the working shifts from day turn to night turn and vice versa. An examination of the time sheets of many of the mills shows that this practice has been entirely abolished in many of the departments and not in others. We recognize that at rare intervals there may come emergencies and unusual conditions that would make absolute enforcement of any exact schedule of work hours impracticable, a fact equally true in any field of industry and commerce. Our investigation, however, leads us to believe that it is feasible and practicable to eliminate the long turn formerly followed in the changing of shifts in continuous process work, and that it should be done. Further, that conscientious efforts should be made by all to reduce to a positive minimum any undue length in work hours that emergencies and unforseen conditions may some-, times demand.

(b) The twelve hour day. To ascertain the number of employees of the Steel Corporation working on a twelve-hour schedule (exclusive of officers, managers, and clerical forces), we have examined the records of 175,715 men. Of this number we find 45,248 or 253/4% are at present working twelve hours per day. Generally speaking, this schedule of work finds its largest proportion in those departments which are more or less continuous, such as rolling mills, open hearths, and blast furnaces, where the percentage working twelve hours varies from 50% to 60%. The explanation of such fact may be found partly at least, in the introduction of a large number of mechanical improvements which have steadily cut down the exhausting drudgery and the severe physical labor that was characteristic of many of the processes in the earlier years of the iron and steel industry. The actual physical labor involved in many of the positions is, today, much less than in former years, this being especially true of the open hearth and blast furnaces, where the intermittent character of the work is such that there is less call for actual expenditures of physical energy than in many of the 8 and 10-hour positions

Notwithstanding this fact, we are of the opinion that a twelve-hour day of labor, followed continuously by any group of men for any considerable number of years, means a decreasing of efficiency and lessening of the vigor and virility of such men. The question should be considered from a social as well as a physical point of view. When it is remembered that the 12 hours a day to the man in the mills means approximately 13 hours away from his home and family—not for one day, but for all working days—it leaves

but scant time for self-improvement, for companionship with his family, for recreation and leisure. It is important that any industry be considered in its relation to the home life of those engaged in it, as to whether it tends to weaken or strengthen the normalness and stability of family life. By a reasonable conserving of the strength of the working population of today may we be best assured of a healthy, intelligent productive citizenship in the future.

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We are not unmindful of the fact that the 12-hour day has by its general acceptance and practice over a considerable period of years become firmly entrenched, and that any sudden or arbitrary change would involve a revolution in mill operations. Nor are we at all sure that it would be possible for any one employer, or any number of employers, to inaugurate a shorter hour system, unless a similar policy should be adopted by all employers engaged in the same industry. We do believe that following in the wake of other betterment of conditions in the steel industry, there will naturally come a shortening of the hours of labor and the eventual abolishment of the 12-hour day, which will tend toward increasing the efficiency and resourcefulness of the working population and for that reason, bring benefit to both employer and employed. That steps should be taken now that shall have for their purpose and end a reasonable and just arrangement to all concerned, of the problems involved in this question—that of reducing the long hours of labor-we would respectfully recommend to the intelligent and thoughtful consideration of the proper officers of the corporation.

(c) The speeding of the workmen. In the article which is under discussion, considerable criticism is made against the system of payment of wages by piece work. We do not believe that there has been evolved any fairer or more generally accepted method of payment for labor. Likewise, what is known as the "bonus" system which has been largely employed by the Steel Corporation as an incentive to increase in output and efficiency, is objected to as tending to result in a system of speeding, harmful to the men.

That there is possibility of abuse in these systems is true. Have there ever been devised rules of procedure in any field of industry free from such possibility? Our observation of labor conditions in the mills of the Steel Corporation does not lead us to believe that there is either desire or tendency on the part of foremen and superintendents to pursue these policies to a point that would mean harm or injury to the men under their charge. It is, of course, within the province of the

Board of Directors, and they should employ the necessary means whereby they would always be conversant with and able to promptly check any official, who in his anxiety for output, becomes disregardful of the possible injury to his men by overspeeding and excessive strain.

As general operating policies, we believe the "bonus" system and the payment of wages by piece work to be of advantage both to employer and employe, guarding as they do against that dead level of wages regardless of the ambition, the resourcefulness, the efficiency of the individual concerned. They are the exemplification of the esprit de corps that is essential to the success of all enterprises; they are but a part of that spirit of contest and competition that is characteristic of all American life, whether it finds expression in the schoolroom, on the athletic field, in the target contests of army and navy, or in the legitimate striving for "place" among workmen, foremen, superintendents, managers and higher officials in any field of commerce and industry. Thru their operation, the qualities of perseverance, ingenuity and grit have opportunity for expression, development and reward. As stated above, these special bonuses are offered as an incentive for increase in output and efficiency. That they should find fair and just distribution among all those whose efforts and labor contribute to any resultant increase in production, or economics, would seem to be a subject calling for consideration and action.

(d) The repression of the men. The Steel Corporation has made efficiency the one standard by which continuance of employment in its plant is determined. If we are to understand the term "repression of workmen" as a criticism of, and objection to, this defined policy, then the implied charge is true. If on the other hand, it involved the question as to what measures the officers of the Corporation should adopt for the suppression of organizations that in the past have, at times, proved irresponsible and incapable of self-control, that have advocated and ofttimes insisted upon what are believed by many to be fallacious theories and practices, then, at least, the charge may well be open to discussion.

As a committee of stockholders, we do not believe the final solution of the problems involved in this question has been reached. We do believe the present methods are preferable to the old for all concerned, and that the Steel Corporation, in view of the practices often pursued by labor organizations in steel mills in past years, is justified in the position it has taken. That the method of employment today must

prove to be the best for the future is a question on which there may well be a difference of opinion. The interests of society and the community at large will not best be served by that type of mind, whether it be employer or employe which bases action on the assumption that might makes right. On the contrary, the adjustment of the relations between employer and employe is a task for men of sound minds, reciprocal natures, broad sympathies and courage, men who believe that the future may be made better than the present. May it not be reasonably hoped that such men, whether they be officials or wage-earners, may more and more be found working together to bring forward the day when employer and employe shall enter into a common administration of industrial interests. In the article under discussion "Old Age at Forty," mention is made of the general social welfare policies inaugurated at different times by the Steel Corporation. It would seem to be in the province of this report to briefly outline those policies, and to consider their value as affecting the relationship of employer and employe.

Safety Department

It is not necessary here to trace the growth of the earlier efforts made by different subsidiary companies toward the prevention of accidents, to the time when they found their culmination in the organization of a central committee of safety early in the year 1908, which committee was given the power to examine all the various plants of the corporation, and as rapidly as possible to bring every mill to the highest possible point of effectiveness in accident prevention. That committee has and is carrying on a determined and effective campaign for safety all along the line. Its work is considered as important a subject as any that the Corporation has to contend with in the manufacture of its products. From the start it has worked on a sound vigorous and scientific system of accident prevention. The central office of the Safety Department is in New York, in charge of an acknowledged expert, with several assistants, and supplemented by local safety committees in each of the subsidiary companies, which, in turn, are supplemented by subcommittees of foremen and workmen, all striving to study and safeguard the lives and welfare of employes. During the years 1910 and 1911, there was expended \$1,750,000 for safety, and large appropriations have already been granted for a continuance of the work. Gratifying results have been accomplished as evidenced by the fact that the percentage of seri-