

In re investigation of an accident which occurred on the line of the Rapid Railway System near Saint Clair, Mich., on June 9, 1917.

June 27, 1917.

On June 9, 1917, there was a head-end collision between two electric passenger trains on the line of the Rapid Railway System near Saint Clair, Mich., which resulted in the death of 2 employees and 2 passengers and injuries to 5 employees and 22 passengers. After investigation of this accident, the Chief of the Division of Safety reports as follows:

The Port Huron Division, on which this accident occurred, extends from Detroit, Mich., to Port Huron, Mich., a distance of 64.5 miles. The line is generally single track between the city limits of these two places and train movements are governed by time-table and train orders, no block signal system being in use. Train orders are transmitted by the dispatchers to the conductors at various telephone booths, conductors taking orders upon manifold blanks in a machine which permits the withdrawal of two copies, the third remaining in the machine as a record copy.

The accident occurred about $1\frac{1}{2}$ miles north of Saint Clair and about 915 feet south of Yankee switch, at a point about 60 feet south of the northern end of a tangent 860 feet in length. South of this tangent is a 1-degree curve 450 feet in length while north of the tangent is a 2-degree curve 690 feet in length followed by a tangent 700 feet in length. From Yankee switch south the grade is descending 2 per cent for a distance of 460 feet and rises to a level just before reaching the point of accident. The ground where the accident occurred is level, there being no cuts or fills in either direction for a distance of more than a half mile. However, the view approaching the scene of the accident is obscured by a shed which stands out closely to the right of way and also by foliage and a dwelling house on the inside of the curve. From the north end of the tangent to the place of collision, the distance is not more than 60 feet and the vision is limited until the tangent is reached. At the time of the accident the weather was cloudy.

Southbound local passenger train No. 66, car 7277, running from Port Huron to Detroit, left Broad Street Station at Port Huron at 2.10 p. m., on time, in charge of Conductor Gardner and Motorman Flotake. This car was of wooden construction with vestibule on front and open platform on the

rear and was composed of 2 compartments, a smoking compartment in the forward end having seating capacity for 15 persons and a passenger compartment following with a seating capacity for 35 persons. The train required no orders leaving Port Huron and the crew did not call up the dispatcher until it reached the end of double track at Sagadorn, just outside of the city limits of Port Huron, where train order No. 151 was transmitted to the conductor and was repeated to the motorman. Train order No. 151 read as follows:

"Meet train 209, car 7306 at Yankee."

From Sagadorn to Burley, the last stop prior to the collision, the distance is about 5 1/2 miles and from Burley to Yankee the distance is about three-fourths of a mile. Motorman Plotzke failed to remember this order and ran by Yankee switch about 915 feet and while traveling at a speed estimated to have been about 15 miles collided with train No. 209 at 2.45 p. m. or about 25 minutes after receiving the order.

Train No. 209, consisted of cars 7306 and 7302, coupled together, and was in charge of Conductor Smith and Motorman Davidson on the first car and Conductor Horton and Motorman Grandall on the second car. Both cars in this train were of wooden construction with vestibuled front ends and open platforms on the rear; they were controlled by the motorman on the leading car, the conductor and motorman on the second car assuming no part in the operation of the train except in the handling of passengers. Train No. 209 was known as the "Limited" which made stops at only the larger towns en route. It left Detroit at 12.15 p. m., on time and at Marine City, the crew received the following train order:

"Meet train 66, car unknown at Yankee."

The last stop made by train No. 209 before the accident occurred was at Saint Clair at 2.41 p. m. It was then 19 minutes late. The speed of train No. 209 approaching the point of accident was about 30 miles an hour. Foliage screened the view of the motorman and train No. 66 was not seen until about 1,000 feet away, it then being too late to avoid the collision. The speed of train No. 209 at the time of the accident was estimated to have been about 10 miles an hour.

The collision resulted in car 7277 of train No. 66 being telescoped a distance of about 12 feet, while the first car of train No. 209 was telescoped a distance of about 7 feet and the following car overshot and crushed the rear end of the first car. The second car in train No. 209 was not badly damaged. Conductor Smith was caught between these

cars and killed while standing on the rear platform of the first car.

Motorman Plotake, of train No. 66, stated that he repeated train order No. 151, received by his conductor at Hagadorn. A copy of this order was placed on a hook in front of him, but upon approaching the meeting point named therein for train No. 209, he forgot it until he sighted train No. 209 and at about the same instant he received three bells from the conductor indicating immediate stop. He stated that he passed Yankee switch running about 40 miles an hour and that the speed at the time of the collision had been reduced to about 15 miles an hour. Motorman Plotake jumped from the car just before the collision occurred and was injured. He was unable to account for his failure to remember the train order.

Conductor Gardner, of train No. 66, stated that after receiving the train order to meet train No. 209 at Yankee switch he had no conversation with the motorman. At Burley a passenger was picked up and the conductor stated that after a minute he went forward to collect her fare, after which it was his intention to go out to the front vestibule to be in readiness to open the switch at Yankee. He had just collected the fare and had turned around to register the amount when he heard the car going over the switch. He at once pulled the bell three times and started for the rear door, the collision occurring before he reached it. Conductor Gardner stated further that he did not feel the motorman apply the air brakes at any time after sounding the emergency stop signal. He said that they met no trains after leaving the double track at Hagadorn and had no orders in their possession for execution other than the meet order at Yankee switch.

Motorman Davidson, of train No. 209, stated that approaching the point of accident he was not running in excess of 30 miles an hour; when he first saw train No. 66 it was about 1,000 feet distant and he thought that that train was running quite fast. Motorman Davidson stated that he sounded the whistle two or three times, applied the emergency air brake and then reversed the power.

Conductor Horton and Motorman Crandall of the second car of train No. 209, stated that they knew nothing of the impending accident until they felt Motorman Davidson apply the air and reverse the power, sounding the whistle signal at the same time.

Mr. Robert D. Donaldson, a passenger on train No. 66, stated that he heard the conductor get the order at Hagadorn

to meet train No. 209 at Yankee switch. The first of anything wrong that he noticed was when the conductor rang the bell three times. He stated that he did not see the motorman make any effort to stop and then the conductor again rang the bell three times. Mr. Donaldson stated that he then called to his fellow passengers to jump.

This accident was caused by the failure of train No. 66 to take the siding for train No. 209 at Yankee switch, as required by train order No. 151, resulting from Motorman Plotzke forgetting the meet order and for which he is responsible.

Motorman Plotzke was employed as motorman on the Port Huron City lines from March 2, 1910 to November 27, 1911; he was re-employed on the same lines on June 24, 1912, and on October 16, 1912, was transferred to a position as motorman on the Rapid Railway. At the time of the accident he had been on duty 45 minutes after a period off duty of 16 hours and 20 minutes.

It is apparent that a lapse of memory was responsible for this accident. Among the audible signals of the Rapid Railway System there is none providing a reminder of a train order or time table meeting point, to be transmitted by the conductor to the motorman when approaching a station where an order is to be executed, or a time table meet to be fulfilled. On many railroads such a signal is provided for in the rules in order to insure that meeting points shall not be overlooked or forgotten, and it is believed that the sounding of such a signal by the conductor of train No. 66 on approaching Yankee switch on the day of the accident would have restored Motorman Plotzke's recollection of his order to meet train No. 209, and by this means have averted the collision.