QUEENSLAND RAILWAYS – THE SIXTIES

The Transition Years

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The development of Queensland Railways, like that of many other organisations can be broken into broad developmental categories. In the case of QR, the era from 1865 until the mid thirties was basically developmental:

- the main trunk routes were completed;
- numerous branch lines were constructed throughout the state;
- almost all classes of steam locomotives to operate on the QR were developed.

The late thirties, the forties and the fifties were a period of consolidation. The demands of World War 2 and the post war era left little room for development. Even the introduction of diesel electric locomotives in 1952 – a great step forward – did not gain any significant momentum.

The 1960's, however, were a period of significant change. It was this period when probably the most significant advances and were made. The change of the sixties permeated the seventies and the eighties. Only in the nineties have we seen change of similar significance to the operation of rail transport in this state.

When the decade commenced in 1961, steam locomotives were still a considerable force in the movement of traffic over the rails.

A large number of branch lines existed statewide, feeding larger towns on main lines. Light rail was predominant, even on main trunk routes.

Many long distance passenger and freight trains were still hauled by relatively small locomotives - PB15, C16 and C17. Competition from road transport - trucks and buses - was minimal. Infrastructure had a negative effect on efficient and effective transportation - steep grades, sharp curves, wooden trestle bridges, screw couplings and light drawgear.

Considerable numbers of timber rolling stock and structures remained. Timber was cheap and light and the rolling stock could be constructed locally.

Side buffers, centre drawhooks and screw couplings were still being used on steam and most diesel electric locomotives, and all locomotive hauled stock. The exception was that automatic couplers were introduced with the air-conditioned passenger trains in 1953, and on various wagons from about 1963.

New drawgear allowed the maximum load to be raised to 1080 tons, with the maximum load for steam double headers raised to 1500 tons.

Weak drawgear continued to make banking more attractive than double heading - up the Toowoomba Range, up to 565 tons could be moved with banking, compared with the 370 tons limit on attached engines.

In 1961, Queensland Railways had just 63 diesel electric locomotives and 741 steam locomotives. Within nine years, all rostered steam operation would have ceased, and 389 diesel electric locomotives would be sufficient number to replace the steam locomotives.

Considering the huge advantage conferred by diesels on the QR, it is remarkable that as late as 1961 half the gross ton miles on the system were moved by steam, and as late as 1965, a quarter. In 1965, 70% of locomotive hauled suburban train miles were still steam worked, but that percentage then fell rapidly, to be only 18% in 1967.

The decline, when it came after 1963, was very rapid. Thereafter many engines produced low mileages on shunting and local goods trains, even in the peak season, and the number of steam locomotives on the books gave little indication of how many actually worked.

Even in the early sixties, the QR was a light railway in terms of axle loads. However, it had to cover long distances, at reasonable speeds, and in places in relatively dense traffic. By the mid-sixties, relaying with heavier rail was taking place, timber bridges were replaced with prestressed concrete structures and new railway construction – mainly for the coal lines – saw easier grades, broader curves, heavier earthworks and "heavy rail" formation.

Road competition, up until the sixties excluded by protection, was allowed to compete and soon cut deeply into most services.

The existing railway technology was based on a cheap to build philosophy, but in Queensland, this became relatively expensive to operate. On main lines Queensland trains were probably the most expensive in Australia.

Thus in the sixties, many branch lines were closed, and services curtailed, particularly those of mixed trains and some passenger trains.

Prior to the sixties, operating costs were not high enough, or service poor enough, to justify, politically if not economically, the high cost of strengthening both main lines and branches. The length and weight limits were tolerable in most respects for the traffic offering. In any case, the capital was not available to make a dint in the situation over any reasonable distance and with a timescale which would allow a return to be obtained.

In the early to mid sixties, despite the incursion of diesels, steam locomotives were still very hard worked, especially on the Brisbane suburban services.

As with other rail systems, the largest non-articulated steam locomotives - the C19 and CC19 classes - were withdrawn earlier than most other classes.

MAJOR INFRASTRUCTURE DEVELOPMENTS

The decision by Mount Isa Mines Ltd. to raise the production levels of lead, copper and zinc led to:

- QR having to increase the capacity of the line between Townsville and Mount Isa.
- the rebuilding of the Great Northern railway commencing in 1960 to carry the increased tonnages
- an interim measure in 1960 when the 1170 class 60 ton light line DEL's were introduced for use on the lighter section of the GNR between Charters Towers and Mount Isa. Numbers 1174 to 1181 were fitted for multiple unit working. The class was allowed 10tal on lines previously limited to 8tal for steam. They were knows as 'Paw Paws" after a comic strip offspring of a racehorse. The name lasting long after the comic strip had disappeared. With the upgrading of this line two were transferred to Roma and some to Cairns for use on the lighter lines in these areas.
- the introduction, also in 1960, of auto coupled multiple unit fitted diesel electric locomoyives with the delivery of 1255 and 1256 of the 1250 class. They were for use on the upgraded Mt. Isa line.
- the first use of Multiple Unit working of 90 ton DEL's and auto coupled wagons which at 62t gross were the first wagons with an axle load greater than 12 tons.
- the introduction of trains grossing 2600 tons hauled by two 1250 class DEL's hauling 42 x WHO wagons.
- the first large scale use of prestressed concrete bridge girders to replace many of the old timber bridges that had been constructed in considerable numbers by QR.

The next major development was the start of the export coal market in Central Queensland.

- In 1959 Thiess Brothers began exporting coal to Japan from Kianga in the Dawson Valley through the port of Gladstone.
- The first trains were hauled by BB18¼ locomotives hauling 35 VJM 4 wheel coal wagons.
- The opening of another mine at nearby Moura in 1961 led to increased traffic and trains of 46 VJM's hauled by Beyer Garratt locomotives were introduced.

1969 all cars painted grey for night visibility - earlier red stripe.

- In 1964 DELs were in use hauling 61 VJM wagons.
- August 1964 saw the first of the 62 ton steel bogie wagons constructed in Japan introduced on the Moura coal trains. They were at first limited to 48 ton gross until the Calliope River bridge was replaced.
- 1270 class DELs were introduced in 1964 for the Moura line.
- In 1965 trains of 2/1270 DELs and 34 VAO wagons were the norm on the Moura coal trains.
- On the 21st.of December 1967 the first triple header DEL train in Australia ran from Moura Mine to Gladstone hauling 51 VAO wagons, for a gross load of 3200 tons.

The opening of the Moura Short Line from Graham on the Monto line to Moura Mine on 21 June 1968:

- gave a direct route with easier grades and curves than the old line via Mount Morgan
- enabled a further increase in train loads by the use of 60 VAO wagons. The gross load for the wagons was increased to 71 tons meaning gross train loads were now 4300 tons.
- saw the introduction of Centralised Traffic Control on this line in 1971.

The next significant stage in the export coal traffic involved the Central Line:

- on 18 October 1967 coal from the Kinrola Mine (Blackwater) was forwarded in trains of 45 VJM wagons hauled by a 90 ton DEL.
- the first of the many branches to coal mines and having balloon loops to turn trains was opened to Kinrola mine on the 1st November 1967.
- VAO aluminium coal wagons were introduced on this traffic in 1968. Triple header trains of 51 VAO wagons were introduced for this traffic. Later, trains of 64 VAO's hauled by 4 DELs were introduced.
- A major regrading program was carried out between Blackwater and Gladstone. The ruling grade was reduced to 1 in 80. This enabled 3 locomotives to haul a 64 wagon train instead of 4.
- English Electric locomotives were used on the coal trains on the Moura and Blackwater lines.

Further development of coal mines in the Bowen Basin coal fields of Central Queensland took place at the end of the decade, leading to the large scale coal export industry which continues to the present day.

LOCOMOTIVES

- 1960 saw the use of AC16's on the Inlander between Bogantungan and Winton assisted by C17's between Bogantungan and Alpha.
- After the delivery of the 60 ton 1600 class DELs these diesels were used on the Midlander west of Emerald.
- Later 1170 class DELs were used between Roma and Cunnamulla followed by 1600 and later 1700 and 1720 class DELs.
- Walkers of Maryborough built a demonstrator Diesel Hydraulic locomotive in 1966 and after trials a total of 73 were purchased by QR to become the DH class. They had their own green and yellow colour scheme.
- From 1967, any engines repainted were painted black all over. Cleaning' postwar was not good, but some depots did reasonably well (eg Ipswich and Wooloongabha). Most passenger train engines were reasonably clean.

PASSENGER TRAINS AND SERVICES

In the 1960's the country passenger trains on the shorter runs such as the Toowoomba, Gympie and Bundaberg services were a mixture of many different types of coaches.

In this era services to branch line destination such as Kingaroy and Monto were provided by composite sleepers. They were detached from the main line trains at the junction station and attached to the branch line mixed for forwarding to their destination.

Most long distance passenger trains included a baggage car for parcel traffic.

In the early 60s, American type suburban cars with end verandahs and clerestory roofs were a common sight in long distance trains. These carriages, introduced in 1902, were modified for long distance traffic after having been replaced by Evans cars from 1911. They were also used on services such as Ipswich to Grandchester and Townsville suburban services.

In 1913 smaller versions of Evans cars with 7 not 9 compartments were introduced on the 'South Side' suburban services in Brisbane. Later versions with lavatories were introduced. Called Excursion Cars, they were still in use on Southport trains at the closure of this line in 1964.

For many years north side suburban sets sometimes had main line cars included in sets. Even Sunshine Express cars were used.

ROLLING STOCK DEVELOPMENT

- the 1960's saw the introduction of international standard containers. This traffic has grown to become a major freight traffic on QR.
- the introduction of the Stainless Steel suburban cars in 1961. They were run in 7 car sets although at one time the sets were reduced to 3 and 5 cars for the lightly patronised Sunday services. Constructed to enable later conversion to electric multiple unit cars they were fitted with headlights and space for a driver's compartment hence the end windows on the terminal cars. The delayed elctrification of the suburban system and the introduction of longer coaches in the EMU sets meant the conversion was never undertaken.
- the WHO and CO classes introduced in 1962/63, the first wagons fitted with auto couplers.
- the aluminium VAO coal wagons in 1967.
- the decision in 1969 to paint all wagons grey to help improve night time visibility at level crossings. Until this year, wagons were painted red except for insulated vans that were painted grey and steel wagons that were painted black. Tank wagons were left black as they always had been and aluminium wagons were left unpainted. By 1979 very few red wagons remained.

A feature of QR was the use of wagons fitted with guards compartments, and many older wagons of this type were in everyday use in the 1960's..

The most notable was the KKB cattle wagon with a guards compartment at one end and drover's compartment at the other end. Although they were mainly used on cattle trains it was a common sight to see them on other freight trains, mainly locals.

Other types still in the 1960's were the CB, CHB, NB and NWB.

SAFE WORKING

Queensland Railways safe working practices were based on the British system of train staff with the later use of electric staff on the busier lines.

In areas of light traffic the standard unattended crossing loop with the minimum of signals was still in use. A variation used fixed beacons instead of distant signals.

Later the "trailable facing point loops" were introduced on a large scale in the sixties.

BRIDGES

The sixties saw significant development in bridge construction. Until this time, most Queensland railway bridges were constructed from the local hardwood timber. It was readily available and cheaper than imported ironwork for bridges. It was also cheaper to construct timber bridges than large embankments.

In the period under review, timber bridges were still very widely used, but were being replaced:

- many large timber bridges were replaced with embankments and culverts.
- prestressed concrete girders were first used at Woogaroo Ck. Goodna opened in July 1962 and at Bundamba Ck. both using 50' spans.
- the Macrossan bridge was replaced by a bridge with the Pratt trusses of the same dimensions in 1965.
- the Calliope river bridge was replaced in 196` by a prestressed concrete having a cantilevered main span of 100'.
- This type of bridge has become the standard bridge type used on QR with spans of 6m to 25m.
- Most bridge replacements have been constructed on deviations. This allowed for improvements in horizontal alignment and grading.

BUILDINGS

Concrete Post and Slab construction introduced in 1913, was still to be seen in the sixties at places such as Burpengary, Moorooka, Rocklea and Banoon.

The roofed station at Roma Street had disappeared just prior to the sixties, but those at Brisbane Central, Rockhampton, Mt. Morgan, Gladstone, Winton and Mareeba were still in use.

Many station facilities were reconstructed in brick or concrete block in the sixties, in particular on northside suburban lines.

OPERATION

The smallness of QR steam locomotives was the result of light standards of track and bridges. The light standards of earlier times persisted and were profound throughout the system in 1960.

Most crossing loops on main lines were 60 F long (equal to 60 four wheeled wagons) and the maximum length for braking purposes was the same.

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Bulk traffic in a range of commodities – wheat, coal, sugar - commenced on a large scale.

Small four wheel wagons were in constant, heavy use, but as the decade progressed, would be significantly replaced by steel bogie wagons.

The QR made up for its light technology by working its small locomotives hard.

Until the end of steam in 1969, full goods loads and many passenger train loads on the QR were very heavy in relation to the tractive effort and boiler capacity of the engines.

After 1962, engines with cross-compound compressors were allowed to take up to 90 four wheelers.

As loads of DEL hauled trains built up in the 1960s, steam shunting engines often moved in those yards heavier loads than they ever hauled on the road - C17s shunting at Gladstone moved 1000 tons in the yard.

As the areas served developed, so loads increased. As grain growing spread across the Darling Downs, so heavier, even full, loads were encountered, even on the branch lines. (Before grain, livestock provided the only fully loaded down trains east of Chinchilla).

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