

Mr. McRobert,—

In regard to lubrication required when using super-heated steam. Do you not find that it requires more lubrication?

Mr. Kastella,—

The lubrication is higher naturally on account of the greater heat. As far as my knowledge goes it seems to be hard to get the right kind of oil to properly lubricate the cylinders, and from enquiries I have made it seems much easier to keep your cylinders properly lubricated, with saturated, than with super-heated steam.

Mr. McRobert,—

Would you think that the increased consumption of oil would be half as much again?

Mr. Kastella,—

Not that much. A short time ago a test was made in the works with very high dry steam, which resulted in an increased consumption of oil of about 1-3 to get the same lubrication.

Mr. Wickens,—

It appears to me that in the question of super-heated steam the thing to know is how much super-heat you are going to have. Suppose you are using steam 100 lb. pressure at 306 degs. well you can get plenty of cylinder oil that will stand 600 degs.

I think the most useful point in connection with super-heated steam is that you can run a reciprocating engine almost without any piston clearance. When you have saturated steam you have got to have a good clearance. With super-heated steam you get the expansion before the steam begins to condense and the result is that a clearance of 1-32 or 1-16 in. is all the clearance at each end of the cylinder that is necessary. This I think is one of the striking points in using super-heated steam.

Mr. McRobert,—

In reference to the chain grates. How do you find coal that contains sulphur? Some class of coal runs very high in sulphur, and consequently clinkers badly, the clinkers being very hard to remove.