

Depreciation of Freight Cars Committee's Report.

An American Railroad Association's mechanical section committee, M. K. Barnum, Mechanical Engineer, assistant to General Superintendent Maintenance of Equipment, Baltimore and Ohio Rd., chairman, and of which L. K. Sillecox, Master Car Builder, Chicago, Milwaukee and St. Paul Rd., formerly Mechanical Engineer, Canadian Northern Ry., was a member, reported as follows:

In order that your committee's conclusions might be based on representative factors as to average life and residue values, circular 35 was issued requesting data on equipment dismantled during the 3 years, ended Dec. 31, 1917. This period was taken because it represented normal conditions more nearly than those existing during 1918, the first year of Federal control. This information was requested by classes, in three groups—wooden cars, wooden cars with steel underframes and cars of all-steel construction.

Replies were received from 55 railways and 7 private lines, representing ownership of 2,023,783 cars and covering 106,010 cars dismantled during the 3-year period. A summary of the latter is given below; cars retired in connection with rebuilding are not included:

All Wood Cars.			
Class	Average life of cars		
	Number	in years	Scrap value.
Box	47,672	22.3	12.2
Stock	5,201	20.1	12.1
Flat	6,800	22.3	17.1
Gondola	24,630	18.0	14.7
Hopper	16,082	20.3	14.4
Refrigerator	4,591	21.7	12.3
Tank	81	24.6	31.5
Weight average	105,057	20.9	13.5
Wood cars with steel underframe, none.			

All Steel Cars.			
Class	Average life of cars		
	Number	in years	Scrap value.
Gondola	817	13	11.7
Hopper	136	14.7	17.2
Weighted average	953	13.1	12

The information furnished regarding wood cars with steel underframes was very limited and not representative of average conditions, and your committee did not feel justified in using it.

The average life of railway owned wooden refrigerator cars dismantled was 17.1 years, and of private line wooden refrigerator cars dismantled was 21.9 years, making the average life for all wooden refrigerator cars dismantled 19.4 years. However, it is only fair to state that the average life of railway owned wooden refrigerator cars is very largely affected by two lines reporting the dismantling of a large number of cars of an average life of only 15 years, which is much lower than the general average for all railway owned wooden refrigerator cars, and by excluding these two lots of cars the results are as follows:

Railway owner	21.3 years
Private line owned	21.9 years
Average life	21.7 years

which your committee feels should be taken as the average life of wooden refrigerator cars and which has been shown in above table.

In order that the information would be obtained on a uniform basis, your committee asked that the scrap value be expressed in per cent of M.C.B. price of car, as shown in rule 112 in the 1918 M.C.B. Rules, using the 1918 price for scrap. From the information secured, we obtained a weighted average percentage of scrap of the M.C.B. value new, on all wooden cars, of 13.5%. It is your committee's opinion that 3/4c. a lb. is more

nearly representative of the average current market price for scrap than the 1/2c. a lb. as quoted in the present M.C.B. Rules, which would increase the weighted average percentage from 13.5% to 20.25%.

In settling for destroyed cars, recognition should be given to the fact that the car has a value to the owner above that of the actual value of the scrap to the line destroying the car, and further, that there is considerable serviceable material on which the line destroying the car can obtain the secondhand instead of the scrap value, and that if 20.25% represents the value of the scrap to the line destroying the car, your committee does not feel justified, in the absence of any other figures, in recommending any change in the provision of rule 112 which provides that in no case shall the depreciation exceed 60% of the value new.

The weighted average life of all classes of wooden cars was found to be 20.9 years, as indicated in the above table. We have no information as to the average life of cars of steel underframe or all-steel construction, in the absence of which we would suggest that on such cars, other than gondola or hopper cars, the same rate of depreciation be used as on wooden cars, until such time as experience may warrant a different rate.

The weighted average life of all classes of open top steel cars was found to be 13.1 years, but on account of your committee having knowledge that the cars reported as being dismantled during the period did not represent the present standard for this type of car we are inclined to believe that the information does not represent the average life of this class of equipment and, pending the time when experience will warrant a revision, your committee recommends considering 17 1/2 years as the average life for open top steel cars.

Based on the average life as indicated in the above table for wooden gondola cars, your committee suggests that wooden and steel underframe gondolas and hopper cars, for the purpose of depreciation, be included with similar cars of all-steel construction.

Opinions were requested as to whether depreciation should be applied on air brake values at the same rate as for car bodies and, on a car-owned basis, the majority of the replies favored depreciating both 8-in. and 10-in. air brakes at the same rate as the car body, which is recommended by your committee.

The majority of replies to the question about depreciation of trucks, considered on a car-owned basis, favored having the trucks carry their own rate of depreciation and having that rate less for all-metal trucks than for composite trucks. However, your committee finds that the rate of depreciation of car bodies should be reduced to 3% and 3 1/2%, according to construction, and we do not feel that a rate less than 3% for trucks is justified; therefore we recommend that the trucks be depreciated at the same rate as the car body to which they belong.

In view of the information at hand, your committee submits the following recommendations for a straight depreciation basis for freight cars.

	1918 Rules	Proposed
	change.	rate. %
Wooden car bodies, except gondolas and hoppers	5.5	3

Wooden car bodies, gondolas and hoppers	5.5	3.5
Wooden car bodies with steel underframes, except gondolas and hoppers with steel underframes	4.5	3
Wooden car bodies, gondolas and hoppers	4.5	3.5
Steel underframe flat cars	5	3
All-steel car bodies or those with steel underframes and steel superstructure frames, except gondolas and hoppers	4	3
All-steel car bodies or those with steel underframes and steel superstructure frames, gondolas or hoppers	4	3.5
Tanks for non-corrosive material	4	3
Tanks for corrosive material	5	3.5
Air brakes	None	Same rate as carbody
Trucks	Same	Same rate as carbody

The age of the car body shall govern in figuring depreciation on air brakes and trucks. The depreciation rate for the class of car shall govern in figuring depreciation on such betterments as are listed in rule 112 and shall be figured from date of application.

In its study of the subject of depreciation, your committee was confronted with the question of rebuilt cars and believes that this should be referred to a committee for consideration, and suggests this committee, if appointed, be requested to take up the part of rule 112 which provides that in no case shall the depreciation exceed 60% of the value new.

Report of Committee on Powdered Fuel.

An American Railroad Association's mechanical section committee, C. H. Hogan, Assistant Superintendent Motive Power, New York Central Rd., chairman, reported as follows: At the time of the last report of your committee in 1916 there were several experimental installations for burning powdered fuel on locomotives in the U.S., but the increasing demands for transportation, due to the great war, and finally the entrance of the U.S. into the conflict, made the setting aside of even a single locomotive for such experimental purposes an impossibility. Accordingly all locomotives that had been equipped for the burning of powdered fuel were stripped of the special appliances intended for that purpose and returned to their regular service.

The general principles involved in the burning of powdered fuel were set forth in our last report in 1916, when the experiments were progressing so satisfactorily that they seemed about to spell success. That the principles were correct has been demonstrated, and it remained to work out the practical details to meet the varying requirements that locomotive service demanded, as has been done for stationary plants. But this sudden stoppage of the work, immediately after the presentation of our last report, leaves matters almost exactly as they were at that time.

It is probable that, as soon as the affairs of the railways are settled and normal conditions have been resumed, the experiments with and development of the devices for burning powdered fuel will be taken up again, which it will then be the pleasure of your committee to present to you. And, with conditions as they are, your committee is asking to be relieved from the necessity of making a report at this time and to be continued pending the resumption of the experimental work which they were appointed to watch and lay before the association.