

time is revival of dead lying river towns which will give work to millions while tubewell can serve no such purpose.

Lastly, the charges are very high. One inch per acre at the end will require at least 4 inches at the source from which the metre charges will be 40/-. Tubewell may give temporary benefit to a few who can afford to pay for its purchase and bear the costs which 90% of our farmers cannot do on

account of their poverty on due to small holdings. Even when it gives two or more crops it may increase the gross income of the few but not suitable to farmers' economy. Double cropping involves almost double the costs if the commensurate rise in the yield does not occur as is invariably the case. So it cannot raise the net income. Moreover it creates further disparity in rural wealth which cannot be said to do social justice.

## **SESSION : S-3 : ROAD & HIGHWAY CONSTRUCTION**

### **Welcome Address**

By

**K. C. Sivaramakrishnan**

It is a very great pleasure to welcome you in the 3rd Technical Session of the Second All India Conference on Engineering Materials and Equipment. I presume that the moto in asking me to make a formal welcome is not with a view to ensure my participation in the seminar because I am a lay man not belonging to any engineering faculty. I am simply a client.

I was going through various papers contained in the Souvenir last night and I got the impression that most of the things that I wanted to raise have been covered. Nevertheless, I like to place before you for your consideration certain feelings I have had in my mind, being a member of your distinguished fraternity.

During the past one year, we have been trying very hard to start Calcutta Development

Programme. When we started this programme general reaction was that we had to face negative criticism. It was a doubt whether we could take up work and money be available. Even if money is available whether various implementing agencies would be able to complete the works due to lack of finance and delivery of goods. Even if the implementing organisations were in a position to deliver goods, they would not be allowed to do so due to political interference. The fourth one was that what is being done is enough and imaginative?

Every professional community in democratic society is performing its function. Professional community is also expected to deliver goods. For speedy action, engineering community should demand that money and materials be made available readily.

We all know so far metropolitan district is concerned quite a good number of roads are subjected to very heavy traffic load and remain water-logged for a considerable part of the rainy season. These roads get badly damaged every year even if they are repaired. So it is extremely necessary to find out a solution to this problem which will be of a permanent nature. Now going through the different papers I find that there is no good deal of thinking in this line and no author has been very specific in recommending solutions to these chronic problems.

I am glad that engineering community has taken a massive programme of developing the city. But you must ensure to overcome the difficulties the city is facing. You must put specific suggestions how you could definitely complete the execution of the programme.

Speed is very essential. True there are certain criteria—technical criteria which the engineers have to comply in the execution of the work. We are trying and trying to develop our country for the last 20/25 years. People are watching whether something is done. If something is done during the coming two years, people will allow us to run the programme thinking that there are yet things to be done. Otherwise all the efforts will prove to be fruitless. I would request all of you to give serious thought on the matter of C.M.D. development programme. I am confident that in this forum, this problem will be discussed, deliberated and there will be specific and concrete proposals for solving the problem.

I thank you once again.

## Presidential Speech

By

S. N. Gupta

I convey my sincerest thanks to the authors of different papers for highlighting the different problems of road construction and their suggestions towards their solution. I also thank the discussors for their valuable contribution.

I do not want to discuss the technical aspects of different papers as these will take hours. There is no denial to the fact that the performance in the construction of road and highway is not upto expectation both in respect of quality and quantity. Now the question remains as to how this performance can be improved and how to achieve success.

There are certainly very many ways of doing this, but I will focus attention to only four specific points. The first one is Specialisation. It is very tragic that the Engineers of to-day are lacking in basic informations even. What is there in the specialisation of road and highway construction? Is it not mixing the aggregates with bitumen, putting and rolling it? These are usual questions not only put forward by the common people but also by some administrators and leaders. But certainly there is need for specialisation and it should be made by a band of Engineers who have really