Sudden Stopping and Starting of Trains Causes Severe Handling Damage

Engineer E. H. Baxter, Fort Scott, Submits Masterful Discussion to Better Service Contest Judges

By E. H. BAXTER

WHEN Engineer E. H. Baxter, of Fort Scott, Kansas, entered his paper on the prevention of rough handling of cars, in the better service contest, he wrote better than he knew. The judges accorded the prize to William L. Lewis, but it was no reflection on Baxter. He thoroughly covered the matter of rough handling from the standpoint of an engineer. His paper, 'Printed herewith, was termed "a masterpiece" in treatment and knowledge of the subject, by judge and technical men. It will be of vital interest to 50,000 Frisco engineers, shopmen and trainmen - W. L. T. Automatic Control Equipment, Inc.

The subject matter of "Rough Handling of Cars" carries with it the idea of the sudden stopping and starting of cars or trains with a sufficient magnitude of force, brought about as the result of slack actions, to cause damage to the equipment and handling.

In present day railway operation the conditions in long freight trains are the most difficult to deal with in train handling. The automatic airbrake has, for a considerable number of years, been dominating all other means of train control. In the manipulation of the airbrake the responsibility is placed upon the engineman, and, in order that the shocks, which are the result of slack action, may be reduced to a minimum, the engineman endeavors to apply the automatic brakes in partial or graduated applications, that is, to say, they are not applied in one continuous full application. This is necessary in order that the slack movement (in or out) will be less violent. Therefore, the smoothness and freedom from injurious slack action with which a long freight train may be handled, either in a service or an emergency application of the brakes, depends to a considerable extent upon the general makeup of the trains, with reference to loaded and empty cars, length of trains, weights, speed and uniformity of piston travel.

In the installation of brakes on railroad cars, the common practice is to use the empty weight of the car as a basis for establishing the braking power and the amount of friction. However, the total cylinder power for the car, both loaded and empty, in the same, those are known is single capacity brakes. The total cylinder power for a car being variable, this then varies the braking ratio of the empty car as compared with the loaded car. The present tendency for increasing the maximum loading capacity of freight cars 10 per cent above the rate of capacity in many instances has raised the braking ratio of the empty to the loaded car from 3 to 4 to 1, in which case the train of empty cars may be stopped in one-third, or one-fourth the distance required for the same train loaded, conditions being equal for the two trains.

For men to handle trains satisfactorily, with the least possible amount of damage from slack action, conditions should, of course, be favorable. In order to provide the smooth handling of the train for long distances, it is necessary to use the L. T. Automatic Control Equipment, in that it is a greater measure of flexibility in service and has incorporated in it features not found in previous types of locomotive brakes.

Terminal Inspection

In addition to terminal testing of airbrakes on outgoing trips, there are a few simple tests that may be made and the results noted as to the general condition of the equipment. Where two air compressors are installed, see that both are working, that they are being properly lubricated, that their speed will be normal and that apparent operative condition will supply a sufficient amount of compressed air. While the rules and instructions for the inspection and testing of train brakes in terminals are well laid down, those concerned, consider the train as the individual car and the brake pipe leakage are two of the most standing things that enter into the problem of freight train handling. The automatic airbrake has been so located, well lighted at night, to make their reading accurate. The equivalent reservoir gauge hand at brake pipe hand on small double gauge should show the same pressure with automatic brake valve in release and running positions, the latter indicates the actual brake pipe pressure at all times, while beyond lag position they are separated as effectually so the equalizing piston will permit.

The automatic control valve should respond to a second service reduction, giving in return a cylinder pressure of 21% to 1, with no perceptible variation of the cylinder pressure for at least 20 pounds, while the control valve must be a leak out of, or into, the cylinder not exceed 2% of nominal, 20 pounds, 2% of nominal, 20 pounds. The equivalent reservoir pressure gauge hand at brake pipe hand on small double gauge should show the same pressure with automatic brake valve in release and running positions, the latter indicates the actual brake pipe pressure at all times, while beyond lag position they are separated as effectually so the equalizing piston will permit.

In the manipulation of airbrakes in service, it is necessary to make a full service reduction of twenty pounds should be attempted 5 or 7 seconds. Any normal variation of this time denotes a defective condition, and where air gauges are not read during brake manipulations, reductions will not be made as intended. Air gauges should be so located, well lighted at night, to make their reading accurate. The equivalent reservoir gauge hand at brake pipe hand on small double gauge should show the same pressure with automatic brake valve in release and running positions, the latter indicates the actual brake pipe pressure at all times, while beyond lag position they are separated as effectually so the equalizing piston will permit.
long travel brakes, releasing first, be-
short travel brakes.
slack, trains could not be broken in
contribute to delaying the release of
considered as sticking brakes. This af-
two, but, obviously, such is not true.
longer, and, in some cases, may be
it is evident that the long travel
cylinder pressure than the long travel,
bearing on this can be a considerable factor for brake ef-
lions during a brake application. Its
affects the pressure in the
brake cylinder for any given reduc-
~miforniity throughout the train will
fectiveness as a whole.
be a considerable factor for brake ef-
long1 as possible, as the travel of the
travel on cars be kept as nearly nni-
likely in stopping and would render it
as the rate
route of cars changes with the in-
length, weight, speed, etc.
the engineman the ability to control
of the empties and the loads will have
part, Which results in heavy stresses
of retardation on the empties will be
much greater than that on the loaded
loads are assembled and placed to-
mainly at the front end of the train,
buckling of some weak car near the
middle of the train.
will be a running in of the slack, with
a recommended location by applying
the brakes. Reduction should be split
in the beginning.
the slack in the opposite direction, there-
brake pipe leakage takes away from
ing excessive leakage. Excessive
be avoided.
short travel brakes, giving a higher
cylinder pressure than the long travel,
pressure in the
air-brake, in what is known as service
braking. Reduction should be split
in the beginning.
the slack in the opposite direction, there-
the slack will run out toward the
head end of the train. The slack in the
head end brakes, being nearest
to the escaping air, respond to the
rate of speed of the head end from
right against the head end, thus clos-
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Railway Men of Four States Honor Veterans of the Rails

Wm. H. Hughes, Jack Cross and George Salmon Guests of Honor, January 20, at Sapulpa Meeting

BY L. A. MACK

Sapulpa, Okla., February 1.—Special to Frisco Magazine.

A RAILROAD man of four states gathered here on January 29th, to be entertained by passengers of active service. The junior member of the trip was Wm. H. Hughes, better know to Sapulpaans as "Uncle Bill" Hughes and was retired December 30th, 1925, having reached the age limit of 65 years. He spent more than 35 years at the throttle and has piloted countless thousands to their destinations in safety. He has been occupied for thirty years in the passenger service of the Frisco, running between Sapulpa and Sherman, Texas. Another engineer of distinguished service in Jack Cross who has been identified with the passenger service of the Frisco during a quarter of a century. Mr. Cross was retired a couple of years ago account of failing eyes and has now passed the age limit.

The third guest present was Geo. Salmon, formerly a resident of Sapulpa and a past Chief Engineer of Division No. 37. Mr. Salmon was retired several years back, account of failing eyes, but has not yet reached the age limit.

Guests from Texas, Missouri and California, joined with the Oklahoma man, in making the occasion one of happiness for the retiring railroad pilots.

A banquet was served by the G. A. A. and L. S. to the E. L. F. and E., which was Frisco Railway proportion of songs and readings. A feature number of the guests was the story of the following page on "Casey Jones" composed especially for the occasion by Mrs. J. Clark and sung by Florence Win. Boyd, Cono Lindell and T. A. Pickens.

"Come all you founders if you have a heart.

The story of a brave engineer, Old Bill Hughes was the founder's name,

And he worked away many winning Frisco fame."

CHORUS

Old Bill Hughes getting out on Wednesday
Old Bill Hughes with his orders in his hand,

Jack Cross trying to get to Sherman,

Plow ing through the country like a battering ram.

Old Jack Cross is a good old soul,

But when he did reach the grade,

He didn’t have to work,

But when he ran an engine, He would never skirt.

CHORUS

Old Jack Cross getting out on Thursday,

Old Jack Cross with his orders in his hand,

Old Jack Cross trying to get to Oklahoma City,

It looked to him like the promised land.

And then we have Geo. Salmon too.

Let me tell you what he used to do.

He used to be Chief of Division 373,

And the trials that he had he sure can relate.

CHORUS

Old Geo. Salmon getting out on "Coal Oil Johnnie."

Old Geo. Salmon with his orders in his hand,

Old Geo. Salmon trying to get to Tulsa,

Ain’t back to Muskogee for his ham

And ——"

Toasts and talks were made by the following brothers, Uncle Bill Albrock, St. Louis, Mo.; Mr. J. R. Scott, Geo. Salmon, Springfield, H. H. Harrison of Sherman, Texas; Win. Henry of Monett, and F. D. Fowler of Los Angeles, California.

At the conclusion of the program, handsome leather travel bags were presented to each of the retired brothers, by the B. F. L. E., while the R. of L. E. and the H. F. E. presented each with a new pipe and a plentiful sup ply of smoking tobacco.

The attendance was estimated at 175 persons. Out of town brothers were, Mr. Wm. Marrett of St. Louis, Mo., Mr. and Mrs. H. H. Harrison of Sherman, Texas, Mr. J. R. Scott of Springfield, Jim Torrill and John Hunter of Henryetta, J. R. Scott, Geo. Salmon, Trem Griffin of Fort Gibson, Mo., W. H. Henry, B. Callander, Monett, Mo., and Mrs. W. H. King of Oklahoma City and Mr. and Mrs. F. D. Fowler of Los Angeles, California.

HARRY C. JAMES is a member of the advertising department, and became secretary of the organization and the general passenger agent in 1912. In 1912 he was made assistant chief electric in the passenger department for advertising, and in July, 1911, returned to his former position as a general passenger agent. On May 1, 1912, he was made chief electric in the advertising department of the company and was appointed advertising manager.

He was born October 21, 1871, in St. Louis, and educated in the public schools there. He is a member of the American Association of Advertising Agents and a member of the Advertising Club of Los Angeles.

HARRY C. JAMES

"Do you know where your brother is?"

"No, I don’t know him.

But I’d like to know you, Mr. James, and see you again and have a good chat."

HARRY C. JAMES

"I’m sorry I couldn’t come."
Modern Apartment Designed and Owned by Frisco Employe

THE two-story Spanish Duplex apartment house, shown in the accompanying picture, was designed by J. W. Guthrie, a draftsman in the mechanical department, Springfield, Mo. Mr. Guthrie is also the owner.

As will be seen from the floor plans, this is a two-family apartment house, with quarters for janitor in basement. It is of frame construction with covering of “Bishopric” stucco on “National Steel Fabric” base, in a sand float finish.

Each apartment is equipped with all the latest features of the modern efficiency type home, including complete built-in cabinets in kitchen, built-in ironing board, built-in ice box with outside icing door, package receiver, and garbage incinerator. The living room has a Murphy door bed as an auxiliary sleeping facility and dressing closet is equipped with built-in wardrobes with mirror doors.

The apartments are finished in glossy ivory enamel with full panel doors in natural gum. Oak floors throughout.

It is heated with hot water plant and the plumbing is complete and of the best grade fixtures.

The building is built on a 50x175 foot lot and faces east. A two-car garage of similar design is seen in the accompanying photo.

The apartment is one of the most complete in the city of Springfield. Mr. Guthrie has planned and supervised its construction, and the picture does not do full credit to the structure, as it was taken in the winter time, when the awnings were down and background of trees and grass adds much to beautifying the place.

Right You Are, Cloud

To all intents and purposes, Missouri's first all-weather cross-state highway known as No. 2, is now in service. Within two days after the opening of this road from Kansas City to St. Louis, a motor bus company, operating machines to carry 21 passengers, began making daily runs in direct competition with the railroads. The railroads provide and keep up their own right-of-way, companies such as these bus companies take charge of a right-of-way for which the tax-paying public, including the railroad companies, pays. It does not seem hardly a fair deal to either the public or the railroads. It has long been a popular diversion to cuss and discuss the railroads and "put the buzzer on them" at every opportunity, yet there must be a limit. It is behooving to public welfare that the railroads continue to operate and we all know fairly well that they are not wallowing in riches. But they cannot operate if the gasoline busses and the gasoline freight trucks, using roads built by the public, continue to cut their throats. —The Pleasant Hill Times.
William J. Orr, a long-time Friend of Judge Orr, has written the following tribute on the occasion of Judge Orr's resignation:

"Thirty-five years of distinguished service in the legal department of the Frisco and its predecessors, it is the record of William Jay Orr, and it is not that his era is dimmed or his natural force abated, but because he has reached the age of retirement under the orders of the company that this long employment terminated February 1st:"

"Mr. Orr was born February 1, 1856, in Ashley, Pike County, Missouri, where he attended and later taught school, and where he was admitted to the practice of law. Since 1880 he has resided in Southwest Missouri."

"In September, 1890, he and his partner Judge B. F. Olden became District Attorneys of the Kansas City, Fort Scott, Mo., a position he held for the firm was dissolved, and Mr. Orr has since continued to serve the interests of a legal nature in his territory with his keen power to discriminate between 'good law' and 'bad law', and his peculiar aptitude for systematic classification, eminently qualify him to transmit to the younger generation memories and life-long friend-ships."

"His career while with the railroad was varied and interesting. From 1871, the date of his first employment, to 1917 he was on a construction train from Pierce City to the Rail Route, west, on the Atlantic & Pacific railroad. In 1899 he was assigned the position of night watch-man at Pierce City, Missouri, where he remained for thirteen years. He served the remainder of his time as a headman on this same division. "Many a day I have shot wild turkey and deer from the baggage car, and served them to the train crews," he candidly said."

"He finds great enjoyment in caring for his many friends in the profession, to whom he refers, died about a year ago."

"Mr. Orr is leaving with the good wishes of every member of the Frisco family with whom he has come in contact. He has the friendship and esteem of every lawyer in his territory, including those against whom his hardest battles have been waged and he is respected by every Judge-State and Federal, trial and appellate—before whom he has practiced for over thirty-five years."

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