

March 9, 1913.

In re investigation of accident on the  
Houston & Texas Central Railroad, near  
Benchley, Texas, February 1st, 1913.

On February 1st, 1913, there was a derailment of a north-bound passenger train on the Houston & Texas Central Railroad near Benchley, Texas, resulting in the death of 2 employees and the injury of 9 passengers, 3 employees, 1 express messenger and 1 Pullman porter.

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

The first division of the Houston & Texas Central Railroad, upon which this accident occurred, is a single track line operated under the train order system, no block signals being used.

The derailed train was passenger train No. 17, known as "The Owl", running from Houston to Dallas, Texas. It is a daily train scheduled to leave Houston at 11:45 p.m. On January 31, 1913, train no. 17 left Houston on time. It consisted of engine No. 256, one baggage car, one smoking car, one day coach, and three Pullman sleeping cars. The baggage car, smoker, and day coach were steel cars. The train was in charge of Conductor Singer and Engineman Latchford.

The schedule time of train No. 17 from Houston to Ennis, a distance of 231 miles, is 6 hours and 30 minutes, calling for an average speed of 38 miles per hour, without regard for time lost in making 8 regular station stops, necessary stops for fuel and water, and orders requiring reduced speed at certain places. On the date of this derailment slow orders were in effect at 9 different places between Houston and Ennis, the speed requirement at 5 of these places being 6 miles per hour and at 4 other places 8, 10, 15 and 25 miles per hour respectively. In addition to these special slow orders which are issued from time to time there is a standing rule requiring first class trains to reduce speed to 30 miles per hour around all curves of 4 degrees or more, which curves are marked by caution signals 500 feet in advance. Observance of these various stops and slow downs obviously would require this train to run at speed greatly in excess of the time card rate over certain portions of the road in order to maintain its schedule. Except as above indicated there is no restriction of the speed of passenger trains.

On the date of the accident train No. 17 was unable to maintain its schedule. Time was lost on account of a hot box,

the observance of slow orders, and meeting other trains, with the result that the train did not leave Bryan, a station 100 miles north of Houston, until 3 a. m., 41 minutes late. Bryan is 9-1/2 miles north of the point of the accident, and was the last stop made by train No. 17 previous to its derailment.

The accident occurred at 3:20 a.m., February 1st. The distance from Bryan to the point of derailment was covered in 20 minutes, at an average speed of but 28.5 miles per hour. Conductor Singer stated that when his train passed through Benchley, 1-1/2 miles south of the point of derailment, the engineman reduced speed to about 10 miles per hour. There was no apparent reason for this reduction in speed, as there was no slow order in force at Benchley, and approaching that station from the south the track is straight and the grade is descending for nearly a mile.

After passing Benchley the speed of the train increased, and, from all indications after the accident, it was running very fast at the time of derailment, although as both the engineman and fireman were killed it was impossible to get any positive evidence as to speed.

At the place where the train left the rails the track is straight and the grade is about .77 per cent descending to the north. The track is laid with 33 foot steel rails weighing 80 pounds to the yard, on treated pine ties, about 20 ties to the rail. Tie plates are used and the rails are single spiked. The ties are laid in about eleven inches of gravel ballast, and at the place of derailment the track is on a two foot fill.

The first wheel marks on the ties were at the north side of a stone culvert. The engine truck wheels were the first to leave the track, remaining on the ties and trailing to the right for a distance of 105 feet, at which point they left the ties and went down the embankment. The drivers left the rails at the point where the trucks left the ties. A short distance further on the engine went down the embankment and turned over on its left side, coming to rest 345 feet beyond the point where the truck wheels first left the rails. The engine trucks were buried in the ground some distance to the rear of where the engine came to rest. The tender was thrown ahead of the engine. Its frame was broken in two and stopped close to the track about 400 feet from the point of derailment. The water cistern was torn loose from the tender frame and stopped about 15 feet ahead and to the left of the engine. The baggage car was thrown ahead of the engine to the opposite side of the track, and stopped in an upright position, with its rear end near the track about 365 feet beyond the point of derailment. The smoking car was overturned, and lay on its right side just ahead of the engine on the right hand side of the track. The front end of this

car stood close to the track and its rear end was about 20 feet away from the track about 330 feet from point of derailment. The day coach remained in an upright position and its front end was jammed into the vestibule of the smoking car. The right side of this car lay against the top of the overturned engine. Its rear end stood about 8 feet away from the track and was about 260 feet away from the point of derailment. The head sleeper was derailed but remained in an upright position, with its head end coupled to the day coach and its rear end fouling the track about 160 feet from the point of derailment. The second sleeper had but one pair of trucks derailed, and the rear car remained on the track.

Most of the injured passengers were occupants of the smoker and day coach, and that there were so few injuries, and no fatalities was undoubtedly due to the type of these cars, they being of modern all steel construction. The bodies of these cars, as well as the baggage car, which was also all steel, suffered practically no damage. After the accident gas escaping from a broken gas pipe in the smoking car was ignited from a match which some person lighted while searching for the injured, but there was no damage by fire as a result. Had this been a wooden car it would probably have caught fire and the result of the derailment would have been much more serious than it was.

An examination of the track after the accident showed some irregularity in its surface. On the right side of the track about 20 feet south of the point of derailment there was a joint  $1/4$  of an inch low. The third rail joint farther south on the same side of the track was 1 inch low, while on the opposite side, beginning at a joint 73 feet south of the point of derailment and extending southward an entire rail length, the track was  $3/4$  of an inch low. This rail length covered a soft spot, or "churn hole", in the track, due to heavy or continued rain on the loose sand gravel with which the track was ballasted. This entire rail length, as well as the low joint farther south on the opposite side of the track went down an additional inch more under the weight of a moving train.

An examination of the engine after the accident showed that the flanges of the engine truck were worn sharp on right hand side. The wheels on this truck had evidently been crowding the right hand rail for some time previous to the accident, as the first pair of wheels on this truck was renewed on December 21, 1912, on account of sharp flanges on right wheel. There was a wheel mark on top of the right hand rail showing where the truck wheel had mounted the rail and run along on it for a distance of about 15 feet before dropping off on the ties. The tire on the back driver on left hand side of engine had slipped in on the wheel  $1-1/2$  inches. As all the evidence was that the engine truck wheels were the first to leave the track, it is not believed that the slipped tire contributed to the accident, but may have resulted therefrom.

This accident was caused by defective engine equipment combined with speed too high for existing condition of track.

An examination of the train delay reports covering the movement of this train for the period from January 15th to February 1st, 1913, showed that the engineman had difficulty in maintaining the schedule, on account of slow orders, heavy trains, heavy station work, stops for water and fuel, meeting, passing and sawing by trains. A special effort is made by the operating officers of the road to keep their passenger trains on time, as indicated by General Circular No. 521, a copy of which is as follows:

HOUSTON AND TEXAS CENTRAL RAILROAD COMPANY  
Office of Superintendent  
First Division

C I R C U L A R N O . 5 2 1

Ennis, Texas, December 26, 1912

To  
ALL ENGINEERS AND TRAINMEN:

Our main line passenger trains are meeting with many delays that can and ought to be avoided. Among the causes which subject us to criticism are failure of freight trains to clear passenger trains, and often when passenger trains are stopped by freight trains the freight trains do not use energy in letting passenger trains out. In saving by, it is noticed that the work is often performed in a slow manner, no preparations made for passing until the passenger train has actually arrived and then several minutes elapse before any movement is made.

Freight trainmen and enginemen are requested to lend every possible effort to get passenger trains over the road and keep them on time. By saving a delay to one passenger train, you are helping other passenger trains, as well as other freight trains. Every main line passenger schedule can easily be made if Enginemen and Trainmen will unite in the effort to get away from stops quickly as possible and cut out unnecessary stops. Keep in mind the schedule figures and make a determined effort to regain the right to our old slogan "H & T C ON TIME". Remember 'safety first', and that TRAINS RUNNING ON TIME is the greatest safeguard that any railroad can adopt.

J. F. SUGRUE

ASST. SUPERINTENDENT."

Enginemen who lose time, or who fail to make up time are criticised quite severely by the operating officers, as indicated by letter of Assistant Superintendent Timmins to Engineman Grissom, of which the following is a copy:

Ennis, Texas, Jan. 10, 1913.

Mr. L. Grissom, Engineer,  
Ennis, Texas.

Dear Sir:

My attention has been called to your poor performance on trains #17 and #18 during the month of December, 1912. The performance is as follows:

Date	Train	Left Houston	Arrived Ennis
6th	17	On time	1 hr. 48 mins late
9th	17	18 mins late	1 hr. 51 mins late
12th	17	On time	1 hr. 25 mins late
16th	17	7 mins late	30 mins late
18th	17	On time	5 mins late
21st	17	15 mins late	1 hr. 33 mins late
24th	17	15 mins late	2 hrs 43 mins late
27th	17	10 mins late	1 hr late
30th	17	7 mins late	50 mins late

Date	Train	Left Ennis	Arrived Houston
1st	18	8 mins late	On time
7th	18	37 mins late	45 mins late
10th	18	45 mins late	58 mins late
13th	18	24 mins late	33 mins late
16th	18	43 mins late	1 hr. 30 mins late
19th	18	54 mins late	52 mins late
22nd	18	44 mins late	1 hr. 7 mins late
25th	18	40 mins late	1 hr. 40 mins late
28th	18	10 mins late	10 mins late
31st	18	17 mins late	50 mins late

You will observe from the above that it is a very discreditable showing for an Engineer of your experience and wish to say to you that I expect much better service for month of January, as the company cannot continue to pay out good money for such poor service.

Yours truly,  
L. L. TIMMINS,  
Asst. Supt.

In view of the evident anxiety of the operating officers of this road to keep their passenger trains on time, it would seem that better provisions should have been made for moving them safely. That the condition of the truck wheels on this engine was not safe for high speed service is evident, and

that this unsafe condition was known is shown by the fact that they were renewed on account of the very defect which was a contributing cause of this accident only a short time before its occurrence. Again, on a portion of the road where the grade and alignment were exceedingly favorable for high speed, the track conditions were unsafe for high speed, and no slow order was in force at that point. When employees are urged to make up time on an exceptionally fast schedule (in view of the operating conditions), and criticised for not doing so, it is plainly the duty of operating officers to see that every facility is provided for high speed to be made with safety. As long as operating conditions disclosed by this investigation are permitted to continue, accidents of this character may be expected to occur.

Engineman Latchford entered the service of the Houston & Texas Central Railway Company as fireman in 1889 and was promoted to engineman in 1890. He was considered a competent man and his record was good.

Fireman Durham had been employed as fireman on this road since 1907. His record was good.

Conductor Singer had been in the employ of this road for 32 years, for the past ten years as passenger conductor. His record was good.

The employees in charge of this train had been on duty 3 hours and 30 minutes at the time of the accident and were off duty 40 hours prior to starting out on this trip.