



NATIONAL AERONAUTICAL LABORATORY

P. B. No. 4, BANGALORE-17

S. R. VALLURI, Ph. D.
DIRECTOR

December 13, 1967

Mr. V. Siddharatha,
Dept. of Mechanical Engineering,
Imperial College,
London, S.W.7.

My dear Ravi,

Pet name

Thank you very much for your letter of November 20th. Yes, it has been really long since I wrote to you. So much seems to have happened that I too really don't know where to start. CSIR seems to be subjected to violent ups and downs nowadays with a considerable amount of internal dissension between the Directors and the Director-General. The new man has very definite ideas as to how the Laboratories should be run and these are coming into very direct conflict with the desires of some of the Directors. He seems to honestly believe that more can be done for less amount of money and this feeling does not help to any extent with the Planning Commission cutting down the 4th Plan budget proposals from about 150 crores to about 46 crores of Rupees. If I take a look at the way the plans of the Laboratory were worked out before I took charge of the Laboratory and the manner in which these plans were drawn out, I personally believe, while 46 crores of Rupees may be too little, 153 crores of Rupees may not be spent in a meaningful manner by the Laboratories. Perhaps if something like 75 crores of Rupees is given, CSIR would not lose anything. All these problems were greatly complicated by political considerations and Dr. Atma Ram gives the impression of feeling that he has to undo everything that Dr. Zaheer had done before he can succeed in accomplishing anything. Any organisation that is subjected to such convulsions every time a Director-General changes will be basically in trouble and badly organised. I personally do not believe that any Director-General can really run the Laboratories from the headquarters and the Directors should be given considerable amount of freedom and responsibility for delivering the goods. This confidence between the Director-General and the Directors is strongly lacking at present and added to this, with a desire to economise on expenditure, the Governing Body of the CSIR sometime ago came up with a directive that the Director-General must scrutinise each and every appointment to be made by the Directors.

This has caused a tremendous amount of uproar and after one year of living through this experience, in the last meeting of the Directors which took place a month days ago, the Vice-President finally made a categorical statement that they will be handing over this responsibility back to the Directors. We have yet to hear officially from the headquarters about this decision for decentralisation. Dr. Atma Ram also expressed his honest desire to decentralise but this statement is so much in contradiction with his action that I find it difficult to accept the statement unless I am given a proof. The basic trouble with CSIR at present is that there exists a crisis of confidence at all levels. I don't want to say that the Directors are all enlightened people and something is wrong with the Director-General. The problem exists across the whole cross section. There are enough number of Directors who want to retain the power in their own hands and not interested in the decentralisation of the administration. I personally feel very disillusioned about the whole situation. At the last Directors' Conference, I proposed an agenda item calling for a complete reorganisation of the CSIR headquarters to get the Directors involved in a more meaningful manner in the evolution of the policies and procedures, implementation and evolution of the Science Policy and interaction with the industry etc. My resolution got clobbered. At best, if in the next four years or so the CSIR consolidates the Laboratories, this will be enough of an accomplishment but with the crisis of confidence that exists at present, I rather doubt if even this is going to be possible.

The most important thing that has happened now is the constitution of Subramaniam Committee by the Government of India to take a close look at the future of aeronautics in this country and put up recommendations which would presumably form the basis for the Government's action. You must have seen something about it recently in the papers. Subramaniam came to our Laboratory recently for getting acquainted with our activities as he did with other all India organisations also. He made the very frank statement that there always exists a conflict between what an industry proposes to do and what the country would like to have and what the country can afford to have. We have been asked to prepare position papers about the future of aeronautics in general and also the future of our Laboratory in particular. Subramaniam has made a similar request from the other research organisations also. Presumably all these things will be taken into consideration by the High Powered Committee constituted by the Government before they make any decision. We are going through this exercise at present and it is not very easy, primarily because of the lack of information. As far as our Laboratory is concerned, I feel very clear about one or two things. If the country is going to build the industry on imported

technology, none of these Laboratories are really necessary and HAL can continue to buy the licence & know-how from other countries and produce equipment as they have been doing in the past. On the other hand if we claim to be really a non-aligned nation, this would imply that we have to have a measure of independence in the Air Force and this would inevitably lead to the conclusion that we have to have a viable aeronautical industry. While this is so, it also appears that the degree of viability cannot extend over the whole range of aircraft that will be required for the country but has to be restricted to few essential categories such as interceptor, ground attack fighter and perhaps STOL type of aircraft etc. Secondly, in view of the fact that any aircraft that are produced must be as sophisticated and competitive as those that our adversaries are likely to have, our aircraft must be equally sophisticated. This seems to lead to the conclusion that a tremendous amount of effort must be available in the country in order to generate such data and information that would form the basis for the design of sophisticated aircraft.

This Laboratory's commitment in three areas appears to be of considerable importance. They are (a) Aerodynamics with our extensive tunnel facilities (b) Materials where no work is going on anywhere in the country except to a marginal extent in our Laboratory and (c) finally Propulsion. In Propulsion, while GTRE may have the primary responsibility for designs and development of hardware, in consultation with GTRE we are committed to basic and applied research in Propulsion. We have very close working relationship with GTRE and I hope in the years to come, it will be strengthened. The Materials Division under Dr. Ramaseshan is progressing exceedingly well. I want to develop one of the best laboratories in this country in Materials Research. Our desire is to concentrate on high temperature alloys, composite materials and to some extent obtaining a better understanding of the existing aircraft materials primarily the non-ferrous group. If we can make significant contributions in these areas, the Laboratory will have acquitted well. Our Aerodynamics Division has good equipment but the other Divisions have to be built up. All that I can say at present is, I don't feel completely defeated and hope that with the help of the Subramaniam Committee, the input to this Laboratory financially and staff-wise will be increased in the next few years.

The axe has fallen on the National Biological Institute and so also on some of the Directorates that were created by Dr. Zaheer before he left. This was a pity because I think all these Directorates were required and instead of strengthening them they have been cut off. All these problems got deeply embroiled in politics and it is too long a story to give any details here.

You talk of motivations of scientists in U.K., I am afraid, they are no better here. These are luxuries which perhaps U.S. can afford. I personally wish more number of people are concerned with the kind of problems you have in mind.

I too heard from Gopu. He wrote a long letter justifying his action. I have replied him wishing them very best in the years to come. He still feels that he will be returning to India soon after he finishes his work and working in a Company for a year or so. There is time enough to worry about these things.

How are you and Pais getting along? What are your plans? Are you people proposing to come back sometime after getting your degrees or you propose to work there for a long period of time? How is your thesis work progressing?

Ramaseshan's joining this Laboratory is the best thing that happened to this place. I do honestly believe that he is more important to this Laboratory than I am. Recently, he, Dr. Krishnan and Ramani from Electronics and Workshop got together and made a Spark Erosion Machine. It is a wonderful job. We are now using it to make a mould for preparing the forging dies for the aero-engine. We think, we have a significant development in our hands in obtaining a better technique for making the forging dies than those that were employed elsewhere. We are also developing a filament winding machine which will presumably be used for making the rocket motor cases for solid propellant rockets. I just received a letter as I was reading the rough draft of this letter that the Patent Office put a seal of secrecy on our patent due to its relevance to Defence! I am personally very much interested in this development. Difficult as it may be I am also committing the Laboratory for involvement in making chromium-base high temperature alloys. The main difficulties with these alloys is that the so-called brittle transition temperature is rather high and does not remain stay put. Because we have no nickle in our country and since we have plentiful of chromium, I feel it is very important that somebody undertake this development.

Our family is doing quite well and the children are growing up. Our son was one year old last week and weighs almost as much as Monica. Enclosed are a couple of pictures taken sometime ago. I thought you may be interested in seeing them.

So long Ravi. Trust this will find you and the Pais in good cheer. Please read my letter to him also.

With good wishes to you three and greetings for the season.

Yours affectionately,

S. R. Valluri

(S.R. Valluri)



NATIONAL AERONAUTICAL LABORATORY

POST BAG No. 4, BANGALORE-17

S. R. VALLURI, PH.D.
DIRECTOR

January 1, 1968

Mr. V. Siddhartha,
Dept. of Mechanical Engineering,
Imperial College,
LONDON, S.W.7.
U.K.

My dear Ravi,

Thank you very much for your letter of December 28, 1967 and the enclosures. If I recall correctly I read the excerpted sections of this in Campus Times of I.I.T. It was quite an interesting article. I am glad to note that the Air Force took initiative in circulating it. I certainly agree with many of the contents.

I note what you say regarding your desire to put some of your thoughts before the Subramaniam Committee. It would not be proper for me "to commission you on behalf of the Laboratory." However, I shall be most happy to send them with a forwarding letter from me to the Subramaniam Committee for their consideration. If you wish, I can also send this article on "Speaking Planely" to the Subramaniam Committee. So, you are very welcome to write a report to the Committee and I shall be most happy to forward it with a covering letter. If there is any typing etc. to be done, I shall be glad to have it done in the Laboratory for you.

Dr. A. Ramachandran took charge as Director, I.I.T. Madras on 11th December. It looks like there is now some hope for that place!

Trust this will find you and Pais in good cheer.

Yours affectionately,

S. R. Valluri

S.R. Valluri.



NATIONAL AERONAUTICAL LABORATORY

POST BAG No. 4, BANGALORE-17 (INDIA)

S. R. VALLURI, PH.D.
DIRECTOR

D/00260

April 11, 1968

Mr. V. Siddhartha,
Department of Mechanical Engineering,
Imperial College,
London, S.W.7.

My dear Ravi,

May I thank you very much for sending me a couple of copies of your report. I have only very quickly glanced through it pending a more careful study at a later date. It focuses attention on many of the important problems and I am very glad you have prepared it. I am sending one of the copies to Mr. Krishna'swamy, Member-Secretary of the Aeronautics Committee as per your request. If you can spare time, if only to see the report in complete form, I think you should write the other chapters also.

What are your plans i.e. yours and Ramachandra's? When are you likely to come back here? We are desperately in need of trained staff and I would like to know what are your plans. Will you please ask Ramachandra also to drop me a line about his future programme.

Did you know Suma is getting married to Ranganathan one of these days?

With good wishes,

Yours affectionately,

S. R. Valluri

S. R. Valluri

BY AIR MAIL
PAR AVION



Mr. V. Siddhanta,
Department of Mechanical Engineering
Imperial College,
LONDON S.W.7

Third Fold

From:

S. R. Valluri, Ph. D.
National Aeronautical Laboratory
Bangalore-17 (India)

To Open

Second Fold

First Fold

GRAMS: NAEROLAB
TELEX : 279



71197
PHONE : 74675
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NATIONAL AERONAUTICAL LABORATORY

POST BAG No. 4, BANGALORE-17 (INDIA)

S. R. Valluri Ph.D
Director

D/00260

May 13, 1968

Mr. V. Siddhartha,
Department of Mechanical Engineering,
Imperial College of Science & Technology,
London S.W.7.

My dear Ravi,

I am enclosing a copy of the letter I have received from Mr. Krishnaswamy, Member-Secretary, Aeronautics Committee. It looks like Mr. Krishnaswamy is interested in you. You may perhaps like to write to him directly to establish contact. You may now like to take initiative in writing the other chapters of your report also.

With kind regards and good wishes,

Yours sincerely,

S. R. Valluri

Copy of letter No.D.O.0197/AC/68 dated 9th May 1968 of Mr. S. Krishnaswami, Member Secretary, Aeronautics Committee addressed to Dr. S. P. Valluri, Director, NAL, Bangalore 17.

"Please refer to your letter No.D/00260 dated 1st May 1968. I have received a copy of the note by Mr. V. Siddhartha on "The Indian Aircraft Industry, perspectives, constraints and alternative futures". The report is interesting, but the conclusions are expected to be incorporated in Chapters III and IV, which are still to be received. You can inform Mr. Siddhartha that the Aeronautics Committee would study these reports and act on the conclusions as may be appropriate.

2. I would also be interested to know how long Mr. Siddhartha would continue to work in the Imperial College of Science and Technology and what his plans to return to India are. "

/true copy/



NATIONAL AERONAUTICAL LABORATORY

P. B. No. 4. BANGALORE-17

S. R. VALLURI, Ph.D.
DIRECTOR

March 28, 1969

Mr. V. Siddhartha
Dept. of Mechanical Engineering
Imperial College of Science & Technology
London S.W.7.

My dear Ravi,

] Pet name

Thank you very much for your long letter. Reading through the letter I get the impression that you have a lot of time ahead of you to think carefully about your future plans, especially in view of the fact that your family is now in England. I am sure nothing fantastic is going to happen here in the next couple of years and a bit of stay in England and some work there would not hurt you at all.

I am glad to know that you are planning for a holiday in early 1970. Do please let us know when you are coming. You are welcome to stay with us during your stay in Bangalore. I am glad to note that my idea of a group to study air defence policy etc. strikes a sympathetic chord in your mind. Unless I have got a small team of people who are actually interested in it, I really cannot afford to start such a group. I tend to believe that you are one of the persons who can play an active role in such a group. Perhaps, if and when you want to come to work here, I must first have to get you in through the Division of Propulsion and after having joined, transfer you to that group. This way, I will be able to accomplish my goals a little bit more easily. This would essentially mean that for any position in the Laboratory you will have to have your technical tools relatively sharp at least for some time.

The Subramaniam Committee report is yet to come out. I suppose it will be out one of these days. But I have to come to the conclusion that nothing will come out of it. We have submitted our own reports. Even if I say so myself, we have done a fairly thorough and technically competent job of assessing the requirements and the prospects for indigenous development. I feel nothing will come out of it, primarily because the Government, apparently, has made up its mind to continue licensed production and invite B.A.C. for producing the Jaguar. The Government itself is not prepared to take a realistic look at our Air Force requirements. Under the circumstances, there is precious little, any

committee can do.

The Government have appointed a few more technically incompetent people who are Air Marshals in the Air Force to the responsible managerial positions. I have no objection to any Air Force Officer to be appointed to such positions provided he is a technically competent person. These people are not technically competent people. Where there is a difference of opinion concerning technical matters, they do not have the capability of assessment and making right decisions. In the absence of this capability, they are guided by the protocol and accept what the senior people say. The senior people, over the last 25 years have gotten very much accustomed to licensed production and have completely stagnated. I can state without any fear of contradiction that the senior staff at HAL, except possibly for Mr. Mahindra and his group, are thoroughly incompetent and as long as they are the people who are going to prevail, precious little will come out. I am personally convinced that there is enough capability available in that organisation to design and build good aircraft. But neither the Government nor HAL seem to have the will to do so. I suspect that things will continue to go on in the present way for some more years to come.

Personally, it was a fantastic experience for me to have gotten involved in the Study Group concerned with research, design and development. I never thought personal propensities, individual idiotic characteristics and the narrow mindedness of people could prevail to such an extent that they are prepared to prostitute their own professional integrity to the extent I had noticed during the proceedings of the Study Group. It makes me feel sad to see what has gone on and what is going on. I do not think Mr. Subramaniam will be able to accomplish anything. He doesn't have the power base which is so essential if you want to prevail upon the Government to accomplish a thing. His recent resignation and the subsequent withdrawal of it has certainly strengthened his position and has improved his image. But what is important in Government is not the image but the power base that you have in the Government operations. He does not have it and to that extent, the recommendation of the Aeronautics Committee are not likely to be accepted. I suspect the activities of the committee would be a failure. The sum and substance of these recommendations are that there is technical talent available in the country and the technically competent people must be given the recognition and the freedom to bring out the best in them without enough back up financially and that is only technical people that must be appointed to the higher managerial positions and that HT-24 must first be improved to a considerable extent along the lines of the studies initiated by our Study Group and that it is to be followed by the design and development of a Ground Attack Fighter essentially on indigenous basis.

I received a bill yesterday addressed to your father for water supply for a sum of Rs.654.45. I wonder what he would like me to do with it. I can send it to your grandmother or pay it

myself and request reimbursement. Will you please tell your father about this matter.

I am also wondering about the problem of renting your house. Every month the house is not occupied, it is costing your parents a lot of money. Although I personally believe that if it is given to a Company, you should get about a thousand rupees a month, I am wondering if in the long run your parents are not going to lose money by keeping it unoccupied. Recently the Larsen & Toubro Manager was willing to offer Rs.800/- a month provided a garage door is put up. He was prepared to take the house on lease for two years. Since the loss to your parents is much more if it house is not let out than letting it at Rs.800 a month, it is perhaps desirable for your parents to reassess this problem and come to a conclusion about the desirability of renting it at Rs.800/- a month and communicate their decision to Mr. Shoroff, the Real Estate Agent in Bangalore. I feel rather concerned about the tremendous loss your parents are suffering by keeping the house unoccupied. If it is to be rented at Rs.800/- a month to the Manager of the Larsen & Toubro, your father may perhaps like to write to Mr. Shoroff to negotiate the lease for a period of four to five years instead of two years and let them take the responsibility for putting up the garage door and collect the money for it by reduction from the rent over a period of months. Do please let me know what the thinking of your father is in this matter and in regard to the water bill. I note in this connection that M. S. Thaker's house in this area which is much bigger is being rented at Rs.1200/- a month.

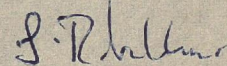
When you receive our scope of activities report and look through it, if you have any comments, I shall be glad to hear them.

Thank you very much for sending to our Librarian a list of periodical holdings of the Imperial College.

We are all doing well.

With kind regards and good wishes to you and your parents,

Yours sincerely,



S. R. Valluri