

mediate superior. It appears that one of the first requisites in creating the proper morale among workers is to insist that the foremen carry on their duties with such honesty and with such sincerity of purpose that no policy of safety of the company can be misunderstood. Instruction and supervision must be clean-cut and sincere. Proper instruction is not that which neglects to make certain that those who are to perform the actual tasks of work know absolutely how it is to be done in safety. Nor is proper supervision that which falters, even for a moment, to countenance unsafe practices.

There is an almost untouched possibility in the development of the homely attitude of even the unskilled and unlearned workman for his job. The development of this attitude through sincere and sympathetic understanding will be found demonstrated when the worker presumes to raise his head and offer a constructive criticism. There is a vast amount of usable horse sense among the uneducated workers doing routine work of the average shop which has been throttled, because an expression of opinion has not been encouraged, or if encouraged, the employee failed to see that any attention was given to the idea.

Contests and campaigns have a very definite place in the program of building safety morale. Accident prevention programs have a tendency to get into a rut or to grow stale unless stimulated from time to time; and it is very important to the successful continuance of the safety program to hold occasional contests or rallies or whatever you choose to call it, to re-stimulate the safety activities and to return them to their logical position of importance. Contests or campaigns of this character should be designed first to improve the physical conditions of the work place; but the major portion of the program must be designed to create additional safety morale among the workers.

We believe that if by some means we can build the proper morale in our shops we will reach the point where the employees will feel that they have more than a job paying a certain wage. They will take pride in the organization. They will feel that they must endeavor to help the fellow worker. They will believe that their company depends on them. They will realize that the success of the safety program is assured by their loyal interest, their support and intelligent work.

Exhibits of Lantern Slides

At this point in the program two special features were introduced where large numbers of lantern slides were used to illustrate the subjects. The first, entitled "Stripping and Erecting Locomotives," was given by J. W. Lennon, Superintendent of Shops, Missouri Pacific Railroad.

The second feature entitled, "Tackling the Worst Hazards in the Car Department," was given by W. R. Dunbar, Divisional Car Foreman, Delaware & Hudson Railroad.

Both these talk outlines, accompanied by brief introductory remarks, may be found in the complete proceedings of the Safety Section, as published elsewhere.

Safety to Employees While Handling Locomotives

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The speaker said in part: In order that we may fully appreciate the frequency of accidents due to this cause, as well as know our experience in the past, here are the figures on number of employees on duty killed and injured over the past five-year period.

1927, killed 22, injured 4,467; 1928, killed 13, injured 3,402; 1929, killed 17, injured 3,160; 1930, killed 17, injured 1,929; 1931, killed 6, injured 1,383.

This shows a decrease of 69 per cent in the number of fatalities and personal injuries in 1931 as compared with 1927. The year 1931 compared with the previous year shows a decrease of 65 per cent in fatalities and 28 per cent in personal injuries.

Our accomplishments during this period in bringing about such a substantial decrease in number of personal injuries from this cause should be highly pleasing to everyone. However, practically all of the accidents coming under this heading are preventable accidents, and regardless of the number of such personal injuries, our best efforts are challenged until they are entirely eliminated.

Among the 35 classifications showing the causes of accidents to employees while operating locomotives, we find that injuries due to employees falling from engine or tender are the most prevalent, in fact, account for over 50 per cent of all fatalities and 25 per cent of all injuries. We appreciate that there are two essential reasons why it is necessary for employees to go up on the tenders of engines—one to take water, and the other coal. The first thing to be considered is the method to be employed in getting on and off the tender. With the advent of the larger locomotives, it has of course been essential to increase the capacity of the tank in a like proportion, which has made them a great deal higher than the old engine tender, and because of the increased height injury to employees by slipping or falling from them has proved more serious.

The vestibule cabs which are coming into more general use, also the design of front ends of modern tenders and the winter curtains which are quite uniform on all railroads, all seem to make access to the top of the tender from the engine cab less inviting. The method requiring the fireman to get down out of the engine from the gangway and go up to the top of the tender from a ladder at the rear, is in my judgment the proper and safest method and should be given consideration by all railroads. The rear of all engine tenders should be equipped with a proper designed ladder at each corner of the tender. A proper designed hook should be standard equipment and carried on each engine to enable firemen to reach standpipes in order to swing it over tender of engine or back into place when finished taking water, so that he will not be at any time placed in a position which might cause him to lose his balance and fall from the tender or engine.

The top of the water cistern should be kept free from all materials which might result in stumbling or falling accidents. On oil burning locomotives oil cisterns should be cleaned regularly and a slight coating of sand thrown on top of the oil cistern to prevent engine men from slipping when walking over the cistern. This is particularly important during winter months. Engine men should also use care to see that there is no oil on the bottom of their shoes before going on top of a tender, since a slipping accident may easily result.

It has been my experience that most of the personal injuries from taking coal have been due to the employees slipping while putting the old style coal shed pockets back into place or due to slipping or falling while returning to the cab of engine after taking coal. The newer design of coal sheds has largely eliminated the first hazard mentioned. It is to be understood that the rope or chains used in manipulating the coal pockets are to be properly maintained at all times.

The practice of any employee going back over the tender of the engine for the purpose of measuring water, etc. while engine is running at high speed should be discouraged. The frequency with which employees go out on the running board of engines while running is, I believe, in a large measure the outgrowth of conditions of a former time when this was apparently necessary. These conditions have largely passed away, due to the development and improvement of modern engines. There is only one solution for the elimination of this class of accidents, and that is by the adoption and enforcement of the rule, now in effect on one of our railroads, which forbids men from getting out on running boards of locomotives while in motion, except that where a helper engine is cut in ahead of the caboose toward rear end