there are a couple of places where you can see these famous oldies still in their original position:

1. Below Lake Manchester dam wall, the pipe that carries water to the junction of Cabbage Tree Creek and the Brisbane River is a 42 inch Lockbar installed in 1925; and

2. Near Mount Crosby Road in the gullies between Barnes Hill and Ugly Gully one can see the 36 inch diameter Lockbar (installed 1914) and a 42 inch diameter Lockbar (installed 1925).

Each can be identified by their characteristic seam (the locking bar) running longitudinally along the top or the sides. Use them to remind you of the inventiveness of early Australians and our link to the famous Coolgardie Scheme that has been listed as an Australian national engineering landmark.

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