

December 12, 1913.

In re Investigation of Accident on Southern Railway near
Easley, N. C., on October 27, 1913.

On October 27, 1913, there was a derailment on the Southern Railway near Easley, N. C., which resulted in the death of the engineman and slight injuries to 5 employees, 1 express messenger, 1 news agent and 3 passengers.

After investigation of this accident the Chief Inspector of Safety Appliances reports as follows:

Southbound passenger train No. 11 consisted of 1 express car, 1 combination mail and baggage car, and 3 coaches, all of wooden construction with the exception of the fourth car, which had a steel underframe. This train was hauled by locomotive No. 1319, and was in charge of Conductor Marshall and Engineman Voyles. It was en route from Richmond, Va., to Atlanta, Ga. Train No. 11 left Greenville, S. C., at 3:35 p.m., Easley at 4:00 p.m., and was derailed at a point 1.6 miles south thereof at about 4:05 p.m., while running at a speed estimated to have been about 35 miles per hour.

The locomotive was the first to leave the rails and turned over on its right side at a point about 400 feet south of the point of derailment. The three cars immediately following the locomotive turned over to the right at an angle of about 45 degrees resting against the wall of the cut, which at this point was from 10 to 12 feet high. The fourth car was only partially tipped to the right, while the fifth car was derailed but remained in an upright position. The engine and the running gear of the first two cars were damaged to some extent, while the other cars in the train escaped practically unharmed.

The division on which this accident occurred was a single track line, and trains were operated under the manual block system. The initial point of derailment was in the middle of a curve of 4 degrees leaning toward the left, which curve had a super-elevation of 5 inches. Before reaching this curve the track was on a tangent about half a mile in length. The grade was about 1% descending for southbound trains. The track was laid with 65-pound rails 33 feet in length, with an average of 18 oak ties under each rail, tie-plated and single-splice. No braces were used. The ballast was of slag, about 12 inches in depth. The rails in this vicinity had been laid about two months, while about two years ago the ties were renewed wherever needed. The weather at the time of the derailment was clear.

Fireman Kelly stated that the engine was not working steam at the time of the derailment. He thought that the trailing wheel first left the track. The engine then seemed to lurch three times, tipping over with the third lurch. He further stated that the engineman applied the emergency brakes the moment it was seen.

that the engine had been derailed.

Conductor Marshall stated that he was standing up in the baggage car when it began to lurch and he realized that the train had been derailed. After the accident he found the track to have been torn up to such an extent that he was unable to determine what caused the derailment.

Examination of the track at the point of derailment showed that none of the rails had been broken, although three or four were badly bent. There was evidence that the outside or right-hand rail had spread outward, as the spikes on the outside of this rail had been pushed outward and that part of one of the tie-plates containing the spike hole had been sheared off. The next rail to the south had evidently been turned over on its right side as there were marks on the inside web apparently made by wheel flanges. One rail on the left-hand side nearly opposite the point where the track gave way had its north end battered in a manner which indicated that it had been done by the wheels of the cars striking it after the fish-plates had given way. Beyond this point the track was entirely torn up by the derailment and no detailed examination could be made.

Examination of the track for one mile north of the derailment showed 42 badly decayed ties, 43 loose spikes, 1 missing spike, and 3 missing track bolts. At one point in this mile of track 5 decayed ties were found under one rail. In a distance of 3,300 feet south of the derailment there were 47 decayed ties, 68 loose spikes, 9 missing spikes and 6 missing track bolts. Many of the loose spikes referred to could have been removed by hand.

Locomotive No. 1319 was of the Pacific type, the engine weighing 224,650 pounds and the tender weighing 147,000 pounds. This locomotive received a general overhauling, including turning of all tires, on October 12, 1913. After the accident it was taken to Greenville and careful inspection of the same was made at that point. The tires and flanges were found to be in good condition and the wheels were correctly gauged.

The section on which this accident occurred embraced six miles of main track and one mile of side track. The section foreman in charge had been employed as such for about two years, and had been in charge of this particular section since August 1, 1913. He had an average force of five men, including a track walker, to assist him. The track walker went over the section every day, while the foreman himself went over it once a week. In this connection, however, it may be stated that the rules of this railway required section foremen to go over their sections twice a week.

The supervisor in charge of this subdivision had been employed as such since 1908. He had 79 miles of main line track and 50 miles of branch line track under his supervision, and

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was required to go over the same at least once a month.

The maximum speed allowed on this part of the Southern Railway was 45 miles per hour, and the scheduled speed of this train between Basley and Liberty, stations on either side of the point of derailment and 6.5 miles distant from each other, was 33 miles per hour. Inasmuch as this train was on time leaving Basley there is no reason to suppose that when it was derailed it was being operated in excess of the estimated of 35 miles per hour given above.

It was impossible definitely to determine the cause of this derailment but it is believed that it was due to turning over of the rail on the outside of the curve. What caused this rail to turn over was not ascertained but it seems apparent that the track structure was not strong enough to withstand the strain placed upon it.