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MINISTRY OF TRANSPORT AND CIVIL AVIATION

RAILWAY ACCIDENTS

REPORT ON THE COLLISION
which occurred on
17th February 1958
at
INCE MOSS JUNCTION
in the
LONDON MIDLAND REGION
BRITISH RAILWAYS

LONDON: HER MAJESTY'S STATIONERY OFFICE
1958
ONE SHILLING NET

MINISTRY OF TRANSPORT AND CIVIL AVIATION,
Berkeley Square House,
London, W.1.
20th May 1958.

SIR,

I have the honour to report for the information of the Minister of Transport and Civil Aviation, in accordance with the Order dated 27th February 1958, the result of my Inquiry into the collision between an express passenger train and a light engine which occurred at about 2.12 a.m. on Monday, 17th February 1958, at Ince Moss Junction, between Wigan and St. Helens, in the London Midland Region, British Railways.

The accident was due to grave negligence by a signalman who wrongly assumed that the engine had passed his signal box though, in fact, it had stopped in the block section, and gave the "Train out of Section" signal for it. He then accepted the express train which ran into the light engine shortly after entering the block section. The driver of the engine was also seriously to blame for failing to protect the line in rear in accordance with the Rules.

The speed of the collision was not high and only one passenger received injuries which, fortunately, were minor, but the driver of the engine and the guard of the passenger train were more seriously hurt; I regret to state that the guard died a few days later. Emergency arrangements were made promptly and thoroughly, and ambulances reached the scene within half an hour.

The night was dark but clear.

DESCRIPTION

The engine and the passenger train

The light engine which was travelling from Preston to Edge Hill via Wigan and St. Helens, was of power classification 5, with 4-6-0 wheel arrangement, and a six-wheeled tender. Its weight was about 125 tons with a brake power of 61%. The 2.0 a.m. express passenger train, Wigan N.W. to Liverpool, Lime Street, comprised 7 coaches, of which 5 were fitted with the quick-acting D.A. valve on the vacuum brake, drawn by a power classification 4 tank engine with 2-6-4 wheel arrangement, travelling with chimney leading. The driver's position was on the left hand side. The weight of the tank engine and coaches was about 295 tons and the combined braking force about 213 tons. The length over buffers was 158 yards.

The line and signalling

The line to St. Helens branches to the right (westwards) from the main line from Preston to Crewe at Springs Branch, about 1¼ miles south of Wigan. The Down direction is from Wigan towards St. Helens and the classification of the line is "less important".

The signal boxes to which reference will be made are Springs Branch No. 2 on the main line about 1 mile south of Wigan, Springs Branch No. 1 which controls the junction to the St. Helens line, about ¼ mile south of No. 2 box, Ince Moss Junction on the branch line about 680 yards from Springs Branch No. 1, and St. Helens No. 3 signal box 7½ miles from Springs Branch No. 1 box.

The branch line leaves the junction in a sharp right-handed curve. There are a number of sidings on the inside of this curve, and vehicles stabled on the ones nearest the running lines obscure the view ahead of drivers on those lines. Ince Moss Junction Down home signal, which is 170 yards on the Springs Branch side of the signal box, is therefore on a tall post for better visibility from approaching Down trains. This signal can be seen from the back windows of Springs Branch No. 1 box but the signalman there cannot see the running lines near the signal when there are vehicles in the adjacent sidings because of the curvature.

Between Springs Branch No. 1 and St. Helens No. 3 signal boxes there are 8 intermediate signal boxes including Ince Moss Junction. These do not, however, remain open throughout the week-end, and at the time of the accident the block section extended from Springs Branch No. 1 to St. Helens No. 3. The running signals at the intermediate boxes were therefore all in the clear position.

The two signal boxes are built in brick up to the elevated working floor, with timber cladding above. They are both equipped with the L. & N.W.R. type tumbler interlocking frame and the L. & N.W.R. type double needle block instrument combined with block bell. The home signal at Springs Branch No. 1 for the St. Helens line is not controlled by the block, nor are there any controls at St. Helens No. 3 between the Down home signals and the block. At St. Helens the railway is in cramped surroundings in a developed area, and partly in cutting; a main road bridges the tracks close to No. 3 signal box.

Engine crew relief arrangements

Ince Moss Junction is a relief point for freight engine crews and there is a cabin on the Up side of the running lines about 30 yards from the signal box towards St. Helens, where relief crews assemble before joining their engines. It is equipped with a telephone to the Liverpool (Lime Street) Control so that

drivers can speak to the controller if required. The Motive Power Depot from which the crews are sent is about ½ mile away on the far side of the main lines near Springs Branch No. 2 signal box.

Report

Driver E. Shufflebottom, who was in charge of the 2 a.m. express passenger train, said that he left Wigan 5 minutes late. He saw the home signal at Springs Branch No. 1 at danger and he stopped at it for about a minute; when it cleared he started normally and had reached a speed of about 25 m.p.h. over the right-handed curve when suddenly he saw, about 30 yards ahead, the tail lamp of the engine which was standing at Ince Moss Junction home signal. He had previously seen this signal in the clear position above the boiler from his position at the controls on the left hand side of his engine but he did not see the tail light of the engine ahead sooner because of the curvature of the line. He applied the brake at once but the collision must have happened before it took effect. He thought that his train travelled about 30 yards after the collision before stopping and that the engine was pushed forward about 3 lengths. There was no derailment and only light damage to the coaches. Driver Shufflebottom walked down the train on the off side and saw that the Up line was clear, and talked to the injured guard in the brake van in the first coach. He then sent the fireman to protect the line in rear and walked through the coaches to attend to the passengers of whom there were about 40. He did not see the driver of the engine ahead.

Passed Cleaner J. A. Cannon was the fireman on the express train. He said he had seen the Ince Moss Junction home signal at clear from his side of the engine above the stabled stock in the first siding but could not see the line ahead. He was preparing to fire when the collision occurred. He went back as far as Springs Branch No. 1 box before he put down three detonators as required by the Rules, and then went to the box to advise the signalman.

Passed Fireman C. Firth was in charge of the light engine; he had reported for duty at 11.30 p.m. that night at Preston (Farington) expecting to work a special freight train to Stoke, but had been told that the train was cancelled and that he was to take the engine to Edge Hill. He said that the shed foreman was aware that he did not know the road beyond Ince Moss Junction and had told him that arrangements were being made for a conductor driver from Ince Moss onwards. He added that he had worked on the line as a fireman but had not been passed for the route as a driver. The trip was uneventful until he was stopped at signals at Springs Branch No. 2 box. He thought that the driver might have joined him there as this signal box is close to the Motive Power Depot, but in view of his instructions he did not call out to the signalman to ask about him. He was not stopped at Springs Branch No. 1 and brought his engine to a stand at Ince Moss Junction home signal, which was of course in the clear position, at about 1.46 a.m. He told his fireman to stay on the engine and walked forward 220 yards to the relief cabin in order to telephone Control about the conductor. He was told that no request had been made but that arrangements would be made forthwith to send one from the Motive Power Depot. He then went back to his engine, took off the brake and waited for the conductor; about 10 minutes to a ¼ hour later the collision took place, some 26 minutes after the engine had stopped at the signal.

Firth could give no good reason why he had stopped at the home signal instead of taking the engine up to the relief cabin, which would have avoided an unpleasant and time-wasting walk in the dark before he could telephone Control, and his only excuse for not arranging for the engine to be protected was that the conductor might have arrived while the fireman was going back and they would then have had to wait some time until the fireman returned.

Further evidence confirmed that the Motive Power Controller at Preston had been told that Firth required a conductor, but this information did not appear in the record of the message as received in the Control office at Liverpool (Lime Street).

Passed Cleaner G. Wilson, who was fireman on the engine, stated that Firth told him to stay on the engine while he, Firth, went forward to the relief cabin. Wilson did not at that time, or later when Firth had returned, suggest that he ought to go back to protect the engine. He said he forgot about the Rule which requires the fireman to carry out this duty, but it is more likely that he had felt it was not for him to argue with his driver.

The conductor driver, H. Jones, was walking along the railway to Ince Moss Junction when the passenger train passed him. He said that he should have gone by road in accordance with the instructions but men sometimes took the shorter route along the railway when the tracks were clear. He reached the scene a few minutes after the accident occurred and warned Control and telephoned for an ambulance before going to the assistance of Passed Fireman Firth who had been rendered unconscious. He said that he did not immediately assume that an accident must happen when he heard the express approaching closely behind him as he walked along the railway, but thought that the signalman must have given precedence to the passenger train. In any case, he could not have stopped the express.

Signalman J. Bond was in charge of Springs Branch No. 1 box assisted by District Relief Signalman H. Davies. Bond said that he exchanged block code messages with the signalman in St. Helens No. 3 box in the normal manner for the engine which passed at 1.45 a.m. He expected it to arrive at St. Helens in about 20 to 25 minutes, and was concerned that the 7½ mile long block section should be cleared promptly so that the following train, the 2.0 a.m. express from Wigan, would not be delayed. At 2.04 a.m. he accepted the express from Springs Branch No. 2 and about a minute later gave the block bell "Call

attention" ring (one ring) to St. Helens No. 3 to check up on the alertness of the signalman there. He received no answering bell ring, so after a pause he gave the code ring for "shunt for following train to pass" (1-5-5) to which also there was no immediate response. The express arrived at his home signal at 2.10 a.m. and Bond was about to give the "emergency call attention" code ring (3-3-3-3) when he received the block code ring from St. Helens No. 3 for "Train out of Section". He then exchanged block code messages with the signalman there in the normal way for restoring the block to normal and for passing the express forward, and cleared his home signal at 2.11 a.m. The collision took place about a minute later.

Bond had no reason to suspect that there had been anything unusual about the journey of the light engine. His prompting of the signalman at St. Helens arose through his previous experience when working with that signalman of occasional delays in getting quick action in answering the bell and clearing the section, and his wish on this occasion to prevent any avoidable delay to the express train. He said that he had not been told that the engine required a conductor, and added that when Ince Moss Junction box was closed it was more usual for relief crews and conductors to join engines at Springs Branch No 2, which is close to the Motive Power Depot, and has a direct telephone line to it. He had not seen the driver conductor as he walked along the tracks in the dark past the signal box a minute or two before the home signal was cleared. Bond said that about 15 minutes after the collision, when he had been told what had happened, he taxed Signalman J. E. Carman in charge of St. Helens No. 3 box with having cleared the block before the engine had passed, and that Carman admitted the fault.

Relief Signalman H. Davies said that though his work in Springs Branch No. 1 box was not concerned with the signalling of trains on the line to St. Helens, he was not busy and that he noted Bond's actions in regard to the engine and the express. He and Bond saw the tail lamp of the engine before it passed out of sight when the engine went round the curve towards Ince Moss. Davies acted very promptly when he heard the noise of the collision; he went at once to the scene and then on to Ince Moss Junction signal box, which he knew as a relief signalman, and opened it to give the "Obstruction Danger" signal at 2.35 a.m. He then told Bond what had happened.

Signalman J. E. Carman, who had worked at St. Helens No. 3 signal box for 7 years, said that he had begun duty at 7.0 p.m. on Sunday evening after having been on duty the previous night from 10.0 p.m. to 8.0 a.m. This was part of the normal week-end roster which enables each of the three men at a box which is open continuously to have one week-end in three free of duty. Carman had worked the night shift from 10.0 p.m. to 6.0 a.m. during the week and had been off duty during the previous week-end.

Carman said that there had been little traffic during the night of the accident and that he had been reading a "cowboy book". At 1.32 a.m. he was given "Train out of Section" from Springs Branch No. 1 box for an Up train (it was the last Up train before the accident), and two minutes later he accepted the light engine on the Down line from that box. The train entering section message was received six minutes later at 1.40 a.m., and he offered the engine forward to Huyton (the signal box ahead) at that time. The box was then quiet, and Carman resumed his reading. He said that he did not hear the 1-5-5 bell code message, which Bond sent some 27 minutes later at about 2.07 a.m., though his chair by the stove was only three to four yards from the bell, and he continued in these words—

> "I heard a noise; took it to be the engine, gave the Train entering Section to Huyton and the Train out of Section to Springs Branch No. 1 (Block Register time 2.09 a.m.). I accepted the express but I did not look for the tail lamp of the engine."

Carman suggested that the noise which he took to be that of the light engine might have been caused by a heavy vehicle on the road overbridge close to the box, but he admitted that he had made a "bad slip" in not looking for the tail lamp on the engine. He confirmed that the bells were audible and working properly and he could give no reason for his failure to hear the ringing; he said that he had no troubles on his mind, he was not unduly tired, and was not dozing so far as he knew. He had eaten his supper, with which he drank tea, at about 11.30 p.m.

In response to further questioning Carman said that he lived about eight miles away from the signal box and that he cycled to work when trains were not convenient; he had cycled the previous evening, a journey which took about 1 hour.

District Signalman's Inspector O. A. Connolly said that he had had no criticisms to make of Carman's work on his periodical visits to the signal box during the past two years that he had been in the district, and Station Master G. K. Cooke, who had been at St. Helens for the past 10 years, and who visited the box daily, also said that he had had no cause in recent years to speak to Carman about his work. Neither of them had received reports from signalmen of Carman's lack of alertness in answering bell messages, which was brought to light in Signalman Bond's evidence.

Carman's work as a signalman had not been entirely reliable in the past, there having been three entries of block irregularities in his Record during the nine previous years, though none were recent, and it was decided after the accident to remove him from signalling duties.

Conclusion

Responsibility for the accident must rest primarily on Signalman Carman. He failed to carry out the simple but vital duty of making sure that the engine had passed through the block section before he

gave "Train out of Section" for it. It may be that he fell asleep after accepting the engine, and awoke to hear a noise which he thought was the engine passing the box, but having failed to see the tail lamp it was his plain duty to make sure from the signalman at Huyton that the engine had arrived there before clearing the block section to Springs Branch No. 1.

Carman's evident lack of alertness does not in any way excuse his irresponsible behaviour, though it may have contributed to it. He had worked long hours during the week-end but he did not complain on this account, or suggest that he had become unduly tired, and in view also of Signalman Bond's evidence regarding his inattentiveness at other times, which I have no reason to doubt, I consider that Carman's lack of alertness on this occasion cannot be attributed to the hours he had worked.

Passed Fireman Firth was also seriously at fault in failing to protect his engine when he stopped in the section. His action in stopping at Ince Moss Junction home signal which was in the clear position, instead of at the relief cabin, was pointless in the circumstances, and resulted in time being lost while he walked to the relief cabin and back to the engine. He could still have prevented the accident, however, if he had sent the fireman to protect the engine as soon as he, Firth, had returned to it.

There was a mistake in message passing between the Preston and Liverpool (Lime Street) Control offices in regard to the arrangements for a driver conductor to take the engine forward from Ince Moss Junction, which resulted in the engine waiting there, but the accident cannot be attributed to this cause. The absolute block system of train working which is in force in this country does not depend for safety on the time which trains take to travel between block points, though the Regulations include precautions to be taken when a train stops in the section.

Remarks

The longer hours worked by signalmen at St. Helens No. 3 box for two week-ends out of three are in accordance with a well established roster, and I understand that signalmen generally are in favour of the system, which is only used at boxes where the work at week-ends is light. These hours seem long but I do not question their use under suitable conditions.

It is obviously undesirable that an engine or train should be stopped in a long block section for a conductor or relief driver, and there was some uncertainty in the minds of the staff on this occasion about the right place for the conductor to have joined the engine when Ince Moss Junction signal box was closed. The need for conductor drivers on trains proceeding on to the branch line at week-ends when this box is closed seldom arises, but I understand that instructions are being issued to ensure that a train requiring a conductor driver does not proceed into the block section until he has joined it.

The accident should not have been possible if there had been full block controls including the "Welwyn" control, at the signal boxes. This control prevents the acceptance of a train unless the previous train has passed through the block section and has occupied and cleared a track circuit or the equivalent at its forward end, and is now standard for fast-running main lines though it has not yet been provided at all signal boxes. The conditions on this branch line, however, are not such as to justify any priority for its installation, though I understand that controls are being provided at the signal boxes on the route when they become due for modernisation.

I have the honour to be,

Sir,

Your obedient Servant,

W. P. REED,
Colonel.

The Secretary,
Ministry of Transport and Civil Aviation.