

Seventh Annual General Meeting

The Indian Institute Of Welding Presidential Address

By R. J. SHAHANEY

I take great pleasure in extending a warm and cordial welcome to all of you, members and distinguished guests at this, the Seventh Annual General Meeting of The Indian Institute of Welding. My special welcome is for Mr. A. W. B. Hayward, President, Bengal Chamber of Commerce & Industry, who has so kindly agreed to be our Chief Guest and principal speaker today. I am glad that we have been able to maintain the past convention of the Chamber President attending this meeting.

We meet in the middle of the festive season, but there is little cheer to industry at this point of time as we look towards the new year of 1974. The period since the last Annual General Meeting has not been particularly happy, either for the country or for the world at large. Shortages have multiplied and prices have gone up. There is no immediate prospect of relief in the supply of basic industrial requirements such as steel, coal, fuel, power and transport facilities. On the other hand, there is a world wide energy crisis arising out of a cutback in oil supplies. We are bound to feel the effect very soon as the imported supplies of critical raw materials will be curtailed. There is, therefore, an immediate and urgent need for an assessment of the overall energy position in our own country and for exploring all available means to utilise fully and augment our own production facilities. We have to meet tremendous challenges of growth in industrial production and export during the Fifth Five Year Plan and there is, therefore, no time for complacency, no time to stand still.

I would like to briefly refer to the activities of The Indian Institute of Welding, after which I wish to highlight some of the important aspects of concern to all of us who are in some way or the other involved in welding.

Institute Work and Activity

The last year has been fairly eventful for your Institute with progress in several directions. Membership has maintained a steady growth, and over the last four years the membership has more than doubled. Two more branches have been formed, one at Calcutta and the other at Madras, and with the existing branches at Tiruchirapalli and Bombay, the activities of the Institute now encompass almost the whole of India. The rise in membership strength has been largely due to these increased activities of the Institute, and it is clear that we must keep up the momentum and build strongly on the foundations established already.

I would like to refer to the main items of work :

The Bombay branch was inaugurated in February 1973 by the immediate past President—Mr. Burt. The inauguration was followed by a technical seminar and four very useful technical papers were presented by specialists.

The Calcutta branch, soon after its formation, arranged a welding appreciation course for executives in July '73.

The Tiruchirapalli branch, which recently celebrated its second anniversary, continued to be very active during the year and organised a number of meetings and courses. Apart from refresher courses for supervisors and other courses on non-destructive testing, the branch recently organised a seminar on "Fabrication of Boilers and Pressure Vessels". I am very happy that this branch of the Institute has consistently shown keen and active interest since its inception.

An all-India Seminar on Welding Productivity was organised in Calcutta in July '73 and the Union Minister for Industrial Development, Science & Technology, Shri C. Subramanian was kind enough to inaugurate this Seminar. The Seminar was very well attended and 8 technical papers were presented on 3 aspects of the subject: the Man, Tool and Environment for welding.

Welding Technology

It is evident that sophisticated welding processes are gradually emerging in our industrial scene. We now have manufacturers in the country who are producing automatic and semi-automatic welding machines, both of the submerged arc and MIG processes. Fabrication work for various projects using austenitic and alloy steel materials are being tackled with greater confidence and skill. Electro-slag welding is also being used more extensively. We have, however, a long way to go and are still far behind in the more modern welding technology. Special welding processes like plasma-arc, laser beam, explosive welding, etc., are still to find effective usages in the country. The considerable interest that has been generated on these subjects will be evident from the various papers presented in the technical meetings and this is the best way of developing our knowledge and experience.

R & D

We are also still very much lagging in research and development. The need for a Welding Research Centre which your Institute has for a long time been advocating, is now likely to materialise in the 5th Plan period. This indication was given by Shri C. Subramanian during his inaugural address at the Seminar held in Calcutta. I hope that the Welding Research Centre, when formed, will concern itself more with applied science rather than pure science. Such a Centre should also collect research reports from other sources, both within the country and from abroad, digest them and disseminate to users for guidance and use.

This work could start with basic fundamentals on fatigue strength, brittle fracture, heat treatment, welding defects and their effect on safety both qualitatively and quantitatively, and finally, a proper understanding of the so called "factor of safety". With the prevailing shortages of steel we should not waste steel under the illusion of greater safety.

Technical Information

Your Institute has now become a basic forum for the accumulation and distribution of knowledge for the growth of welding technology in the country. Activities of this kind by way of meetings, seminars and discussions in the various parts of the country are gradually increasing under the auspices of your Institute. Some of the functions I mentioned in connection with the Welding Research Centre are being performed by your Institute and we have already taken in hand arrangements to distribute to Members, the documents received from the International Institute of Welding. The library of the Institute is also arranging these documents in a systematic manner for future reference.

The Indian Welding Journal which is now being issued four times a year, continues to maintain a very high standard and we are anxious to make this Journal into a bigger volume, so that there is a greater outflow of technical information. We are, however, handicapped by the limited resources available and we have of necessity to rely on support by way of advertisements from our Industrial Corporate Members.

Quality Aspects

There is rapidly growing consciousness regarding quality in welding and an insistence on inspection for high quality welds is becoming fairly common. The Institute has organised courses on non-destructive procedures on ultrasonic and gamma ray testing. Papers on the subjects have also been presented. Shortage of X-ray films, however, continues to be a bottleneck and import canalisation of these films through the State Trading Corporation has not helped matters, therefore, industry, continues to face problems in this regard. Whereas an insistence on inspection is a healthy sign, it should be appreciated that the quality of a weld and the duty it is to perform need to be considered together. Quality control techniques have to be developed to find out various defects, but acceptance standards are still to be defined and this often creates unhappy situations between the inspectors and the manufacturers. Your Institute could perhaps fill this

gap by drawing up suitable acceptance standards for quality welding in consultation with the International Institute of Welding.

Raw Material Shortages

Industry continues to face the problems of acute shortages of steel materials and welding consumables. This shortfall in indigenous steel production has so far been met from import, but with the prevailing world wide shortages, this is both, complex and difficult. The landed cost of imported steel is today of the order of Rs. 4,100 per tonne against the indigenous price of Rs. 1,500 per tonne. Even at this high price it is difficult to obtain foreign offers for import and the situation is likely to worsen. Shortage of steel materials has also a direct effect on production of welding wires which also continues to be in short supply. Government has also been made aware of the persisting shortage of argon gas and it is hoped that an early solution will be found. Apart from increased production, it would be useful if sale of imported cylinders could be permitted for use by local producers. This will help to partly solve the problem of shortage of cylinders. Shortage of acetylene is posing yet another problem. There is no doubt that in planning industrial expansion due care should also be taken to plan the availability of basic materials.

There is a chain reaction when basic materials such as steel and industrial gases are in short supply, first on the welding industry and, at the second stage, on all types of fabrication and, at the third stage, on end user industries, industrial products, etc.

I feel compelled today to draw a rather depressing outline of the industrial framework. We have before us limitless opportunities for growth and development, located as we are in a country with immense resources. But clearly, our progress has been halting at best and especially so over the past year. The unsatisfactory food situation, because of drought, brought with it famine as well as a massive shortage of power. More recently, the shortage of power, with its wide implications for industry has been largely due to non-availability of coal which, in turn, is partly due to transport difficulties and inadequate production.

The complexity of economic and industrial development can be seen very clearly. The balance that needs to be maintained between different sectors is so delicate that any upset and imbalance creates many

new problems. I have referred to the shortage of coal and the link with power ; this shortage of coal has also disrupted production of coke oven gas and contributed thereby to a low production of steel in the country in the current year. Food, power, coal, steel and so on are just a few instances in the very long chain of connected basic sectors and industrial areas which show up the vicious circle of constraints and limitations in which we have to operate. Looking at 1974, and keeping in view, the reasonably good harvest this year, I would sound an optimistic note in that the economy should go into an upswing. In terms of the very high targets of the Fifth Five Year Plan, we need to ensure a very considerable boost in industrial production and that, too, almost immediately. There is, however no short cut to scale these peaks of development and I would suggest that, even with our many constraints and problems, much can be achieved with full dedication to the tasks ahead, through hard work and greater production both in industry and agriculture. It is always extremely difficult to make everyone aware of and involved in a war for growth and development but this is exactly what we need, very similar to the successful military operations of recent years.

Before I conclude, I would like to record our appreciation of the work done for the Institute by the immediate past President, Mr. W. Burt. Mr. Burt had to resign as President consequent to his transfer from India early this month. During Mr. Burt's tenure as President, the Institute has acquired an all-India character and I hope that in the years to come the Institute will grow from strength to strength. The Council of your Institute is now a much bigger body than previously, comprising also representatives from the four branches. The Council and branch committees now have a large accumulation of eminent people in the field of welding and we are indeed grateful to all of them for sparing time and rendering valuable service. The growth of the Institute has been possible due to such efforts from the office bearers and active members.

I would like to, on your behalf, thank all the active participants of the Institute and look forward to increased efforts and wider activities in the coming year.

I am grateful to all of you for listening to me so patiently, in spite of all the many depressing factors I have listed. Let me wish you, in great sincerity, a very happy New Year.

Thank you.