

measure about as authoritatively as anything one could find the relative prevalence of the 12-hour day in most of the country's more important industries. It shows that the steel industry is the very last of all the industries in the United States in the matter of eliminating long hours. The chemical industry here ranks next to the steel industry, but as the table indicates, the chemical industry has in recent years made great strides towards changing from the two-shift to the three-shift system. The paper industry was once on two shifts, and still is in some localities; but most of the plants covered by this study evidently had gone to the shorter day. The glass industry, which was once on two shifts, is now for the most part on shorter hours. In coal mining there are some pumpmen and others who work twelve hours; but the proportion of such persons in the whole industry evidently is small.

As further illustration of the momentum of the movement towards shorter hours, Table II gives some of the organized trades which by 1919 had gone on eight hours; and Table III gives the number of men who in several important industries have in the last few years had their day reduced to as low as 8 hours.<sup>1</sup> Of these industries railroading was one which not many years ago operated on long hours; but first the basic 8-hour day was introduced and now the actual 8-hour day is rapidly coming in. Even on ships the three-watch system became universal for American ships in 1919, the only exceptions now being radio operators, and the sailors on the Great Lakes.<sup>2</sup>

In the face of what is no less than an overwhelming movement away from 12 hours, it would seem that no further proof should be heeded of the desirability of the steel industry's giving up the two-shift system; but if doubt still exists, it should be dispelled by ob-

serving what has been taking place in the steel industry itself in all of the world's leading steel centers outside of the United States.

In Great Britain the movement towards three shifts was begun in blast furnaces as long ago as 23 years; and by ten years ago was so well under way as to be the rule in the steel and tin plate industry of Wales, and a common practice in the blast furnaces of the north of England.<sup>3</sup> The late war retarded the rounding out of the three-shift system in England; but in March, 1919, those furnaces and other branches of the steel industry which had not already done so went over to three shifts; and today persons returned from England state that the three-shift system is the accepted practice throughout the English steel industry and is working to the satisfaction of all concerned.<sup>4</sup>

In Belgium an agreement was entered into between the employers and workers by which beginning with January 1, 1920, the 8-hour day was to be observed at blast furnaces.<sup>5</sup> In France, a law of April 23, 1919, established the principle of the 8-hour day, leaving to public administrative regulations the fixing of the conditions under which the principle should be applied. Without waiting for such regulations to be issued, however, the French employers and employees in the metal industry, and a number of other industries, made their own agreement, to go into effect on June 1, 1919.<sup>6</sup> In Germany the law also limits the working day to 8 hours, subject to such exceptions and conditions as may be defined by Decree or Administrative Order.<sup>7</sup> In Sweden the 48-hour week is generally applied in iron works.<sup>8</sup> In Spain the 8-hour day was first adopted by agreement for iron and metal workers in a long

<sup>1</sup>Lake shipping is for the most part a branch of, and controlled by, the steel industry.

<sup>2</sup>See *Report of Special Commission on Hours of Labor in Continuous Industry*, presented to the Seventh Delegates Meeting of the International Association for Labor Legislation, Zurich, 1912.

<sup>3</sup>As reported by Mr. Whiting Williams who spent the summer of 1920 studying the English steel industry. See Mr. Williams' discussion on a later page.

<sup>4</sup>*Report on the eight-hours day or forty-eight-hours week*, prepared for the International Labor Conference of the League of Nations, held at Washington, 1919, pp. 66, 67, 90.

<sup>5</sup>*Ibid.*, pp. 69-74, 99.

<sup>6</sup>*Ibid.*, pp. 5, 6.

<sup>7</sup>*Ibid.*, p. 85.

<sup>8</sup>While the fact that many industries, especially in foreign countries, have gone to the 8-hour day is the strongest possible evidence that the 12-hour day is out of date, it is important to bear in mind that the three-shift system is not in itself equivalent to the 8-hour day. Because of the necessity of dividing 24 by 2 or 3 (or 4), shift workers do in fact usually go to 8 hours. But there is nothing to prevent the men who have been working 10 hours from continuing to work 10 hours, or indeed to prevent a part of what has been shift work from being made over into 10-hour work. While some large plants have gone on an 8-hour day throughout, the more common practice has been to retain considerable 10-hour work. In this paper, therefore, we shall not deal with the 8-hour question as such. But we shall assume that the introduction of the three-shift system means that shift workers will go to 8 hours, while men not on shifts will, as in the past, work a day of whatever length the general conditions and customs of industry, and the wishes of the men and management, makes desirable. It is the avoidance of the 12-hour day that is the important consideration.

list of cities, and then, effective October 1, 1919, the 8-hour day was established by Royal Decree as the general rule for all industries.<sup>1</sup> In Italy there is an agreement limiting hours in the iron and steel industry to 8 hours a day.<sup>2</sup> Unless it be in the Orient there is, therefore, no important seat of the steel industry present or prospective excepting the United States where the two-shift system has not already passed away. It is to be hoped that in this matter we do not try to hide behind the Chinese or Hindoos.<sup>3</sup>

Granting, then that the elimination of the 12-hour day is essential to the higher development of American steel workers, and that the country and world at large have come to think of 12 hours as too long a day's work, it is obvious that whether or not the shorter day can be made of direct profit to the industry, it would be courting trouble for the industry to persist indefinitely in maintaining a system which the public generally condemns. The attitude of the public, even that part which is friendly to the steel industry, is well illustrated by the language in which the Senate Committee, which investigated and denounced the steel strike, used in speaking of the 12-hour day.<sup>4</sup>

"It is true that some of the workers testified that they wanted to work longer in order to get increased compensation, but most of them seemed anxious for an eight-hour day with a living wage. The policy of working men 10 and 12 hours per day in the steel mills is, it seems to the committee, an unwise and un-American policy. There are many hundreds of thousands of employees in the steel mills, a considerable portion who cannot read, speak, or write the English language. It is claimed by the Steel Co. that a very large proportion of those who are out on the strike are foreigners, which is defined in the evidence to be non-English-speaking people. The testimony sustains this contention.

"The 8-hour day is involved in the solution of this question. These non-English-speaking aliens must be Americanized and must learn our language, so the question of a reasonable working day is involved in the question of Americanization. Men cannot work 10 hours and 12 hours per day and attend classes at night school. . . . An 8-hour day with a living wage that will enable men to support their families and bring up their children according to the standards of American life ought to be a cardinal part of our industrial policy and the sooner the principle is recognized the better it will be for the entire country."

<sup>1</sup>*Ibid.*, pp. 82, 103.

<sup>2</sup>*Ibid.*, p. 81.

<sup>3</sup>I have no information regarding China and India, so that this allusion is only to the possibility of standards developing there that are akin to those now prevailing in the United States. As regards Japan, I am indebted to Mr. Hiroshi Iwata of the Mitsubishi Steel Co. for the information that the three-shift 8-hour day system has been adopted in his company's blast furnaces, open-hearth furnaces, rolling mills, coal mines, etc. He says that the tendency in Japan is all in the direction of the speedy adoption of shorter hours. He gives the impression that the three-shift system is the prevailing tendency in the Japanese steel industry.

<sup>4</sup>*Report of the Committee investigating the strike in steel industries*, Sen. Doc. No. 289, 66 Congress, 1st Session, p. 15.

Now a Senate and Congress that feels that way about the 12-hour day would be as likely as not to pass a law prohibiting it altogether if it was evident that the industry itself would make no move in that direction. Things as bad as that have happened, as in the case of the Adamson Act. And if there were no law passed and the 12-hour day still continued, then it seems almost certain that the industry would simply be adding so much fuel under the boilers of some future steel strike, or series of strikes. In spite of the apparent willingness and desire of many men to earn 12 hours' pay, there can be little question but that it was the 12-hour day which more than anything else supplied the popular motive power back of the 1919 strike. And the strike was a serious one for the steel industry. There might have been a strike had there been no 12-hour day; and, conversely, the ending of the 12-hour day will not completely solve all the steel industry's labor problems. But to continue the 12-hour system in the face of the general drift towards shorter hours already referred to would simply be to plant dynamite. Then—whether or not there is a law passed, or a strike—the fact is that with the passing of the old type of immigrant and the general movement towards shorter hours which is even stronger in Europe than in the United States, the steel industry will not long be able to get an adequate labor supply unless it introduces a working day which will be more attractive to working people. Even if the men could be obtained the sentiment is becoming such that employees would be smarting under a sense of oppression formerly not very much felt; so that the efficiency of the 12-hour day, probably never very high, would seriously suffer. In a word, the steel industry seems to be face to face with the inevitable. The change is coming; and the chief question is not whether it will come, but in what manner is it to be brought about? How will it work? How much will it cost? Is it possible to bring the change about so that instead of its being a financial loss, it will be a gain? It was in order to obtain light on the answers to these questions that during the last three months I have visited practically all of some 20 steel plants, which, seeing how things were going, have already changed from two to three shifts. And it is the results of the experiences of these companies which I propose first to illustrate, and then to summarize.