



Dr. L. Bovey, BA, FInstP,
Senior Regional Officer

MINISTRY OF TECHNOLOGY
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Our ref: LB/KB

1st April, 1968

Dr. T. G. Pickavance,
Director,
National Institute of Research
and Nuclear Science,
The Rutherford High Energy Laboratory,
Chilton, Berks.

Dear Dr. Pickavance,

Precision measurement of d c current

During a recent visit to GEC/AEI at Rugby it was mentioned to me that among their technical problems were the following:-

- (a) precision measurement of D C currents for magnet supplies with a desired accuracy of $\pm 0.005\%$;
- (b) precision measurement of D C current in the region of 100,000 amperes. The desired accuracy is $\pm 0.5\%$

It occurs to me that these problems must be a part of your heritage, although it may be that your staff have already discussed these aspects with the people at Rugby. However, I thought I should bring the point to your attention and would be glad to have your comments on whether it would be worthwhile putting people at Rugby and Chilton in touch with one another.

Yours sincerely,

L. Bovey

cc. Mr Hadley
Mr Ward
3/3.

Ext. 368

LB/KB

4th April, 1968

Dr. L. Bovey, BA, F.Inst.P.,
Senior Regional Officer,
Ministry of Technology,
West Midlands Regional Office,
Five Ways House,
Islington Row,
Birmingham 15.

Dear Dr. Bovey,

Precision Measurement of Magnet Current

I am replying to your enquiry of 1 April, 1968. As you supposed, we have some experience of the problems mentioned to you by GEC/AEI at Rugby. The immediate comments of our experts, and copies of some relevant papers, are enclosed. You will see from these that, unless we have misunderstood the situation, both of the requirements can be met by established technology. Two of the preprints are of papers given at last year's International Conference on Magnet Technology which was organised by the Rutherford Laboratory; if the GEC people at Rugby would like to have the full Proceedings it can be obtained at £5 per copy from Mr. F. M. Telling of our Scientific Administration Group.

We are already in close contact with GEC, Witton, who are at present supplying us with a large order for highly stabilized magnet power supplies, and whose staff are very familiar with the problems of precision measurement of high currents. We would, of course, be glad to talk directly with the Rugby group if they would like us to do so, in which case they should first contact Mr. H. Hadley of the Rutherford Laboratory Engineering Division. They may also like to contact Professor Merrison, Director of the Daresbury Nuclear Physics Laboratory, whose staff also have a lot of experience similar to ours.

Yours sincerely,

T. G. Pickavance
Director

c.c. Professor A. W. Merrison
Dr. L. C. W. Hobbis ✓
Mr. H. Hadley

D. A. Gray
B. Ward.