

plain, and that is, which is the furnace that will give the best results? He spoke of a number of furnaces in his paper, and it would be interesting to know which of them will give the best results with varying loads, with the least possible waste of coal, what I mean is, where you have to crowd your furnaces part of the time, and bank them at others, and still get the same efficiency out of the coal.

The writer has said that there is a great deal of fuel wasted in the amount of smoke coming through the stack. It seems to me that it would take a man a long time to gather up a ton of coal from the smoke issuing from the stacks. I am told that there is less than one-half of 1 per cent. given off in smoke.

While it is possible to burn bituminous coal with a clear stack and get very poor economy, it is quite possible to burn it with a clear stack and get good economy. If you burn one pound of carbon with insufficient air, you get a combination of gas given off CO and get 4,500 B.T.U. and have a clear stack, while if you add another atom of air, you get a combination of gas CO<sup>2</sup> given off and 14,500 B.T.U.

Chairman,—

I am somewhat surprised at the low cost of generating current, the figures for which Mr. Wickens states he got from New York. I know that in New York City the engineers have been face to face with this problem for the last two or three years, owing to the competition of the big central plants like the Edison Plant in New York. I know of cases where engineers have been practically up against it, and simply had to develop power to meet the Edison prices or lose their jobs. It is necessary for engineers to wake up and find out what is doing in their plant. I know of one particular case where they employ four engineers in a large building on Broadway. The plant owners were undecided as to whether they would shut down their plant and turn it over to the Edison people. This engineer got his staff of four or five firemen and the other engineers together and offered them a bonus if they would turn out certain work, and pay particular attention to the plant for a month, as he felt quite sure that if they did this, they could beat the Edison system. They got to work and did so.

Every engineer must wake up to the fact that, when competition is so keen, he must know exactly what his plant is costing him to generate current, the amount of water he evaporates per pound of coal, and all other particulars in connection with his plant.