

amount of superheat added to the steam in its passage through the reducing valve. This is one reason why some engineers claim that heating a building through a reducing valve is the cheapest plan.

Mr. Lewkowicz,—

I do not think Mr. Wickens quite understood the question, I was not referring to the change in temperature, but to the volume in cubic feet of steam required to give the same amount of radiated heat in each case in a given space of time.

Mr. Wickens,—

In considering these conditions we did not consider the latent heat at all. The latent heat would be alike under both pressures and in each case.

Mr. Wilson,—

I believe that you can get steam enough from an engine to do your heating for nothing, that is, of course, if you have enough work for your engine to produce only the necessary amount of exhaust steam. There is to be considered the condensation in the cylinder, a few leaks in the steam main from the boiler to the engine, all of which, of course, will be a loss. On the other hand, you will have to burn the same amount of coal to heat the building with live steam, that you would to get the exhaust steam from the engine less what is lost through the condensation of the cylinders and the other losses I mentioned.

Mr. Latour,—

I read Mr. Wickens paper through and I think that Mr. Wickens has gone very fully into this matter.

Regarding the question of exhaust steam and live steam for heating, I think the point had better be explained by explaining that the engine, that is a simple engine, only uses 10 per cent. of the heat units to develop a certain quantity of work which may account for the fact that you can heat as cheaply from exhaust steam as you can from live steam through a reducing valve.

In reference to furnaces, a couple of years ago I was examining a power plant, one of the principal features which was the height of the furnace, which was 12 feet. That seemed to be a long way from the grate to the boiler, but they were getting very high results. At another plant where they had a