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G.O. No.

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G.O. page 594.

[Despatch Abstract.]

Madras Educational Service - Professor of Electrical Engineering, College of Engineering, Guindy Sri K. Sukumaran - Petition - Orders passed.

Back papers.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Further papers.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
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From

Sri. K. K. Sukumaran, B.E.,
Instructor in Electrical Engineering,
College of Engineering, Guindy.

To

The Secretary to the Government of Madras,
Education and Public Health Department,
Madras.

Through

The Proper Channel.

Sir,

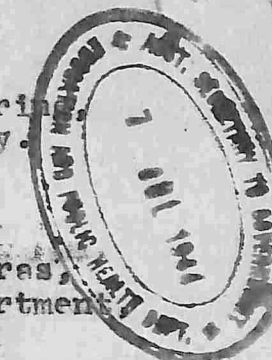
Sub: Claim to the Post of Professor of Electrical Engineering,
College of Engineering, Guindy.

I submit the following for the consideration of the Government:-

1. According to the prescribed rules this post is to be filled up either by promotion or by direct recruitment. To prevent hardship and discontent amongst the staff already in service I submit that direct recruitment may only be resorted to when all possibilities of getting an efficient man from the College had been explored. I may point out that the last two vacancies of Professors, viz., the Post of Professor of Mechanical Engineering and Civil Engineering were filled up by promotion of Instructors.

2. When the post was advertised for direct recruitment in the first instance, I did not make a representation regarding my claims for post of Professor as I knew that no man with the qualifications advertised would be available. No Professor either here in this College or elsewhere possessed or is likely to possess all the qualifications prescribed. The qualifications were subsequently modified and the post was readvertised. This was a surprise, for with the lowered qualifications I would more than satisfy the prescribed qualifications if not exactly according to the letter of the rules

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qualifications if not exactly according to the letter of the rules according to their spirit. I, therefore, represent ~~that~~^{by} ~~that~~ my claims may be reconsidered.

3. One of the reasons why the post of Professor of Electrical Engineering has been advertised for and not filled up by promoting me who was then Junior Instructor in Electrical Engineering is probably because that according to the existing rules promotion to the category of Professor of Electrical Engineering cannot be made from the category of the Junior Instructor in Electrical Engineering. I submit that this rule is anomalous to that followed in other educational institutions under the Director of Public Instruction: Any one in the Madras Educational Subordinate Service, of non-gazetted rank, is eligible for ~~promotion~~^{transfer} to the post of Professor in an arts College whereas the Junior Instructor in Electrical Engineering, who is of gazetted rank cannot be so promoted, (incidentally there is only one such post in the whole of the Education Department). This is a hardship on the Junior Instructor of Electrical Engineering, since there is not much difference between the qualifications prescribed for the post of Instructor in Electrical Engineering and the Junior Instructor in Electrical Engineering.

The present existence of the rule is most probably due to the oversight, that when the rule which originally prohibited Instructors from being promoted as Professors was found necessary to be modified as actual instances for promotion arose, the case of the Junior Instructor was left out, since there has been no case so far, for promotion. However, ^{this maybe} I hope that this objection ^{has no force} ~~will be set aside~~ now as that I am made an Instructor.

4. According to rules a Degree with Honours in Electrical Engineering is required. I possess only a degree in Mechanical

Engineering of the Madras University. Against this I possess qualifications more than equivalent to it, viz., I have lectured ^{by} ~~at~~ ~~Madras~~ ~~University~~ for several years to final year classes in practically all subjects of Electrical Engineering of Honours Standard. Further I have suggested new ideas and have helped students in their researches for the M.Sc., Degree of the Madras University. Again I am a specialist in the subject of Electrical Measurements. I am also an examiner of the Madras University in advanced subjects. From these it is evident to any technical man that I am long past the stage when the absence of a Honours Degree in Electrical Engineering should stand against me. I may be permitted to point out that a qualification like this while it forms a useful basis for a preliminary selection is not an absolute test for the soundness of the knowledge expected in a Professor unless supported by proofs of subsequent capabilities.

In this connection I wish to point out that according to the newly modified rules a Mechanical Engineering Degree of this College prior to 1934 is accepted as equivalent qualification for the post of Instructor in Electrical Engineering, it is not clear whether this rule applies to the Post of Professor also. There does not seem to be any valid reason why this should not also apply to that ~~Post of Professor~~, especially when it is considered that ^{an} Instructor is eligible for promotion as Professor. If the rules are ^{harmonised} ~~recognised~~, I shall be satisfying even the letter of the rules.

5. The second qualifications prescribed is "Practical training and experience for not less than 5 years." My practical experience covers a far longer period, viz., 20 years. My practical experience comprises of:-

(a) 5 years as a Power Station Superintendent, supervising the running and maintenance of Electrical and Mechanical Plants.

(b) Erection of the College Power House, and the major portion of the old Electrical Engineering Laboratory.

(c) A period equivalent to 5 years for the installation of machinery and plant costing about 3 lakhs of materials of the New Electrical Engineering Laboratory. The work was done entirely departmentally and I was incharge of the installation.

(d) Practical experience in supervising the Electrical Engineering Laboratory Workshops for 20 years. This includes experience in the design and construction and repair of all ^{types} ~~kind~~ of apparatus, a large number of which are ^{of a} delicate character ^{and} which has not been previously attempted, and construction of new electrical machines and training of workmen who had no previous experience to do instrument repairing and armature winding.

5. The third qualification prescribed is capacity to teach Electrical Engineering upto the standard prescribed for the Degree of Bachelor of Engineering of the University of Madras and teaching experience for a period of not less than 3 years. Out of the 4 subjects in Electrical Engineering for the B.E., Degree course in Electrical Engineering of the Madras University, now taught in this College, viz., Theory and Calculation of Electrical apparatus, Electrical Theory and Measurements, Generation and Utilisation of Electrical Power and Design of Electrical Machinery, I have actually handled had experience in teaching the first three and I am competent to lecture on the last one. In case it becomes necessary to consider my qualifications along with those of any others the fact of my actually having handled 3 subjects may be taken into consideration.

I possess a teaching experience in electrical engineering for the last 20 years out of which ~~for~~ 14 years ^{experience is in} ~~I have been~~ lecturing to the Degree Classes.

I have been holding additional charge as Professor of Electrical Engineering for the past one year.

6. In addition to the above, I possess the following special qualifications.

(a) I was responsible for the preparation of the preliminary plans of the whole scheme of the development of new Electrical Engineering Course and the newly constructed Electrical Engineering Laboratory which is the foremost of its kind in India.

(b) The design of the High Tension Laboratory, again the biggest of its kind in India, was done entirely by me.

The above two statements will be borne out by the then Principal Rao Bahadur, G. Nagarathnam Iyer.

(c) I have a major share in the choosing and drawing up of detailed specifications and final installation of almost all the apparatus of the New Electrical Engineering Laboratories which, from the point of equipment not only surpasses all other in India but will challenge comparison with many of those in England. A large percentage of the apparatus were modified from commercial standards and many were specially manufactured to our specifications. The intimate knowledge thus obtained of our extensive apparatus can hardly be expected from other recruited from outside and whose experience may possibly consist of laboratories of an inferior kind.

I submit that these qualifications and experience are unique. The first two especially are work associated with experts in the subject.

(d) I am a specialist in the subject of Electrical Measurements and have been ^{consulted for} ~~of help in~~ solving problems for the laboratory attached to the office of Electrical Inspector to the Government.

(e) Ability for research. The attached list shows a list of researches that I have been carrying out and also those which I propose to carry out in future. The extreme pressure of work consequent on the requirements on the time of staff in working out details of a rapidly expanding new department and the shortage of staff due to changes in the

staff either by retirement or promotion have prevented me from giving the finishing touches necessary for publishing them. I venture to submit that these show a high order of originality and constructive thinking. Fuller details of these researches can be given if this is required to be produced before an expert technical body.

7. I have only four more years of service. During the long period of my stay in this department, I have developed ideas for the further improvement of the efficiency of this department. I request I may be given an opportunity to consolidate the work of a department that I have so largely helped to create.

8. I further request the Government to consider that since the post can only be filled up temporarily for the duration of the war whether it is not better to promote one already in the department rather than risk a double change in the next few years.

9. I may be permitted to point out that there are limitations in specifying the qualifications expected of a Professor by a set of rules. For example no rule can determine the ability of a person to impart knowledge to students which is a primary requirement. Neither can soundness of knowledge, imagination, ability to stimulate interest and enthusiasm for work, personal character, powers of organisation and industry, be specified. These have to be found out during the probationary period of two years after a direct recruitment. In view of the fact that my abilities in all these directions and also my abilities regarding soundness of knowledge of the subject and the other special qualifications mentioned in paras (5 and 6) are already well known, I request the Government to consider whether it is not in the interest of the College to appoint me as Professor of Electrical Engineering. In order that the Government may be satisfied regarding my ability to fill this post with distinction, I suggest that references may be made to the two previous Principals, Dr. K.C. Chakko, and Rao Bahadur G. Nagarathnam

Iyer, more especially to the latter as he had greater opportunities for assessing my technical abilities (see para 6). I suggest ^{of the P.W.D} that a reference may also be made to the late Chief Engineer, Rao Bahadur L. Venkatakrishna Iyer, who was for some time [^] was a Professor in this College and [^] who knew my capabilities thoroughly.

I cannot help giving expression to a handicap that I possess. All the special work that I have done and more especially ^{these} on the practical side [^] has [^] been done in the college itself. If the same had been in a commercial firm ^{done} I would have documentary evidence to show in the shape of testimonials. It is for this reason that I press for a reference to the previous Principals.

I have the Honour to be

College of Engineering)
Guindy. 3rd. July '44.)

Sir,

Your most obedient servant

K. and M. S. Srinivasan
Instructor in Electrical Engineering

Copy submitted direct to avoid delay.

E. O. P. H. (A).

This is only an advance copy. Action may be taken on the original, when received. This may be lodged.

7.7.44

8.7.44

~~The advance copy sent to~~

The original of this petition subd. to the Principal & the D. P. I. has not yet been received. The commission's report re. direct disbursement for bus posts has been recd. & is kept with in top file. Please see by

12.7.44 S

K. and M. S. Srinivasan

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Yours most obedient servant
 College of Engineering
 Guindy. 3rd July 1941.

Instructor in Electrical Engineering

Copy submitted direct to avoid delay.

LIST OF RESEARCH WORK.

(With brief notes on the investigations)

Work under Progress.

1. A new method of controlling the speed and power factor of Induction Motors without the use of commutator, using two coupled induction motors.

The stators of two Induction Motors of suitable relative sizes are connected either in parallel or in series. The rotors, of slip ring type, are connected in series. The rotors are coupled. The stator of one of the Induction Motors is mechanically rotated by a suitable angle by racking the stator. In the general case, when the machines are loaded the phase and magnitude of the resultant rotor e.m.f. is changed proportional to the slip consequently altering the speed and the power factor. When used for speed control the machines instead of the usual shunt characteristic give a series characteristic, a feature desirable in many types of industrial drives, for example, in steel rolling mills. The method is different from the usual cascading.

The equation for the current locus of the motor has been worked out and experimentally confirmed.

2. An investigation of the Repulsion Induction Motor on the basis of the Cross-field Theory using the equivalent circuit and inversion methods.

The equivalent circuit for the motor has been worked out and the equation for the current locus obtained. The characteristics of the motor has been experimentally

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(16) 17 R.W.2

studied and the theory is being verified.

3. ~~3~~. A new direct reading Slip Meter for Induction Motors.

The principle of this meter departs from all others so far proposed, in that the per centage slip is measured directly on a calibrated voltmeter, without involving the measurement of time. The advantage of the instrument ~~is~~ over all other types including the well known Drysdale direct reading stroboscopic type is that the reading given is instantaneous and the slip is measured in a fraction of the ~~time~~ time required for any other method.

The theory of the instrument which is very simple has ~~g~~ been worked out. The construction of this meter is nearly completed.

4. Separation of Leakage Reactance^r of the primary and secondary windings of slip ring type induction motors.

It is usual to assume in^t the experimental investigation on these motors that the leakage reactances of the primary and the secondary are equal which is an approximation and leads to incorrect results in many cases. Two new methods investigated have been found to give good results. A few more methods are undergoing verification.

5. New methods for the separation of Armature Reaction and armature Leakage Reactance Components of three phase alternators for the pre-determination of alternator regulation, (a) by methods using a search coil and (b) using series connection of the three phases (suitable only for certain types of windings)

The experimental verification of these methods have been completed and the results were found to be satisfactory ^{out} and on one type of alternator. Work is being carried

on several other types to see whether the results are of general application.

6. Improvements in the measurement of Kilo-Volt-Amperes and Kilo-Volt-Ampere Hours in cases where the rectified principle is used.

Work on these is nearly completed.

Proposed Investigation.

A rapid method for checking Rail Bond Resistance.

The two principal methods at present used are based on the Wheatstone Bridge or the Kelvin Double Bridge principle. ~~Both methods~~

Both ~~of~~ methods, ~~as~~ as at present put into practice are time consuming and ~~have~~ to be painstakingly done by the observer putting the apparatus on ~~at~~ every rail joint one after the other, the apparatus being manually carried. In the proposed method the apparatus, which is an adaptation of ~~the~~ the Kelvin Double Bridge ~~method~~, is ~~in~~ carried on a moving trolley fitted with rail contact brushes and it is expected to automatically record the rail resistances as the trolley runs over the rails and to ring a warning electric bell whenever there is a faulty joint of too high a resistance.

There are considerable but not insuperable technical difficulties in the solution of this problem, but, if the difficulties are overcome, it would greatly simplify the task of maintenance of the Electric Traction Rail ~~System~~ and ~~effect~~ effect a very large saving in of time and labour.

General Remarks.

The ideas for investigations for (1), (2), (4) and (5) are

claimed to be entirely original. (6) is an improvement on a known but not commonly used method and attempts to make this method of greater practical value. (7) is an adaptation of a known method applied in ^{an} original way. (8) is ~~an~~ ^{an} analytical study of a special type of motor and deals with the theory calculation and performance of the motor.

LIST OF RESEARCH WORK.

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theory calculation and performance of the motor.

Case 22

Education and P.H. Department (A).

Confidential

D.O. No. 35748A-1^{Sn} dated 14.7.44

13

Dear Sir Meverel,

Recruitment - Direct - M.E.S. - Men's
Branch - Professor of Electrical Engi-
neering, coll: of Eng: Guindy

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P156-57C3
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With reference to the correspondence ending
with my letter No. 1953-1-A-Edn., dated the 25th April
1944, the M.P.S.C. has selected Sri K. Srinivasan, now
employed as Assistant Professor in the Indian Institute
of Science, Bangalore, for appointment temporarily
as Professor of Electrical Engineering in the coll: of Eng: Guindy. The Commission
has added that the candidate expects to be given the
maximum pay, viz., Rs.900, in the time scale of pay
sanctioned for the post of Professor and that he would
not accept the post on less than the salary he draws in
the Institute, viz., Rs.800. In the meantime, the Government have

Point No.1:- According to rule 2(a) of the Special Rules for the Madras Educational Service only Professors are eligible for promotion to the category of Professors in the College of Engineering, Guindy. Sri K. Sukumaran is an officiating Instructor holding his permanent lien on the post of Junior Instructor in Electrical Engineering. With reference to rule 30(a) of the General Rules for Provincial and Subordinate Services, a probationer is not eligible for promotion to a higher category until he completes his probation satisfactorily in the category from which promotion is to be made. Mr. K. Sukumaran and the Principal, College of Engineering, point out that the omission to include in the rule the Junior Instructor also as eligible for promotion as Professor is probably due to oversight. The post of Junior Instructor in Electrical Engineering is a gazetted post and the qualifications prescribed for the post are almost the same as those prescribed for the post of the Instructor in Electrical Engineering. This post is the only one of its kind and there are no Junior Instructors' posts in the other subjects in the college (i.e., in Mechanical or Civil Engineering). As pointed out by the Principal there is not much difference in the work and responsibility of the Junior Instructor and Instructor. Even as Junior Instructor Mr. Sukumaran has an actual practice handled the highest class in Electrical Engineering subjects and shouldered greater responsibilities, than the former Instructor (Mr. P. Subba Rao). Again, he has been holding full additional charge of the post of Professor of Electrical Engineering with effect from 8-6-1943 - vide G.O. Ms. No. 788 Edn., dated 9-6-1943. In view of the above there is no reason why the Junior Instructor in Electrical Engineering should not be considered eligible for promotion to the post of Professor in the same way as an Instructor. I have the honour, therefore, to request that Government may be pleased to include the post of Junior Instructor also in rule 2(a) of the Special Rules for the Madras Educational Service as a category from which promotion to the posts of Professors can be made.

Point No.2:- The qualifications prescribed for the post of Professor of Electrical Engineering consist of three parts. The Principal, College of Engineering, Guindy in paras 3 to 8 of his letter R.C.No.283/43 dated 10-7-44 (copy enclosed) has discussed fully the qualifications possessed by Sri K. Sukumaran. Mr. K. Sukumaran satisfies the last two parts of the revised qualifications, viz., practical training and experience in Electrical Engineering for not less than five years and capacity to teach Electrical Engineering upto the B.E. degree standard. He possesses in addition, the preferential qualification of teaching experience of over 22 years out of which he has lectured to the students of the B.E. degree course in Electrical Engineering since 1930. However, he does not satisfy part (i) of the qualifications literally. The Principal has elaborately dealt with the qualifications possessed by Sri K. Sukumaran and has recommended that Mr. Sukumaran may be considered to possess qualifications at least equivalent to the part (i) of the qualifications prescribed for the post.

5. In paragraphs 11 to 14 of the Principal's letter (copy enclosed) it has been explained why the post of Professor of Electrical Engineering should not be filled by direct recruitment at present. I agree with the Principal that it would be in the interests of Electrical Laboratory if Mr. Sukumaran is appointed as Professor and entrusted with the consolidation of the laboratory. It is also true that the promotion of Sri Sukumaran will mean promotion to two deserving subordinate officers. These promotions will result in the contentment of the staff and will in turn have a desirable effect on the impending recruitment of 13 new hands for replacing the Public Works Department Instructors.

6. Apart from the above points, I submit that with reference to Rule 5 of the General Rules for the Madras Provincial and Subordinate Services, direct recruitment should be resorted to only against substantive vacancies. As has already been pointed out in paragraph 2, the post of Professor of Electrical Engineering has not yet fallen substantively vacant. Appointing a person temporarily by direct recruitment now, and recruiting a candidate with war service some years hence will mean two changes in the post within

within a short space of time. On the other hand, if Sri K. Sukumaran is appointed, he will hold the post till 1948, when he retires from service. It would perhaps be then possible to secure the services of a suitable candidate with war service, thus obviating the necessity for appointing a direct recruit temporarily.

7. Sri K. Sukumaran has been holding additional charge of the post of Professor of Electrical Engineering with charge allowance for more than a year now in addition to his own duties. Considering his qualifications, long experience and past record, I consider that he is suitable for the post and his capacity to teach the highest class in Electrical Engineering is amply borne out by Dr. J.J. Rudra, M.B.E., who was himself the Professor of the subject. In the above circumstances, I have the honour to request that the Government may be pleased to appoint Sri K. Sukumaran as Professor of Electrical Engineering, College of Engineering, Guindy..

I have the honour to be,
Sir,
Your most obedient servant,

for Director of Public Instruction.

R.C.14/8.

Copy of letter C.No.283/43 dated 10-7-44 from the Principal, College of Engineering, Guindy, to the Director of Public Instruction, Madras.

Sub: Representation of Mr. K. Sukumaran, Instructor.

I am herewith submitting the representation of Mr. K. Sukumaran, Instructor in Electrical Engineering to the Secretary to the Govt. of Madras, Education and Public Health Department, Madras stating his claims for the post of Professor of Electrical Engineering at the College. (16)

2. Since I recommended Mr. Sukumaran for appointment as Professor of Electrical Engineering in my letter C.No.283/43 dated 7-4-43, the qualifications for the post of Professor and Instructor in Electrical Engineering have been modified and Mr. Sukumaran has been promoted as Instructor in Electrical Engineering. I therefore request that Mr. Sukumaran's case may be reconsidered in the light of the changes that have taken place.

3. The qualifications for the post of Professor of Electrical Engineering as amended in G.O.Ms.No.606, Edn., dated 20-4-44 communicated in your proceedings No.R.C.691 C/44 dated 25-4-44 are:-

- (i) Honours degree in Electrical Engineering of one of the specified foreign Universities or
Diploma in Electrical Engineering of the college of Engineering, Guindy with Honours and the B.E. degree of the University of Madras (presumably in Electrical Engineering).
- (ii) Practical training and experience in Electrical Engineering for not less than 5 years, and
- (iii) Capacity to teach Electrical Engineering upto the standard prescribed for the Degree of Bachelor of Engineering of the University of Madras.

Preference shall be given to candidates who possesses in addition, teaching experience for a period of not less than three years.

4. Mr. Sukumaran does not literally satisfy part (i) of the qualifications for the post of Professor of Electrical Engineering as he does not possess the Diploma of the College of Engineering in Electrical Engineering with Honours and the B.E. degree in Electrical Engineering of the University of Madras. I request permission to point out that Mr. V.H. Sadarangani, Professor of Civil Engineering and Mr. S. Paul, Professor of Mechanical Engineering also do not possess any of the academic qualifications prescribed for their respective posts of Professor, although they possess one of the academic qualifications prescribed for the posts of Instructor from which they were promoted. I presume that the Govt. have been good enough to consider their academic qualifications together with long teaching experience as equivalent to the academic qualifications prescribed for the post of Professor which they are now holding. I request that for reasons given below the same consideration may be extended to Mr. Sukumaran.

5. Mr. Sukumaran possessed an academic qualification prescribed for the post of Instructor in Electrical Engineering, viz., the B.E. Degree in Mechanical Engineering obtained before 1934. (vide G.O.Ms.No.429, Education, dated 18-3-44 communicated in your proceedings R.C.No.691 C/4 dated 23-5-44). He has 22 years of practical and teaching experience in Electrical Engineering and has lectured with distinction to the students of the B.E. degree course in Electrical Engineering since 1930. Since I first came to know him in 1935 I have found him continually engaged in not only acquiring new knowledge, but striving to make original contributions to knowledge. Speaking as an Electrical Engineer, I would say that in my opinion Mr. Sukumaran's knowledge of Electrical Engineering is of the highest order in three of the four main branches of Electrical Engineering taught to the students of the B.E. Degree course in Electrical Engineering at the college. He is a specialist in Electrical Measurements and as far as I know, the foremost man in this subject in India. I have had research students working under me since 1937 and they have all received very substantial guidance in their work from Mr. Sukumaran. Two of these are Messrs. A.R. Ramanathan and A. Srinivasan, Electrical Laboratory Assistants who have already been awarded the M.Sc. degree. Mr. Sukumaran has been doing research on his own ever since I have known him and a summary of the work done by him is submitted with his representation. Judging from the research work of Mr. Sukumaran and the many discussions that I have had with him on various problems of research since 1935, I

I am of opinion that Mr. Sukumaran possesses abilities for research of a high order. He is registered for the M.Sc. degree in Electrical Engineering of the University of Madras and the reasons why he has not been able to obtain the degree so far, while the Electrical Laboratory Assistants guided by him have obtained their degrees, are that he has far greater responsibilities and pressure of work and his problem is an extremely difficult one although it has been satisfactorily solved by him. I recommend that in view of the above, Mr. Sukumaran may be considered to possess qualifications at least equivalent to the Diploma in Electrical Engineering of the College of Engineering, Guindy and the B.E. degree of the University of Madras.

6. Mr. Sukumaran more than satisfies part (ii) of the qualifications. He performed the full duties of the Power House Superintendent of the College Power House for a period of 5 years and 10 months from October 1924 to August 1930 in addition to his duties in the Electrical Laboratory. The wiring and erection of plant and machinery in the Electrical Laboratory were carried out by Mr. Sukumaran and I may add that the value of the Electrical plant installed since 1930 exceeds Rupees three lakhs. Mr. Sukumaran has also been in charge of the Electrical Laboratory workshops and has been responsible for the repair of Electrical machines and instruments of the Electrical Laboratory. Mr. Sukumaran desires that the practical work done by him in the Electrical Laboratory and the Electrical Laboratory workshop since 1922 may be considered as equivalent to 5 years practical experience. In requesting you to accept this, I consider that the equivalent period is underestimated. Taking into account Mr. Sukumaran's service as Power House Superintendent for 5 years and 10 months and the erection and repair work in the Electrical Laboratory since 1922, I would say that Mr. Sukumaran possesses more than 10 years practical experience in Electrical Engineering and consequently more than satisfies part (ii) of the qualifications for the post.

7. Mr. Sukumaran also fully satisfies part (iii) of the qualifications for the post. Since the start of the B.E. course in Electrical Engineering in 1930, Mr. Sukumaran has been lecturing to the students of the B.E. degree course in Electrical Engineering. Mr. Nagarathnam Ayyar, Principal of the College in 1932, in his Telephone message to you dated 31-3-32 (flag 'H' in the personal file of Mr. Sukumaran, submitted with my letter of 7-4-43) states that Mr. Sukumaran is "lucid and effective as lecturer in Electrical Engineering." I fully endorse the opinion of Mr. Nagarathnam Ayyar and would add that I have come across very few people who possess such sound and critical knowledge of the fundamentals of Electrical Engineering as Mr. Sukumaran does.

8. In the second para of part (iii) of the qualifications it is stated, "Preference shall be given to candidates who possess in addition teaching experience for a period of not less than 3 years." Mr. Sukumaran possesses teaching experience of over 22 years during which he has lectured to the students of the B.E. degree course in Electrical Engineering since 1930. He thus more than satisfies the qualifications with regard to teaching experience.

9. It will be seen from the above that Mr. Sukumaran satisfies the revised qualifications for the post of Professor of Electrical Engineering, if my recommendation is accepted that he possesses academic qualifications equivalent to those mentioned in part (i) of the qualifications for the post of Professor of Electrical Engineering. However, there may be a technical objection to his promotion as Professor on the ground that he has not yet been confirmed as an Instructor and is still to be regarded as a Junior Instructor, who according to the rules, is debarred for promotion as Professor. I may be permitted to point out in this connection that an Electrical Laboratory Assistant can be promoted as an Instructor in Electrical Engineering which is two stages higher than his post and it appears to be hard on the Junior Instructor that he is not given the same privilege. It may not be possible to remove this anomaly by debarring the Electrical Laboratory Assistants from promotion as Instructor as the same rule will operate on the Laboratory Assistants in other departments of the college which have no Junior Instructors and would cause great hardship and discontent amongst them. I therefore suggest that the anomaly may be removed by permitting the promotion of Junior Instructor as Professor. There are other reasons, given below, why a Junior Instructor, particularly Mr. Sukumaran, if he is still to be considered a Junior Instructor, should not be debarred from promotion as Professor.

10. Although the salaries and qualifications for the post of Instructor and Junior Instructor are different their work and responsibility are about the same. In practice, the work and responsibility of the Junior Instructor may be greater than those of the Instructor.

was actually the case when Mr. Subba Rao was Instructor and Mr. Sukumaran was Junior Instructor. Mr. Subba Rao lectured on Design of Electrical Machinery to the third and fourth year students of the Electrical Branch, on Direct Current Engineering to the third year students of the Electrical and Mechanical branches and on Elementary Electrical Engineering to the second year students. Mr. Sukumaran lectured on Electrical Measurements to the third and fourth year students of the Electrical branch, on alternating current Engineering to the third year students of the Electrical and Mechanical branches and on Electrical Technology to the final year students of the Mechanical branch. Mr. Sukumaran carried out the fitting up of the new Electrical Laboratory and was in charge of the practical work of students of all classes. He was also in charge of the Electrical Laboratory workshop in which repairs to machines and instruments of the Electrical Laboratory were carried out under him. Thus, in practice, the Junior Instructor had not only teaching work of a higher type than the Instructor, but had greater work and responsibilities in the Electrical Laboratory and Electrical Laboratory workshop. As Instructor in Electrical Engineering, Mr. Sukumaran's work will be practically the same as it was when he was a Junior Instructor. The confidential reports of Mr. Sukumaran as Junior Instructor since 1935 and I should say, many years before, will show that he has already discharged most satisfactorily the duties that he has now to discharge satisfactorily in the capacity of an Instructor for a year more before his probation as Instructor can be considered to have been completed. Under the circumstances, the application to Mr. Sukumaran, of the rule debarring the promotion of Junior Instructor in Electrical Engineering as Professor would be a hardship and to avoid further cases like this as well as to remove the anomaly referred to in the previous para, if I request, that the rule which makes the promotion of the only Junior Instructor in the College as Professor inadmissible be deleted.

11. There are special reasons why at the present time the post of Professor of Electrical Engineering should not be filled up by direct recruitment. Mr. Sukumaran, Mr. K.N. Ramanathan and Mr. A. Srinivasan have built up the Electrical Laboratory, the largest of its kind in India, and it has yet to be consolidated. It would be in the interests of the efficiency of the college to let these men complete their work.

12. The tenure of the Professor of Electrical Engineering who may be appointed by direct recruitment would only be until the time when a person with war service would become available. Giving 4 years at the minimum for the termination of the war and demobilization after the war, there may be another change of the Professorship of Electrical Engineering after four years. A change now, and a change four years later would not be in the interests of the Electrical Laboratory. If on the other hand, Mr. Sukumaran is appointed as Professor, the work of consolidation of the Electrical Laboratory would proceed satisfactorily in his hands and he will retire in 1948 when a person with war service can be expected to be available for appointment as Professor. This will prevent the disadvantages of a double change within about 4 years through the appointment of a direct recruit to the Professorship.

13. The appointment of Mr. Sukumaran as Professor should also benefit Messrs. K.N. Ramanathan and A. Srinivasan, Electrical Laboratory Assistants who have worked whole-heartedly for many years and who have been recommended by me for promotion as Instructor and Junior Instructor respectively. These Laboratory Assistants have had to wait very long for promotion. Mr. N.S. Krishnaswamy Ayyangar, Instructor in Civil Engineering, was promoted from Laboratory Assistant to Instructor after 6 years service. Mr. V. Kalyanaraman, Instructor in Survey and Drawing was promoted as Instructor after 3 years service as Laboratory Assistant.

14. I may add that limited prospects of promotion in the college and technical difficulties in the way of promotion of staff would deter people from seeking the teaching career in this college. There is already evidence of this, as recently, an advertisement for the post of three temporary Laboratory Assistants on Rs. 100 - 200 in the Gazette as well as three daily papers brought only three applications. If it transpires that a person like Mr. Sukumaran with 22 years of distinguished service in the Electrical Laboratory of which 14 years were as Gazetted officer, could not become a Professor, Mr. K.N. Ramanathan, a capable Laboratory Assistant with 13 years of teaching experience and good research to his credit could not become an Instructor, and Mr. A. Srinivasan, another capable Laboratory Assistant with 11 years service and the M.Sc. degree in research, could not become a Junior Instructor, there may be considerable difficulty in getting the best men for appointment to future vacancies on the staff of the college. In this connection, I may mention that in my letter R.C.No.234 D/44 dated 29-5-44 proposing the reduction of the licentiate in Civil Engineering course from

from 4 years to 3 years, I have pointed out the disadvantages of obtaining the Assistant Instructors on loan from the P.W.D. for periods of three years. The Chief Engineer in his letter communicated with your proceedings R.C.No.552 A/44 dated 4th July 1944 agrees with my views and has suggested that the P.W.D. Instructors, 13 in number, should be replaced by permanent instructors. I therefore expect that 13 new members of staff will have to be recruited shortly and the decision with regard to the filling up of vacancies in the Electrical Laboratory may have very considerable influence on the possible applicants.

15. In conclusion, I strongly recommend the appointment of Mr. K. Sukumaran as Professor of Electrical Engineering on the following grounds:-

- (1) He fully satisfies the revised qualifications prescribed for the post of Professor of Electrical Engineering if my recommendation with regard to part (1) of the qualifications is accepted.
- (2) The appointment of Mr. Sukumaran in preference to a direct recruit is in the best interests of the Electrical Laboratory and is necessary for consolidation of a Laboratory which should still be considered to be young and approved two capable Laboratory Assistants of long and approved service would secure contentment by promotion and would help Mr. Sukumaran in the consolidation of the Electrical Laboratory.
- (3)

From

Sri. Kanoth Sukumaran, B.E.,
Instructor in Electrical Engineering,
College of Engineering, Guindy.

To

The Secretary to the Government of Madras,
Education and Public Health Department,
Madras.

Through

The Proper Channel,

Sir,

Subject: Claim to the Post of Professor of Electrical
Engineering, College of Engineering, Guindy.

I submit the following for consideration of the Government:-

1. According to the prescribed rules this post is to be filled up either by promotion or by direct recruitment. To prevent hardship and discontent among the staff already in service, I submit that direct recruitment may only be resorted to when all possibilities of getting an efficient man from the College has been explored. I may point out that the last two vacancies of Professors, viz., the Post of Professor of Mechanical Engineering and Civil Engineering were filled up by promotion of Instructors.

6/25/45 2. When the post was advertised for direct recruitment in the first instance, I did not make a representation regarding my claims for the post of Professor as I knew that no man with the qualifications advertised would be available. No Professor either here in this College or elsewhere possessed or is likely to possess all the qualifications prescribed. The qualifications were subsequently modified and the post was readvertised. This was a surprise, for with the lowered qualifications I would more than satisfy the prescribed qualifi-

From

Sri. Kanath Subramaniam, B.E.,
Instructor in Electrical Engineering,
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qualifications if not exactly according to the letter of the rules according to their spirit. I, therefore, represent ~~that this is only~~ ^{as} fair that my claims may be reconsidered.

3. One of the reasons why the post of Professor of Electrical Engineering has been advertised for and not filled up by promoting me who was then Junior Instructor in Electrical Engineering is probably because that according to the existing rules promotion to the category of Professor of Electrical Engineering cannot be made from the category of the Junior Instructor in Electrical Engineering. I submit that this rule is anomalous to that followed in other educational institutions under the Director of Public Instruction. Any one in the Madras Educational Subordinate Service, of non-gazetted rank, is eligible for ^{transfer} promotion to the post of Professor in an arts College whereas the Junior Instructor in Electrical Engineering, who is of gazetted rank cannot be so promoted, (incidentally there is only one such post in the whole of the Education Department). This is a hardship on the Junior Instructor of Electrical Engineering, since there is not much difference between the qualifications prescribed for the post of Instructor in Electrical Engineering and the Junior Instructor in Electrical Engineering.

The present existence of the rule is most probably due to the oversight, that when the rule which originally prohibited instructors from being promoted as Professors was found necessary to be modified as actual instances for promotion arose, the case of the Junior Instructor was left out, since there has been no case so far, for promotion. However, ^{this may be} I hope that this objection ^{has no force} will be set aside now ^{as} that I am made an Instructor.

4. According to rules a Degree with Honours in Electrical Engineering is required. I possess only a degree in Mechanical

No g.l.f. presented
for transfer from
Instructor's post

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Engineering of the Madras University. Against this I possess qualifications more than equivalent to it, viz., I have lectured ⁱⁿ with distinction for several years to final year classes in practically all subjects of Electrical Engineering of Honours Standard. Further I have suggested new ideas and have helped students in their researches for the M.Sc., Degree of the Madras University. Again I am a specialist in the subject of Electrical Measurements. I am also an examiner of the Madras University in advanced subjects. From these it is evident to any technical man that I am long past the stage when the absence of a Honours Degree in Electrical Engineering should stand against me. I may be permitted to point out that a qualification like this while it forms a useful basis for a preliminary selection is not an absolute test for the soundness of the knowledge expected in a Professor unless supported by proofs of subsequent capabilities.

In this connection I wish to point out that according to the newly modified rules a Mechanical Engineering Degree of this College prior to 1934 is accepted as equivalent qualification for the post of Instructor in Electrical Engineering, it is not clear whether this rule applies to the Post of Professor also. There does not seem to be any valid reason why this should not also apply to ^{that} the Post of Professor, especially when it is considered that Instructor is eligible for promotion as Professor. If the rules are ^{harmonised} ~~revised~~, I shall be satisfying even the letter of the rules.

5. The second qualifications prescribed is "Practical training and experience for not less than 5 years." My practical experience covers a far longer period, viz., 20 years. My practical experience comprises of:-
(a) 5 years as a Power Station Superintendent, supervising the running and maintenance of Electrical and Mechanical Plants.

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5. The second qualification prescribed is "Practical training and experience for not less than 5 years." My practical experience covers a far longer period, viz., 20 years. My practical experience comprises of:-

(a) 5 years as a Power Station Superintendent, supervising the running and maintenance of Electrical and Mechanical Plants.

(b) Erection of the College Power House, and the major portion of the old Electrical Engineering Laboratory.

(c) A period equivalent to 5 years for the installation of machinery and plant costing about 3 lakhs of materials of the New Electrical Engineering Laboratory. The work was done entirely departmentally and I was incharge of the installation.

(d) Practical experience in supervising the Electrical Engineering Laboratory Workshops for 20 years. This includes experience in the design and construction and repair of all ^{types} ~~be~~ of apparatus, a large number of which ^{are} ~~are~~ delicate character ^{and} ~~has~~ not been previously attempted, ^{ba} ~~and~~ construction of new electrical machines and training of workmen who had no previous experience to do instrument repairing and armature winding.

5. The third qualification prescribed is capacity to teach Electrical Engineering upto the standard prescribed for the Degree of Bachelor of Engineering of the University of Madras and teaching experience for a period of not less than 3 years. Out of the 4 subjects in Electrical Engineering for the B.E., Degree course in Electrical Engineering of the Madras University, now taught in this College, viz., Theory and Calculation of Electrical apparatus, Electrical Theory and Measurements, Generation and Utilisation of Electrical Power and Design of Electrical Machinery, I have actually handled had experience in teaching the first three and I am competent to lecture on the last one. In case it becomes necessary to consider my qualifications along with those of any others the fact of my actually having handled 3 subjects may be taken into consideration.

I possess a teaching experience in electrical engineering for the last 20 years out of which for 14 years ^{experience is in} I have been lecturing to the Degree Classes.

I have been holding additional charge as Professor of Electrical Engineering for the past one year.

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I have been holding additional charge as Professor of Electrical Engineering for the last 20 years out of which for 14 years I have been lecturing to the Degree Classes.

I possess a teaching experience in electrical engineering for actually having handled 5 subjects may be taken into consideration. I consider my qualifications along with those of my others the fact of my competent to lecture on the last one. In case it becomes necessary to have actually handled had experience in teaching the first three and I am and Utilization of Electrical Power and Design of Electrical Machinery, Theory of Electrical Apparatus, Electrical Theory and Measurements, Generation of Electrical Engineering, etc., Theory and Calculations for a period of not less than 5 years.

Out of the 4 subjects in Electrical Engineering prescribed for the Degree of Bachelor of Engineering of the University of Madras and teaching experience Electrical Engineering upto the standard prescribed for the Degree of 5. The third qualification prescribed is capacity to teach no previous experience to do instrument repairing and armature winding. of which are delicate character, which has not been previously attempted, design and construction and repair of all kinds of apparatus, a large number of Laboratory Workshops for 20 years.

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Engineering Laboratory.

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(d) Election of the College Power House, and the major portion

6. In addition to the above, I possess the following special qualifications.

(a) I was responsible for the preparation of the preliminary plans of the whole scheme of the development of new Electrical Engineering Course and the newly constructed Electrical Engineering Laboratory which is the foremost of its kind in India.

(b) The design of the High Tension Laboratory again the biggest of its kind in India was done entirely by me.

The above two statements will be borne out by the then Principal
Rao Bahadur, G. Nagaratnam Iyer.

(c) I have ^{had} a major share in the choosing and drawing up of detailed specifications and final installation of almost all the apparatus of the New Electrical Engineering Laboratories which, from the point of equipment not only surpasses all other in India but will challenge comparison with many of those in England. A large percentage of the apparatus were modified from commercial standards and many were specially manufactured to our specifications. The intimate knowledge thus obtained of our extensive apparatus can hardly be expected from others recruited from outside and whose experience may possibly consist of laboratories of an inferior kind.

I submit that these qualifications and experience are unique, *laboratories are not built every day..*
The first two especially are work associated with experts in the subject.

(d) I am a specialist in the subject of Electrical Measurements and have been ^{consulted for} ~~of help in~~ solving problems for the laboratory attached to the office of Electrical Inspector to the Government.

(e) Ability for research. The attached list shows a list of researches that I have been carrying out and also those which I propose to carry out in future. The extreme pressure of work consequent on the requirements on the time of staff in working out details of a rapidly expanding new department and the shortage of staff due to changes in the

60

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41 (23)

staff either by retirement or promotion have prevented me from giving the finishing touches necessary for publishing them. I venture to submit that these show a high order of originality and constructive thinking. Fuller details of these researches can be given if this is required to be produced before an expert technical body.

1948

7. I have only four more years of service. During the long period of my stay in this department, I have developed ideas for the further improvement of the efficiency of this department. I request I may be given an opportunity to consolidate the work of a department that I have so largely helped to create.

8. I further request the Government to consider that since the post can only be filled up temporarily for the duration of the war whether it is not better to promote one already in the department rather than risk a double change in the next few years.

9. I may be permitted to point out that there are limitations in specifying the qualifications expected of a Professor by a set of rules. For example no rule can determine the ability of a person to impart knowledge to students which is a primary requirement. Neither can soundness of knowledge, imagination, ability to stimulate interest and enthusiasm for work, personal character, powers of organisation and industry, be specified. These have to be found out during the probationary period of two years after a direct recruitment. In view of the fact that my abilities in all these directions and also my abilities regarding soundness of knowledge of the subject and the other special qualifications mentioned in para 4, 5 and 6 are already well known, I request the Government to consider whether it is not in the interest of the College to appoint me as Professor of Electrical Engineering. In order that the Government may be satisfied regarding my ability to fill this post with distinction, I suggest that references may be made to the two previous Principals, Dr. K.C.Chakko, and Rao Bahadur G.Nagarathnam

the two previous Principals, Mr. S. Chakko, and Rao Bahadur B. Nagaraj. This post with distinction, I suggest that reference may be made to order that the Government may be satisfied regarding my ability to fit College to appoint me as Professor of Electrical Engineering. In the Government to consider whether it is not in the interest of the qualifications mentioned in para () are already well known, I request regarding soundness of knowledge of the subject and the other special the fact that my abilities in all these directions and also my abilities during period of two years after a direct recruitment. In view of industry, be specified. These have to be found out during the probation and enthusiasm for work, personal character, powers of organisation and can soundness of knowledge, imagination, ability to stimulate interest impart knowledge to students which is a primary requirement. Neither rules. For example no rule can determine the ability of a person to in specifying the qualifications expected of a Professor by a set of 9. I may be permitted to point out that there are limitations than risk a double change in the next few years. whether it is not better to promote one already in the department rather post can only be filled up temporarily for the duration of the war. 8. I further request the Government to consider that since the that I have so largely helped to create. I may be given an opportunity to consolidate the work of a department further improvement of the efficiency of this department. I request period of my stay in this department, I have developed ideas for the 7. I have only four more years of service. During the long is required to be produced before an expert technical body. thinking. Fuller details of these researches can be given if this submit that these show a high order of originality and constructive the finishing touches necessary for publishing them. I venture to staff either by retirement or promotion have prevented me from giving

Iyer, more especially the latter as he^{had} had greater opportunities for assessing my technical abilities (see para 6). I suggest that a reference may also be made to the late Chief Engineer of the P.W.D. Rao Bahadur L. Venkatakrishna Iyer, who was for some time a Professor of this College and who knows my capabilities thoroughly.

I cannot help giving expression to a handicap that I possess. All the special work that I have done, and more especially those on the practical side, ^{have} ~~have~~ been done in the College itself. If the same had been done, ~~by me~~ while working under a commercial firm or outside side institution I would have documentary evidence to show in the shape of testimonials. It is for this reason that I press for a reference to the previous Principals.

I have the Honour to be

Sir,

Your most obedient servant

Instructor in Electrical Engineering.

3rd July 1943
College of Engineering Guindy.

(One copy sent direct to avoid delay)

Submitted to the Director of Public Instruction,
Madras with remarks in my letter NO 283/43 dated 10.7.44
LON

J. J. Rudra
10.7.44

Principal

College of Engineering, Guindy

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-7-

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Sir,

Your most obedient servant

Instructor in Electrical Engineering.

College of Engineering Guindy.
19th July 1943

(One copy sent direct to avoid delay)

RG1

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45

LIST OF RESEARCH WORK.

(With brief notes on the investigations)

25

Work under Progress.

1. A new method of controlling the speed and power factor of Induction Motors without the use of commutator, using two coupled Induction motors.

The stators of two Induction Motors of suitable relative sizes are connected either in parallel or in series. The two rotors of slip ring type, are connected in series. The rotors are coupled. The stator of one of the Induction Motors is mechanically rotated by a suitable angle by racking the shaft. In the general case, when the machine is loaded, the phase and magnitude of the resultant rotor e.m.f. is changed proportional to the slip consequently altering the speed and the power factor. When used for the speed control instead of the usual shunt characteristic the machines give a series characteristic, a feature desirable in many industrial drives for example in steel rolling mills. The method is ~~entirely~~ different from the usual cascading.

The equation for the current locus of the motor has been worked out and experimentally confirmed.

2. An investigation of the Regulator of the Repulsion Induction Motor on the basis of the Cross-field Theory using the equivalent circuit and inversion methods.

The equivalent circuit of the motor has been worked

46
81- 47 (26) R(2)
out and the equation for the current locus obtained. The characteristics of the ^{set} ~~has~~ been experimentally studied and the theory is being verified.

3. A new direct reading Slip Meter for Induction Motors.

The principle of ^{this} ~~this~~ meter departs from all others so far proposed, in that the per centage slip is measured directly on a calibrated voltmeter, without involving the measurement of time. The advantage of the instrument over all other types including the well known ^{or} Dysdale direct reading stroboscopic ~~is~~ type is that the s reading given is instantaneous and the slip is measured in a fraction of the time required for any other method.

The theory of this instrument which is very simple has been worked out. The construction of the meter is nearly completed.

4. Separation of Leakage Reactance x_l of the primary and the secondary windings of slip ring type induction motors.

It is usual to assume in the experimental ~~an~~ investigation ~~an~~ on these motors that the leakage reactances of the primary x_l and the secondary are equal which ~~is~~ is an approximation which leads ^{to} incorrect results in the ^{many} ~~cases~~ of ^{some} ~~special~~ ^{good} ~~motors~~. Two new methods investigated have been found to give ^{good} results. A few more methods ~~and~~ are undergoing verification.

5. New methods for the separation of Armature Reaction and Armature Leakage Reactance x_l Components of three phase alternators ~~for~~ for the pre-determination of alternator regulation,

48

83- 49 (27) R(3)

(a) by methods using a search coil, and (b) using series connection of the three phases (suitable only for certain types of windings)

The experimental verification of these methods have been completed and the results were found to be satisfactory on one type of alternator. Work is being carried on several other types to see whether the results are of general application.

6. Improvements in the methods of measurement of Kilo-Volt-Amperes and Kilo-Volt-Ampere Hours, in cases where the Rectifier principle is used.

Work / on these is is nearly completed.

Proposed Investigation.

A rapid method for checking Rail Bond Resistance.

The two principal methods at present used are based on the Wheatstone Bridge or the Kelvin Double Bridge principle. Both methods as present put into practice are time consuming and has^{ve} to be painstakingly done by the observer by putting the apparatus on every rail joint one after the other the apparatus being manually carried. In the proposed method the apparatus which is an adaptation of the Kelvin Double Bridge method is to be carried on a moving trolley fitted with rail contact brushes and it is expected to automatically record the rail resistances as the trolley runs over the rails and to further ring a warning electric bell whenever there is a faulty joint of too high a resistance.

There are considerable, but not insuperable, technical difficulties in the solution of this problem but, if the difficulties are overcome, it would greatly simplify the

50

85 51 (28) R4

the task of maintenance of the Electric Traction Rail System and effect a very considerable saving of labour and time.

General Remarks

The ideas for the investigation (1), (3), (4) and (5) are ~~stated~~ claimed to be entirely original. (6) is an improvement on ~~a~~ ~~new~~ on a known but not commonly used method and ~~stems~~ and attempts to make the method of greater practical value. (7) is an adaptation of a known method applied in ~~an~~ an original way. (8) is a ~~thorough~~ analytical study of a special type of motor and deals with the theory, calculation and performance of the motor.

Confidential.

D.O. No. 35748-A-3-Edn., dated 25-9-44.

(29)

Dear Rao Bahadur,

M.E.S. - Recruitment - Post of Professor of
Electrical Engineering, College of Engineering,
Guindy.

The post of Professor of Electrical Engineering, College of Engineering, Guindy, has been vacant since July 1941 and the work of the Electrical Department of the college is being carried on by the remaining staff of the department, including Mr. K. Sukumaran, Instructor in Electrical Engineering. Mr. Sukumaran has also been officially appointed to hold additional charge of the post from June 1943. The M.P.S.C. was requested to make a selection for direct appointment to the post. There were two applicants, of whom only one, Sri K. Srinivasan, who does not belong to this Presidency, got enough marks at the Commission's competitive examination. The Commission has selected him.

2. Before the Commission's selection was considered by Government, Sri Sukumaran made a representation advancing his claims for the Professor's post. The main argument against him is that he does not hold an Honours degree or Diploma in Electrical Engineering as prescribed by the rules at page 32 of the Madras Services Manual, Volume II, and that the Professor should be a specialist. On the other hand, the College Principal and the D.P.I. feel that the interests of the college will be better served by appointing him than by appointing a direct recruit. A further suggestion has been made in this connection that the post may be kept vacant for a short time until a more highly qualified candidate becomes available. I am to request you to advise Government on the two suggestions covered by this paragraph.

φ.23 CF

H. 4909-L.F.

φ.56 CF.-L.F.

PP 31-43 C-7.

(BR. No. 29-A)

φ.4, N.F.

φ.24 & 30 CF.

φ.4 N.F.

54
3. I am to forward for your reference and return the file containing Sri Sukumaran's representation dated 3-7-1944 and the remarks of the D.P.I. and the Principal, College of Engineering.

Yours sincerely,

23.8.44

23/8/44

C.F.
Sri Rao Bahadur
G. Sundaram, M.A.,
AMIEE (Chartered Elec.
Engr.), E.A.C.,
Chief Engineer for
Electricity.
(with encl: 30 pages.
C.F. 23-52)

Confidential.

Office of the Chief Engineer
for Electricity, H. DEPT.
Chepauk, Madras, 30th Sept 1944.

30 SEP 1944

GOVERNMENT OF MADRAS

47468

Dear Mr. Subramaniam,

Sub.- Madras Educational Service - Recruitment - Post
of Professor of Electrical Engineering - College
of Engineering, Guindy.

I have your D.O. No. 35748-A-3-Edn. dated 25-9-44.

A proper man in the post of Professor of Electrical
Engineering at Guindy can be of material help to power develop-
ment in this Province.

I consider selection should be made not on the basis of
minimum qualifications laid down in the rules but of the best
available man who can be persuaded to accept the salary offered.

The Professor should not merely have sound and up to date
knowledge of his subject but should have some standing in the
engineering world. His record should be such as to inspire
respect and confidence among the field engineers in the
Province. Engineering problems of complexity are arising and
this Department would like to feel that they could be referred
to the Professor for authoritative advice.

It is desirable that the person selected has had training
in foreign countries especially in electrical research stations
and laboratories. In the present stage of electrical
engineering progress in India, such training helps to widen
the outlook of men and makes them more alive to the engineering
issues ahead.

In the coming days of reconstruction and expansion, it
is necessary to have someone who is not merely a very able
instructor and an efficient routine man. Considerable
research work along new lines will have to be initiated by him.

56
2.

In this view, I feel that promotion of Sri Sukumaran may not be desirable.

For the scale of salary offered I am not sure if a more qualified candidate than the one selected by the Services Commission will ever be forthcoming. I have known Sri K. Srinivasan's work both at Bangalore and abroad and I think he will do well as Professor at Guindy.

The papers you had enclosed are returned herewith.

Yours sincerely,

J. Sundaram

M.V. Subramanian, Esq., I.C.S.,
Secretary to Government,
Education & Public Health Dept.,
FORT ST. GEORGE.

Enc: File of 30 pages.

"CONFIDENTIAL"

Education Department.

From

Sir R.M. Statham, M.A., C.I.E.,
Director of Public Instruction,
M a d r a s.

To

The Secretary to Government,
Education & Public Health Department,
Fort St. George, M a d r a s.

58702

R.CL. No. 23/43, Dated 13th December, 1944.

Sir,

Subject:- Madras Educational Service - Post of Professor of Electrical Engineering, College of Engineering, Guindy - Recruitment - Claims of Sri K. Sukumaran.

1923-25 Reference:- My letter R.CL. No. 23/43, dated 12th August 1944.

Kindly let me know when the orders of Government on the subject quoted above may be expected.

I have the honour to be, Sir,
Your most obedient servant,

M. V. Subramanian
14.12.44
For DIRECTOR OF PUBLIC INSTRUCTION.

Item 2: - Caldwell High School
 Servants including heres-

Serial No.	Designation	Incumbent's name	Dates of incum.
1	2	3	4
1	Heret	Mr. M. Draviam	April 1927
2	Deon	Balaiah	do. Sept
3	Heret	Sundarapandia Konar	October 1927
4	Sweeper	Vellaiyan	April 1927
			do. Sept
			October 1927

660 Litm

720

672

I hereby certify that the exp
 by the management and that the

In witness
 14-4-428

Mo. 35748

Conf.

(32)

E.P.H. Dept.

M.E.S. - Recruitment. Professor of Electrical

Engineering - College of Engineering, Guindy -

Refa on the S.P.S. R. Ch. m. 23/43 d 13/12/44.

Mem. No. 35748 A-4 Edn., d/23/12/44

Grants will be issued shortly.
 The matter is under consideration.

To the S.P.S.

23/12. 15/12/44

22/12/44

14. E. S. - Professor of Electrical Engineering, College of Engineering, Gairdy - Appointment of
Ref. from the D.P.I. R. C. No. 23/43 dated 12-8-1944. 24.11.44

Plans.

~~The S.P.I. is informed that Sri K. Ginnivan~~

who is a Mysore State Subject and who has been selected by the Madras Public Service Commission for the post of Project Engineer in Electrical Engineering & that the selection has been approved. Separate orders are being issued appointing Sri

cm. 35748 A/44

M. S. S. - Professor of Electrical Engineering,
College of Engineering, Guindy - ^{Sri K. Subramanya. B. Sc.} ~~Appointment by~~
Petition - ~~direct recruitment~~ - Orders passed -
Refugee from the D.P.S. R.C.H. No. 23/43 dated 12-8-46 -

Griffiths. No. 30 Edn. dates. 5. 1. 1945

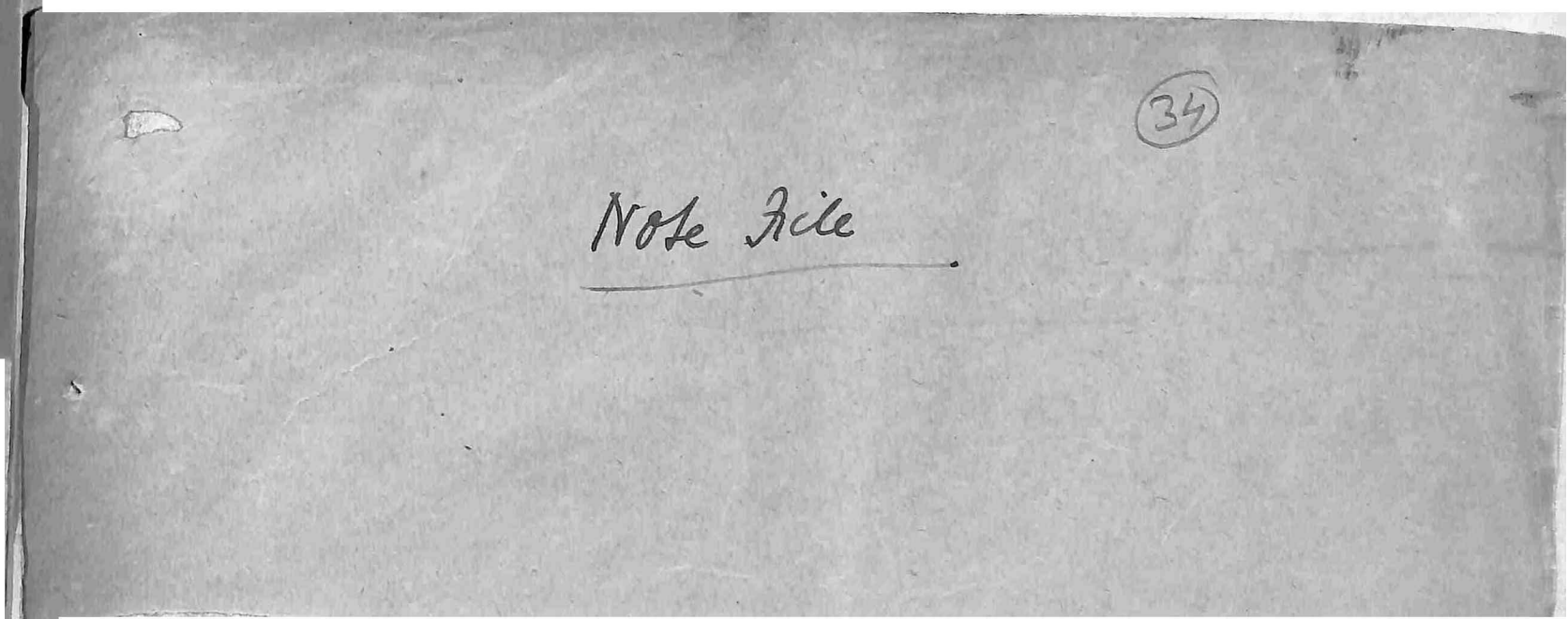
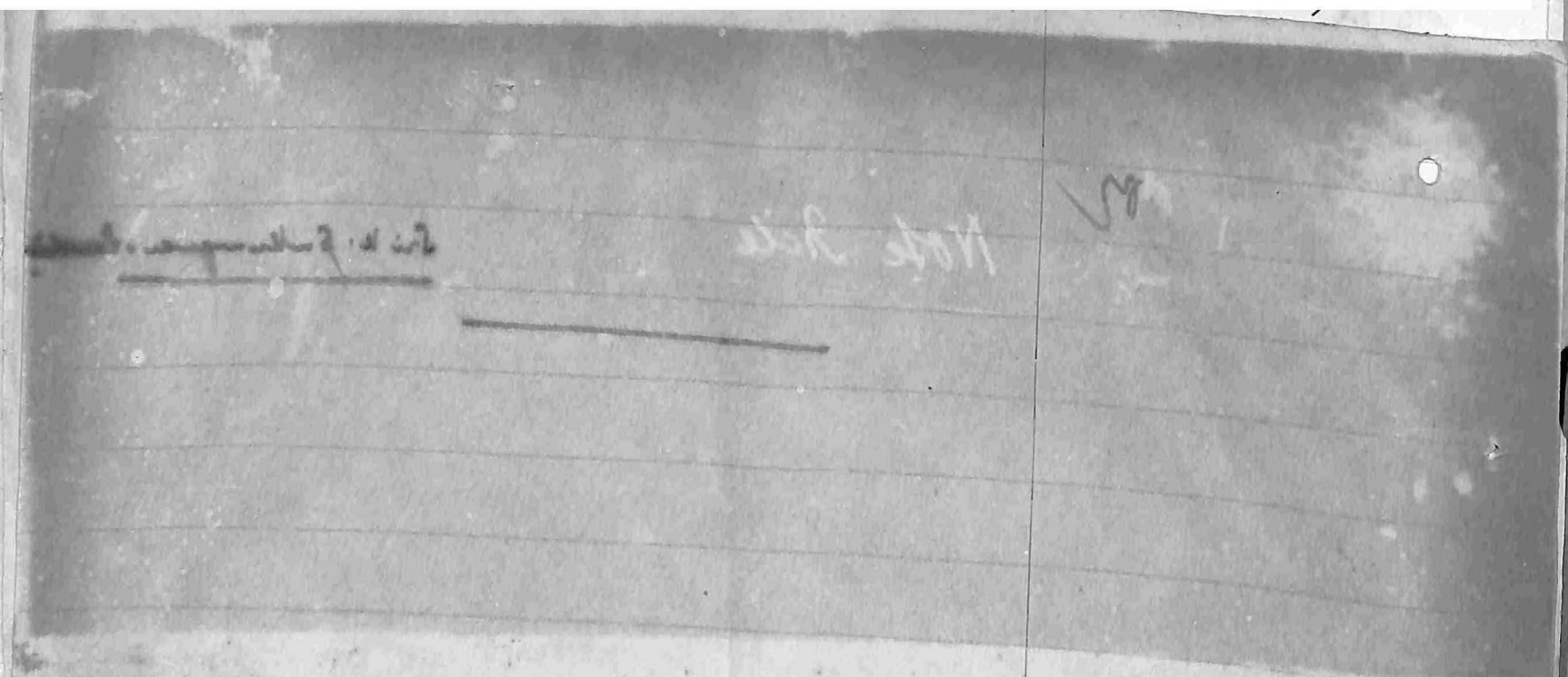
The Govt. have considered the representation of Sri K. Sukumaram in regard to the filling of the post of professor of Electrical Engineering in the College of Engineering, Guindy. They have decided that the post should be filled by direct recruitment. The S.P.I. is requested to inform Sri. Sukumaram accordingly.

To the D. P. I. ✓

~~3-1-45~~

3:145-

4/1/43



C.No. 35748. From Sri M. Sukumaran, Instructor in Electrical Engineering, College of Engineering, Guindy, dated the 3rd July 1944.

Professor of Electrical Engineering, College of Engineering, Guindy - Filling of vacancy.

(35)

The original of this petition submitted through the Principal and the D.P.I. has not yet been received. The Commission's report regarding direct recruitment for the post has been received and is dealt with in top file.

E.A.V., 12-7-1944.

Please see my routine note in the top file.

M.V.S., 13-7-1944.

As mentioned by Secretary, it is perhaps better to consider Mr. Sukumaran's representation before the Commission's proposal in respect of a direct recruit is further examined.

A draft D.O. to the D.P.I. is submitted. The L.F. will be held over until the Director's reply is received.

45-9
from notes
to the
linked file
also - 1/2

13.7.44 S 14/7/44

[Issued as D.O. 35748 A-1 dated 14.7.44 to the D.P.I.]

[41518] From the D.P.I. R dt No 23/43 dated 12.8.44

At G.F.21-22, the D.P.I. was asked to discuss the merits of Mr. Sukumaran's representation (C.F.31-43), that he may be appointed Professor of Electrical Engineering, with reference to the new grounds, if any, urged by him. The grounds urged have reference both to the method of recruitment to the post of Professor and to the qualifications prescribed therefor.

2 Method of recruitment: The rules which were in force in 1935 had prescribed direct recruitment as the only method of appointment to the post of Professor (class V, category 2) - page 1 of G.O.No.925, Public, dated 4-6-1935. The rules had further contained a provision that the Professorship shall not be filled by promotion from the categories of Lecturers and

(B)

Rule 12 on
p 3 ibid

Instructors. When the post of Professor of Civil Engineering fell vacant in 1936, the D.P.I. canvassed the propriety of enabling Mr. Sadarangani, then Instructor in Civil Engineering, to apply for the Professorship. On that, it was decided to remove the ban on Instructors from aspiring for Professorships in the Engineering College. The case of the Junior Instructor, which, as pointed out both by the D.P.I. and the Principal, exists only in the Electrical Engineering Department of the College and not on the Civil or Mechanical side, was not taken to Government's notice. The noting on the case (G.O.No.1259, Pub., dated 20-7-1936), appears to suggest that if the position of the Junior Instructor had been explained, as has been done now, the ban on the promotion of the Junior Instructor as well as the Instructor would probably have been removed. It may perhaps be done now by amplifying entry "(ii) promotion from Instructors" against "class V: "category 2 - Professors of the College of Engineering" in rule 2(a) into "(ii) promotion from the categories of Instructor or Junior Instructor".

3 Qualifications: Mr. Sukumaran possesses the last two of the three heads of qualification prescribed for the post of Professor by G.O.No.606-Edn., dated 20-4-1944. ^{As regards the first, he points out} that the Madras University came to award the degree in Electrical Engineering long after he had taken the Mechanical Engineering degree of the University and that for the reasons for which a Mechanical Engineering degree of the Madras University obtained before 1934 has recently been accepted as sufficient qualification for Electrical Instructors, it may be accepted as adequate also for the post of Professor. The suggestion of both the Principal and the D.P.I. was that a Mechanical Engineering degree of the Madras University taken before 1934 should be an alternative qualification for all gazetted posts in the Electrical Engineering Department - pages 22 and 30, G.O.No.840-Edn., dated 30-5-1944. There is also force in the recommendation as even an Instructor, who under the rules is eligible for promotion as Professor, cannot actually be so promoted unless the Mechanical Engineering degree obtained before 1934 is prescribed also for the Professorship. This

opportunity may be taken to bring the qualification for the post of Professor in this respect on a line with the qualification for Instructor.

4. For orders whether steps may be taken to amend the rules as suggested above. In that case, it will not be necessary further to proceed with the direct recruitment dealt with in the L.F. The file may be sent to the Public Department for remarks before circulation.

20.35748-A2
7-9-44

6.9.44

5/1/44



Public (Senior) Department

E & P. H. notes on pp 1-3 above may be perused. As the rules which it is proposed to amend relate to methods of recruitment and qualification the M.P.S.C. should be consulted under section 266(3) (a) of the Government of India Act, 1935, before issue of amendments.

The file may be returned to E & P. H.

45306

11/9/44

13.9.44

E & P. H.

E & P. H.

Pub Sec No 44655/44-1
14.9.44

May be circulated for orders as

① the amendment of the rules, as proposed above

② the app't. of Mr. Sukumaran as Prof. of

Electrical Engg.

the amendment of the foundation as to qualification for app't. (para 3 above) or not so important as to require consultation with Chief Engg.



May be approved, as recommended by D.P.I.

14.9.44

5/1/44

A3 A1 HE

This does not appear to me to be sound. Surely the Professor of El. Engineering should be a specialist, as provided by the rules, in El. Engineering & the appointment of a man who has a mechanical Engineering degree & has been a lecturer in Civil Engineering, is in fact a jack of all trades, as Prof of El. Engineering is not likely to cause the reputation of the college. If a first class El. Engineer cannot be found at once the post may well be kept vacant for a short time until a first class man is available instead of appointing an unsuitable man now who can be got out whenever he is available later. *as per committee*

Very Rev.

At 19/9/44

Governor's Secretary (Lt)
Routine Note.

EPH. may be requested to let A-3 see the minute of A-1 before the file is subd. to H.E.

E & P.H. U.O.

May be circulated

Please consult C.E. (Elec.), putting to him points raised by A.1.

T.A. (ustin),
21-9-44.

(Issued as D.O. No. 35748-A-3,
dated 25-9-1944.)

53-54 C.F.

ROUTINE

37

A.1's point is that Sri K. Sukumaran is the holder of a degree in Mech. Engg. and has been a Lecturer ~~only~~ in Civil Engg. It is true that Sri Sukumaran's degree is a Mech. Engg. degree. In the very first proposal put up in May 1943, the Principal thought that this ~~was only~~ theoretical disqualification ~~and~~ was more than outweighed by the consideration at "E"/6-7. It was found that a Mech. Engg. degree obtained before 1933 was a qualification for posts in the Madras Electrical Service and that on that basis and on the basis of the real content of such a degree it could be made an alternative qualification for all the gazetted posts in the Electrical department of the Engineering College. The question of direct recruitment to the post of Professor of Elec. Engg. was then under correspondence with the M.P.S.C. The Mech. Engg. degree obtained before 1934 was, therefore, recognized as an alternative qualification for the ^{other gazetted} posts of (Instructors.) The present proposal is only to extend the scope of this recognition to the post of Professor also.

Mr. Sukumaran's work has ^{almost} throughout been in the Electrical department of the Engg. College. The Principal has stated that ever since the Elec. Engg. degree course was opened in the college in 1930 Mr. Sukumaran has trained only candidates of the Elec. Engg. department and not of the Civil Engg. branch.

The post of Professor of Elec. Engg. has been vacant for over three years - from July 1941. It cannot be said for what further length of time it will have to be kept vacant against the possibility of obtaining a proper direct recruit. All these years Mr. Sukumaran has been doing most of the work of the Professor, and from June 1943 he has also been appointed to hold full additional charge of the post.

2. The Principal's and the Director's case is that the interests of the college will be better served by Mr. Sukumaran's appointment in the circumstances explained above.

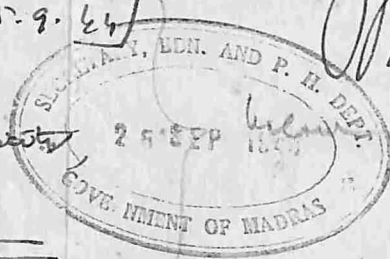
It is perhaps desirable that A.3 discusses the case personally with the C.E. (Elec.) and the D.P.I. If, however, a reference should go, the draft D.O. is for consideration.

23.9.44

S by 26/9/44

A3 18/9/44

D.O. 35748/A-3, 25.9.44



From the C.E. for Electronics 30.9.44

The file may now be circulated, with C.E.'s reply,

to A3.

2.10.44

S/A3

by 2/10/44

P. now examine Mr. P.S.' advice -
is the app^r to be temporary?

p21



S 2/10/44

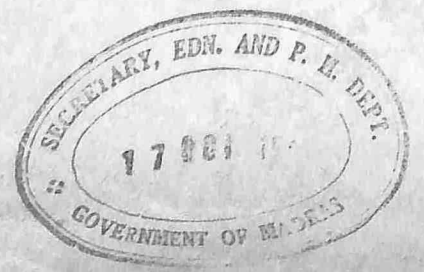
An extract of the above ~~note~~ minutes has been made in the L. & further note added. This may be further circulated in due course with L. &

3.10.44

S by 3/10/44

May be circulated.

Emphas. 35748/A-3 4-10-44



9.10.44

S/A3

A, H E.

2/10/44

A3. A1. HE

AH

15/10/44

This may continue to lie over till orders are issued on top file, appointing Mr. Subramanian.

17.10.44

S

by 17/10/44

38

A draft ~~memo~~ to the D.P.I. is submitted for approval. After issue, the paper may be filed with top file (No. 19053A/44).

3.1.45



3.1.45

S by 4/1/45

2/1/45

$\frac{2}{3}$

$\frac{1}{2}$