

Mr. Gilmour,—

There is one advantage in using hot blasts, your cupola would not be likely to scaffold. When cold air comes in contact with the iron a great deal of slag forms, and this is done away with by using a hot blast.

Mr. Hare,—

I would like to ask Mr. Gilmour one more question.

In recent years a considerable number of blast furnaces have been run with dry air, that is, with air from which the atmosphere moisture has been removed by the pressure refrigeration process, and with remarkable results in economy of fuel and quality of the iron.

I would like to ask Mr. Gilmour if he has had any experience with dry air in cupola practice. I should imagine that similarly good results would be obtained.

Mr. Gilmour,—

I am satisfied that it would be all right. I think that if we could get the atmosphere dry, we would certainly have better results in the cupola.

A similar question has often been asked in reference to the use of dry or wet coke. I have tried it both ways, and I have never found any difference at all. I know one place where there is no shed at all for keeping the coke in, and I have seen the coke put into the cupola saturated with water, and they got just as good results as when they used dry coke. When wet coke is used gas is formed which has the effect of adding considerably to the heat of the cupola.

One of the advantages of dry air over damp atmosphere is, that in the case of dry air you do not get slag forming over the tuyeres that is caused when the air used is damp.

Mr. Stanley,—

In reference to using dry or damp air in the furnaces, I remember an occasion when there were a lot of grate bars to be melted. It was found that no value could be obtained from melting these grate bars until steam was introduced into the cupola. It was found that we got the best results when three pounds of steam was introduced into the cupola through a half-inch pipe. Perhaps Mr. Gilmour could tell us why this works successfully?

Mr. Gilmour,—

I never saw steam introduced into a cupola, and I am doubtful about the advantage to be gained by allowing damp air to go through the tuyeres.