

EDITORIAL

We have just completed our 14th AICEME successfully. The topics of discussions were Modern Welding Technology and Urban Transport System. Quality welding or joining of materials, structural parts are essential for modern fabrication technology in various fields of production. Knowledge in this area is quite developed but hardly it is given right emphasis in our technical educational system. People implementing the design ideas from a blue-print to a structural piece need to know the technology and develop the skill. Man-power training is lacking in this area. Even in University education past students often complain of their lack of knowledge in welding. Welding of plastics also need to be focussed in future as this material is coming up at a rapid pace in the field of engineering.

Regarding urban transport problem we, Calcuttans are bewildered and totally under the grip of traffic-jam-phobia. It has already become an uncontrolled routine affair. Traffic rules and regulations are violated every moment. More than 25% drivers in Calcutta roads are unlicensed and they are moving around under the nose of the guardians of law and order. In this city, life has become miserable, the speed of flow of traffic has become hopelessly slow during rush hours. At this point of time, this conference was the most desired topic which a Calcuttan could think of. Some of the papers discussed the problem at length and suggested some solution. CMDA, Metrorail authority and Calcutta Corporation and Govt.

of West Bengal are thinking of various measures to ease out the problem. Circular rail, Eastern Metropolitan bypass, Metro rail hopefully will provide us the desired relief in near future. Progress in these sectors are essential for all round development of this state and survival of this metropolis as a premier centre of culture, education and business.

Proceedings of the 14th AICEME

The Conference was declared open by the President at 5 P.M. on the 23rd February, 1985 in the Kennedy Hall, Institute of Jute Technology, 35 Ballygunj Circular Road, Calcutta-700019. Sri N. R. Banerjea welcomed all the dignitaries, delegates and guests and members of the Association. Then secretary pointed out the highlights of achievements of the Associations for past years. It was followed by the inaugural speech by Sri Patit Pavan Pathak, Minister of State for Parliamentary Affairs, Govt. of West Bengal. He suggested that the deliberations of the conference specially on the Urban transport problem should be forwarded to the Govt. for its consideration. Concrete feasible suggestions were the most desired point in this aspect, he mentioned. He also suggested the research institutes to take up projects with aiming at goals to solve this burning problem of the day.

President Prof. R. K. Chakrabarti then read out the message from Mr. Russi Modi, Chairman & Managing Director of TELCO.

Mr. Modi wished the conference all the best and a grand success.

President then read out the message from the chief guest, Sri Prasanta Sur, Minister, Local Self Govt. and Urban Development, Govt. of West Bengal, who could not be present due to some unforeseen emergent situation. Mr. Sur in his speech thanked the Association for the choice of the topic on problems of Urban Transport. He welcomed practicable and precise suggestions from the Association regarding the solution of Transport problem of the metropolitan Calcutta.

After that President of the Association delivered his speech. The short text of the speech is given below :

Speech of the President

Addressing the chief guest and the members and delegates present, the President spoke about the present condition of the Association and appealed for donation to the building fund. He mentioned that unless the Association conducted examination for technical personnels to improve their qualifications, it would be very difficult for the Association to grow rapidly. An attempt should be made to hold Section 'A' & 'B' Examinations for the students coming out of Industrial Training Institutes (ITI's) in the country possessing requisite basic qualifications so that they may be treated as equivalent diploma holders in Engineering. President assured the meeting that such a Scheme had already been prepared and it would be submitted to the Ministry and other authorities shortly.

President then discussed about the professional ethics for the engineers and techno-

logists. He said that since the early days engineers had been regarded as public servants, members of the noble profession and self regulation seemed adequate to assure a high level of competence and performance.

There were two aspects of this problems one being the legal and the other moral. Society never demanded that the engineers, among others, improved the performance and did a better job of anticipating the hazards brought about by its work. Engineering related decisions involving ethical dimension were not that easy.

In the present day world decision making in technological field some times is based on vague, unreliable & important data, incomplete knowledge, uncertain probability, controversial value judgement. Again, decisions are mostly influenced by many individuals with varied backgrounds and training like bureaucrats, etc. Many engineers feel and know by heart that they form such a minor part of the decision making process as to have insignificant impact on technological decision. Even under such circumstances the consequences of wrong choices or errors in execution can be massive in terms of damage to the environment and loss of life. A glaring example is the recent tragedy in Bhopal where a large number of people died and thousands incapacitated.

For the second point, one finds that the moral ethics of professional man depends not only on his part or honesty but also on the environment in the society in which he is working. If it is found that one is living in corrupt society then one cannot expect to find exception in the professional person alone.

Corruption may be of different nature. Some times, engineers are to work under employers who may force them at the threat of loosing their jobs to make do with inferior quality of material or machinery for a larger profit making motive. Another is the distribution of corruption, from one end to the other, such that no one can escape from its clutch. The position of engineers in our country is very peculiar. They are sandwiched between the employers, bureaucracy in one hand and the work forces on the other. Engineers find themselves in a dilemma and takes the path of least resistance for sheer survival which, to an out-sider may seem to be an example of gross incompetence. Is there any other society in the country where such spectacles of un-clothing of Officers take place in front of factory gate in view of the public and the administration and management are helpless to take any punitive action ?

President further said that both legal and moral ethics of a professional man is such a vast subject that seminars may be organized, from time to time, in different parts of the country for a thorough understanding of this problem.

This was followed by vote of thanks to all concerned by Vice-President Prof M. Bhattacharyya, specially to the sponsor TATA Iron and Steel Co. and the participants and guests for coming over to attend the meeting and making it a success. A tea break for half an hour followed by a variety of Cultural programmes performed by Nabarun Sahitya Gosthi and Show Theme.

Proceedings of the Technical Sessions

February 24, 1985.

Technical Session I : Modern Welding Technology

It was held in the Kennedy Hall and started at 9 A M. under the Chairmanship of Prof. R. K. Chakrabarti.

Keynote speaker to this session was Dr. M. Bhattacharyya Professor, Mechanical Engineering, Jadavpur University. Prof. Bhattacharyya gave a talk on the subject starting from the fundamentals of the subject. He explained the various design parameters and factors that affect weldment design and performance. His lectures raised lot of interesting questions from the audience.

In this session subsequently four more papers were read. These were 1) Distortion in welded joints : its causes and remedies by Er. N. K. Maitra of M/S. M. N. Dastur & Co. (P) Ltd

2) Modern Welding Technology by Er. S. K. Mukherjee of Burn Standard Co. Ltd. Calcutta and Sri A. K. Basu

3) Computer based study on the estimation of residual stress by S. Roy of B. E. College and Dr. M. Bhattacharyya of Jadavpur University.

4. Recent developments of Welding Technology, by Dr. B. Roy, Krebs India Calcutta.

5. The training needs at the grassroot level at the ITI's for the successful implementation of the various designs and principles of Welding Technology by Er. A. K. Basu, Welding Consultant.

Then Er. P. K. Mallick summarised the papers discussed in this session. The papers which were accepted after the review are published in this volume.