

CONSETT IRON ORE TRAIN REGULATIONS

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J Crosse looks at the practicalities of carrying iron ore from port to steel plant.

Ask a youngster today what he knows about Consett, and if he has ever heard of the place he might manage to tell you that a well known brand of crisps is made there. He is very unlikely to mention anything about steel manufacture or the rail services that became the focus for enthusiasts towards the end of steam and into the diesel era.

It is now over thirty years since the last ore train ran from Tyne Dock to Consett with the service acquiring special attention from enthusiasts, not only because of the guaranteed locomotive action but also because of the operation of the dedicated rakes of wagons having air operated discharge doors which in turn required locomotives to be fitted with air pumps to operate them.

It is easy to lose sight of the fact that other freight traffic worked to and from Consett with, in particular, large quantities of coal going in and steel coming out. Whilst the specially equipped steam engines were based at Tyne Dock shed (latterly 52H), Consett (52K) had an allocation of its own heavy freight and shunting locos. However when the diesel classes took over both Tyne Dock and Consett sheds closed with all motive power being nominally based at Gateshead.

The route from port to factory was some twenty three miles in length and featured some long stretches of steep gradients involving a total climb of over 800 feet. It was this fairly rugged terrain combined with train weights in the region of 800 tons that produced the ideal subject for both sound and photographic recordings.

The peculiarities of the traffic led British Railways to issue a pocket book for staff detailing the requirements for operating the trains, and particularly handling the dedicated wagon fleet, this being jointly prepared by L Reeves, Carriage & Wagon Engineer, Doncaster; F H Petty, Motive Power Superintendent, York and A P Hunter, Divisional Operating Superintendent, (North Eastern Operating Area) based at York.

The eight page booklet went into some detail on the operations, some of which is reproduced here verbatim.

Each wagon had a capacity of 56 tons and was fitted with a vacuum operated automatic brake and four power operated side discharge doors which were under the control of the driver. Each wagon was also fitted with two manually operated safety lock levers, one at each end of the wagon but both on the same side. When closed the levers were held in the 'bottom' position by pins inserted above them. Levers were only to be raised when the wagons were being prepared for opening of the doors on arrival at the Consett unloading gantry.

The doors were operated by other levers attached to compressed air door engines, of which there were four on each wagon, two being centrally mounted with one at each end. Each door engine had a dedicated 14" and 16" cylinder. The doors were kept closed by air pressure via what was known as the No.1 pipe to the 14" cylinder.

However to open the doors compressed air was pumped via the No 2 pipe and the 16" cylinder. The compressed air supply was obtained directly from air compressors and reservoirs fitted to the dedicated fleet of engines. The discharge doors were not capable of being operated independently.

The booklet listed what were, at the time, the compressor fitted engines, these being O1s 63712.55/60 63856/74 and Q7s 63460/3/5/9/73. The reasons why two classes were selected are probably lost in the mists of time. It was the arrival of the BR 9Fs on the scene that seemed to bring more attention to the services with 92060-7/98/9 being air pump fitted from new, these being displaced by Class 24 diesels starting in 1965.

The booklet then went into some detail concerning hose coupling as follows:-
'Three hosepipes require to be coupled between the locomotive and leading wagon and between wagons, but only one, the vacuum hosepipe, between the last wagon and brake van.

The hosepipes can be identified by the following description:-

1. The vacuum hosepipe is the standard vacuum brake fitting.
2. Constant air pressure hosepipes (No.1 pipe) are fitted to end cocks situated on the underside of the locomotive buffer beams and wagon headstocks. The coupler heads on the hosepipes, cocks and main pipes are painted black.
3. Door opening hosepipes (No. 2 pipe) are mounted on swan necked pipes fitted to end cocks which are above locomotive buffer beams and wagon headstocks. The coupler heads on the hose pipes, the stand pipes and the main pipes are painted Yellow.
4. To correctly couple respective hosepipes, couple black to black, yellow to yellow and vacuum to vacuum.'

There is nothing like stating the obvious but in practical terms the colour coding would have been almost totally useless as every part of the wagon became encrusted in a dull red covering of iron ore dust.

Attention was then turned to the engines. Each was fitted with two 10" Westinghouse compressors operated by a red-painted valves mounted in the cab. In the No. 1 position the valve handle was in roughly at 7 o'clock whilst when open (no. 2 position) it was at 3 o'clock. The No. 1 position allowed compressed air to flow into No.1 pipe and thus keep the hopper doors closed, acting on the 14" wagon mounted cylinders to achieve this. Moving the handle to the No. 2 position opened the wagon doors by allowing air to pass from No 1 pipe to No 2 pipe and act on the 16" cylinders. Finally an isolating cock was provided and was required to be kept in the closed position except when it was intended to open the wagon doors.

The guard was the only person authorised to instruct the driver when to open or close the wagon doors.

Train operating requirements were described in some detail. Empty trains were to terminate in the Tyne Dock Bottom yard Reception lines with the incoming locomotive immediately going to the shed. The guard's brakevan was then removed

by a pilot engine and placed on the van kip (this term actually being used in the text) at the entrance to the Bunkers line.

A Carriage & Wagon Examiner was then required to carry out a thorough check of each Wagon and advise the Yard Inspector whether the train condition was satisfactory to undertake the next journey. Replacement of single faulty wagons would be carried out if required.

The outward train engine would then be attached at the inlet end of the reception sidings to propel the train to the Bunkers line although if the train engine was not available it was permissible for the pilot engine to carry out this operation. The train engine would have all three hoses connected, this operation being supervised by the Carriage & Wagon Examiner. In particular, care was required to ensure that the air line cocks were closed on the last wagon of the train.

The instructions then highlighted the fact that the brakevan was not to be attached under any circumstances as both brakevans and locomotives were prohibited from passing under the ore bunkers. The set was then positioned under the hoppers under guidance of a BR employee via use of a marker board. As it was normal practice to run with fixed 8 wagon formations, stopping at the marker should normally have ensured correct positioning of the wagons.

86 lbs/in² air pressure was required to be maintained in No 1 pipe to ensure that the wagon doors were closed. The guard was responsible for ensuring that individual door lock handles were in place and that the safety pins were also correctly fitted before allowing loading to commence. According to the rules he was supposed to repeat the checks both on completion of loading and again prior to departure.

Tyne Improvement Commission staff were responsible for the operation of the loading bunkers and completion of the paperwork (in duplicate) listing the wagon numbers and weight of ore loaded. The guard was responsible for ensuring that upon arrival at Consett one copy of the paperwork was handed to the Traffic Agent and the other to the Consett Iron Company's gantry leading man.

Once loaded the brakevan had to be attached. This was achieved by drawing the train off the Bunker line and allowing the brakevan to roll onto the train using gravity. Once all the necessary pipework had been connected up the train drew forward once more so that an assisting engine could be attached.

At the time that a wagon required maintenance, the Yard Inspector was required to notify the Carriage & Wagon Foreman at Tyne Dock Wagon Shops on which side of the replacing wagon the safety catch handles must be, as it was a requirement that all the handles on a train were on the same side. Despite the fact that fixed formations could run for a considerable time the guard was still required to record the wagon numbers on every trip.

As can be seen from the above, these were indeed detailed instructions and they continued thus:-

' The new ore gantry at Consett is approached from Carr House West Box and the new lines between this box and Fell Box (C.I.C) will be worked under the NO BLOCK regulations.

The new signal box, known as Fell Box is owned by the Consett Iron Company but is worked by British Railways signalmen.

After passing Fell Box there is a group of three reception lines and normally these 56-ton wagon ore trains will arrive on No. 1 line (right hand on entering from Fell Box).'

Once the train had come to a stand, CIC staff would release all the safety levers and the guard would be advised that the train was ready for unloading. The train would then move forward onto the gantry under the control of the Gantry Leading Man. The guard was required to accompany the CIC employee and obtain an assurance that the train had stopped in the correct position and was then required to verbally tell the driver to open the doors. The process was repeated upon completion of discharge.

The guard was required to operate the ground frame so that the train could be propelled off the gantry line where upon CIC staff were required to re-instate all the safety lock handles and pins. This was clearly an exercise in BR ensuring that it had no responsibility for loss of ore due to incorrect loading or unloading of wagons.

Finally via a further couple of ground frame operations and shunting moves the train was ready to depart back to Tyne Dock. Given that this was the early 1950s, were these the country's first merry-go-round trains?

At the end of the booklet there is some detail concerning the wagons. There were thirty altogether numbered 446000-29 and they were maintained at what was described as 'a special depot within Tyne Dock Motive Power Depot'.

The wagons were divided into seven groups of four designated A-F and S, these letters supposedly being stencilled on each wagon. The remaining two wagons were stencilled Y and Z respectively. Of course logic dictated that the normal train formations should be sets A&B, C&D and E&F. One wonders how often this was achieved. The instructions went on:- 'Each Friday one group of four wagons will be withdrawn from service and worked to the maintenance depot and be replaced by either the four wagons forming S group or one of the other groups. Each group of four wagons will thus undergo maintenance for a week.

Separate instructions are issued by the Carriage & Wagon Department setting out the cycle for the respective groups. Such instructions will be issued periodically as desired by the Carriage & Wagon Department.

The two wagons marked Y and Z will normally be at Tyne Dock Bottom for use at short notice in the event of vehicles having to be taken out of service outside their rostered maintenance period'.

And we all thought it was so simple! Just another Consett ore train passing by- next time you see a photograph of one of these trains just think of all those checks on safety pins and handles that should have taken place not to mention the care needed

to couple black pipes to black pipes and yellow ones to other yellow ones....and red ones to red ones!