Welcome Address

by

B. C. Ganguli

Chairman, Reception Committee

I welcome you all and thank you for lending support by being present today.

In our First All India Conference for engineering materials and equipment, held in 1970 we primarily discussed about engineering materials and equipment necessary for works in urban sector with special stress on CMDA activities. This year subjects for discussion in the Second All India Conference for Engineering Materials and Equipment have been chosen to cover both rural and urban fields to maintain rural-urban linkage.

We will discuss, in our seminar, about the Rural Electrification. It is very essential to extend certain urban facilities to the rural inhabitants, so that exodus to urban area can be checked. If they can get electric lights and fans in their rural environment there will be less temptation to go into maddening crowd of city to live in. If the essential requirements of human life be available in clear environment at the door steps there will be less allurement for migration to urban areas. In order to energise the tubewells for irrigation purpose, expanding rural electrification programme has to be taken—by providing electric power in the villages. It is also essential for pumping out water from the sub-soil to irrigate larger tracts. Moreover by tubewell irrigation many arid areas can be brought under cultivation. Many small scale industries in rural set up can be developed with the introduction of electric power and thereby giving more employment to the rural sector.

Japan has enormously utilised their rural talents in cottage industries after partly utilising villagers' spare time in small scale industries. The generation, conveyance and distribution of electric power are now major problems specially in West Bengal and other developing States. The uran demands for electric power is increasing in leaps and bounds. So the rate of expansion and growth of electric power cannot cope with the rate of demand in industrial and other fields. The rural electrification has made a great headway in some State of India specially in Haryana where they claim that all the villages have been brought under rural electrification. Our achievement in West Bengal is of no mean dimension but there is a long way to attain the goal. The present status will be revealed from the following table :—

Region	Villages		Percentage Electrified upto (March 1970)	Remarks
	Total	Electrified		
INDIA	5,66,878	90,700	16%	Percentage Attained in Haryana 100
W. BENGAL	38,454	2,679	7%	
W. BENGAL DISTRICTS				In the State :
i) Nadia	1279	433	34%	Highest percentage.
ii) W. Dinajpur	3130	18	less than 1%	Lowest percentage

In our second technical session we are to discuss about Tubewell Irrigation for the production of more crops and its impact in achieving verdant revolution where either flow or flood or storage irrigation is not possible. It is now claimed that there was a break-through in the food production due to green revolution which is attributed to concerted efforts of the use of good seeds, effect of proper fertiliser and application of insecticides in time ; but water played the very essential and the most important role in the production of crop. How to achieve this objective most economically ? Posterity may accuse the present generation for our inability to expedite the latest technique developed so far. Here construction of tubewell means the sinking of galvanised tubes wiih strainer at the end with hand or mechanically operative pumps at the top to extract water from the acquifer and to distribute over the field. The usual life of these tubewells in contact with corrosive and high pH. water extends normally to 5/6 years thereby creating difficulties for pumping out requisite quantity of water from the water-bearing strata. Now steel is in short supply and the time has come to ponder over some alternative materials for replacement of the steel pipes. We may consider as an alternative, PVC type pipe which can be conveniently utilised for such purposes with PVC strainer so that not only their life would be enhanced but the cost of construction will also be reduced.

We must devlse methods to speed up these works and cut down time and costs both so that some breakthrough can be made as people are looking up to us for this impatiently.

Roads and Highways Construction plays a very important and essential part not only in rural but also in urban life. In relation to the standard as prevalent in other advaneed countries the extent of urban roads are very meagre. There is only half a mile of road per square mile in India. Even in metropolis like Calcutta, the percentage of land thrown to roads is nearly 8% whereas according to the modern standard it should be no less than 20%. The rural roads connecting urban areas encourage development of trade and commerce, communication and cultural contact.

In the First Chief Engineers' Conference which evolved a plan, it was decided that no village will be 5 miles away from the proposed road net-work. In the past three Plans, considerable development and increase in length of roads have been made in this country but very little progress has been made in the existing cities except through the efforts of Improvement Trusts or Development Authorities. Of course, new towns have been developed having steel as centre of activities like Rourkela, Durgapur, Bhilai or ship building activities like Vizag or capital development projects like Bhubaneswar and Chandigarh. The provision of roads in these new cities is quite adequate and the area thrown for road development is considerably high i. e. to the tune of 20% or more.

In ancient scripture of Vastusastra it was recorded that there should not be any road less than 5 dandas i. e. at least 30 ft. wide. But the existing lanes and by-lanes, alleys and gallies occupy major lengths of roads in Calcutta, Howrah, Bombay, Benaras, Allahabad and other regions. Those are very narrow and often below 5 dandas.

It has been observed that the specifications of roads so far done cannot meet the increasing standards of axle loads which result in rapid deterioration of the surface and sub-grade. The objective was to increase the length of the roads giving less stress on higher specifications

of construction. With the advancement of technology, the carrying capacities of vehicles are increasing but the condition of the pavement is not sufficient to cope with the load. It is now necessary to change some road making techniques to give place to new ones already experimented upon and to change some specifications of the road metals on the basis of its availability and demand of traffic. There is no sense in having gneiss stone ballast for a 10 ft. wide road. On the circuitous alignment, some brick khoa, slag or laterite or some sort of cheap materials are sufficiently good.

I hope the deliberations here will contribute to the solutions of these matters amongst others—like housing where also the gap is very large and improvisations must be found on scientific basis to help the society to its goal of better existence.

I thank you once again.

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I, Pannalal Das, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/P. L. Das.

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