

21/6/48 (1)
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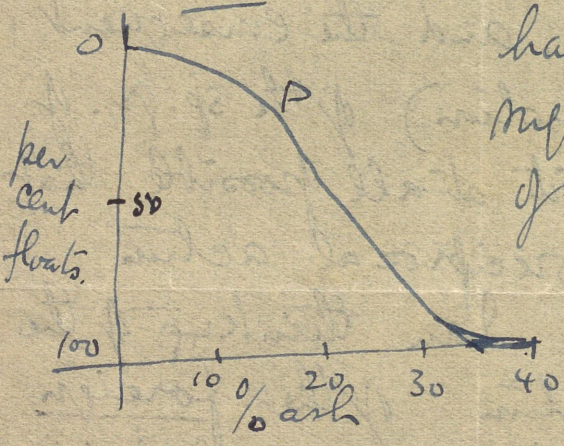
Replies should be addressed to the Director.

To Dr. S. K. S. Krishnan

20. 6. 48.

Dear Dr. Krishnan. A propos of the spacing of the carbon (graphite) layers by Na, Li, etc., and the consequent alteration (reduction) of the sp. gr. of the mass, is it at all possible that something of a reciprocal action may occur? I am thinking of the general composition of the foreign matter (non-carbonaceous), which is essentially a silicate or silicates, as in clay, mud, shale & slate. In shale there is well developed cleavage suggestive of horizontal packing, while in slate the cleavage is still better developed due to metamorphism. Now if the silicate structure can in any way also be modified by spacing

(? with carbon etc) so that again the density of the whole mass is less than what one would expect from a simple mixing of the two components, the explanation of the "early" portions of the washability curve might lie in that direction. On the other



hand your former suggestion re spacing of Carbon layers may be the true one — or perhaps both factors

are at work? Can X ray analysis help?

Several other lines of thought have suggested themselves as a result of your stimulating conversation.

With kind regards

Yours sincerely

J. Whitaker

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5.4.48

Dear Dr. Krishnan,

I am happy that you are collaborating with me in this research on the powdered coal gas-turbine & that you will keep an eye on Dr. S. Guruswamy's work for me.

I feel he is the right man for the investigation, & with your guidance he should acquire the confidence which is so valuable in a beginner.

I have asked him, ^{also} to maintain close contact with the Research Officer of the Railway Board (Standardisation Dept.) & with the Deputy Chief Controller (Mechanical) of the same office.

The Research Officer, Mr. Da Costa, will be able to give him many useful hints & suggestions. He is an able man.

I was glad to meet you two days ago, and

trust that we shall often meet, in Delhi
& elsewhere. I am often called to the
Capital, & now that Dr. Saruswamy's
work provides a link I hope to see you
about once every other month.

Again many thanks for your
generous cooperation.

Yours sincerely

J. Whitaker