

years is probably a good deal below the number of similar steel foundries. The use of steel has recently replaced cast iron for a great many different requirements. As a single case in point, out of many that might be cited, we need only name its much more general employment for rolls and housings. The iron foundries can hardly as yet be said to have much felt the pinch of steel castings, because the general conditions of trade have been so prosperous, but there are those who believe that many of the iron foundries will be among the first to experience the effects of a slump. The true character and dimensions of the contest between the two metals cannot as yet be accurately gauged, for many reasons. It is certain that iron foundries are, and have for a long time past, been full of work, and there are many who believe that iron castings will long continue to hold their own. The British foundry interest would do well to keep their eyes upon the course of events in the United States, where economic and manufacturing conditions are so readily responsive to new demands and improved and cheapened applications.

Regarding which the American Metal Market, a good authority, says:

The statement above that there have been more steel foundries than iron foundries erected in the past few years is not true of this country. The growth of the steel casting industry in this country in the past year is shown by the following figures, compiled by the American Iron

and Steel Association. Total production of open hearth steel castings in 1900 was 177,491 tons, in 1901 it was 301,622 tons, an increase in 1901 of 124,131 gross tons, equal to 70 per cent.

New methods of making steel castings are coming into use, which bid fair to still further increase the volume of the industry.

Mr. S. S. Deemer, a large manufacturer of steel at Reading, Penn., writing of the Bookwalter process, says:

I have had a few years' experience in making steel castings by different processes almost constantly since 1877—namely, McHaffee, open hearth, Robert, Tropenaz, and at the present time Bookwalter, which I consider under proper conditions superior to any known process. A visit to our plant will convince the most skeptical. I am willing to make a broad assertion that with a small converter that will turn out about 5,000 pounds of finished metal every half hour you can make any grade the open hearth people can, and also a great many that they cannot. For instance, after decarbonizing a 5,000 pound heat, you can make two or three different kinds of steel out of the one melted bath. Following is the analysis of three different grades of steel made out of one heat: First ladle, 2,000 pounds, 0.10 car.; mang. trace; sil., 0.01; second ladle, 2,000 pounds, car., 0.25; mang., 0.60; sil., 0.25; third ladle, 2,000 pounds, car., 0.55; mang., 0.85; sil., 0.28. The first of these the open hearth steel casting

people cannot make at all, for they could not get it out of the ladle; however, they might a scull. I claim the small converter will produce hotter steel, with more life to it than the open hearth, and the claim is not "fallacious." You can decarbonize one 5,000-pound heat, pour it into an open ladle, and hold the metal hot enough until you finish the second heat, then pour it into the same ladle and pour the entire mass into one mould over the lip of the ladle without any scull. You can take a small shank ladle with about 100 pounds of melted steel from the converter, let two men carry it about 75 feet, and pour it over the lip to the ladle, the same as you would iron, and have no scull. The open hearth people could not get it to run, even into a plain mould. We can run anything, from one ounce up. I predict in the near future that almost every steel casting plant will install a small converter for special grades of castings. Of course it requires constant attention and careful practice. I write this simply because the small converters have been ridiculed by different ones, when they did not understand or give them proper attention.

AMERICAN IRON.—In the American Iron and Steel Association's annual report, made public this week in its complete form, are contained some highly interesting comparison of prices during the past few years. A clear idea may be obtained from these figures as to the actual movement of steel and iron pro-

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