

The Indian Institute of Welding Eighth Annual General Meeting

Address by the Chief Guest

M. SONDHI*

I deem it as a great privilege to have been invited to be present here this evening at the 8th Annual General Meeting of The Indian Institute of Welding. As Shri Shahaney and Dr. Dastur have already outlined, this Institute has been doing yeoman service in the field of welding in our country through its activities first as the Indian branch of the British Institute of Welding, since 1948, and later as a full-fledged Institute. I am sure that the Institute will continue to gather strength and render greater service to the industry.

2. India is a poor country but it cannot be really called a developing country in the sense in which this term is normally used. We have a wide industrial base with the necessary expertise and well established traditions spread over the last 100 years or more. Although welding is a complex technology, we already have the expertise and the knowledge to use this technology in its most sophisticated applications. I remember that when I was engaged on the setting up of the factory at Avadi near Madras, for the manufacture of Armoured Fighting Vehicles in 1961, our collaborators—M/S. Vickers Armstrong (Engineers), were most apprehensive about the competence of our welders to undertake the welding of armour plates which, as you probably know, requires meticulous preparation of welding

surfaces, their pre-heating and post heating of welded joints, which are subjected to very rigorous quality control including ballistic tests and which, therefore, require the use of welding manipulators to allow downhand welding all the time. Their appreciation was that we shall have to send at least 50 welders to their works in the U.K. for training purposes. But knowing the capabilities of our workers, which are second to none in the world as far as the basic skills are concerned, as a compromise solution, it was agreed that we shall, to start with, send only two welders. These two welders performed so well that it became not only quite unnecessary to send any more for training but we had also to accede to Vickers' request that they be allowed to stay at their works in the U.K. to work for them till our production actually commenced at Avadi.

3. My experience was the same when we undertook the manufacture of Bailey Bridges for the Defence ; these required complicated welding of high tensile steel and were subjected to dynamic loading and fluctuating stresses. Similarly welding at Bokaro, which included technological structures of the blast furnace and steel melting shops, complicated multiple bay portal frames in mill buildings, technological pipeline of diameters upto 3.4 m. and a large number of crane girders and trusses with spans as large as 70 m. did not really pose a very serious problem. Electroslag welding was also used extensively in the welding of alloy steel

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shell plates of blast furnaces and LD convertors but this technique was also mastered without undue difficulty.

4. All this, however, does not mean that our men do not require continuous training in this highly specialised and complex technology; in fact the need for continuous training can hardly be over emphasized.

5. Presently, the industry trains its own men for a specific need and for a specific end-product. However, in my opinion, if we have to bridge the gap, it really requires a systems approach. Viewing it in this context, we see the need for developing expertise not only in welding and welding technology but also for the supporting disciplines such as heat treatment, quality control and metallurgical testing. These and other supporting disciplines need to be brought to a level of competence which would enable a strong team of trained men to achieve the desired forward thrust in this field. Thus, the men have to be trained, preparatory to a need, rather than the need causing the men to be trained up. For this purpose, a large body of men must constantly be exposed to the welding and supporting technologies so as to bring out from them inventive and innovative ideas. These men have to be trained both within the industry, as well as in educational institutions. I hope that due consideration will be given to these aspects in formulating our plans of action and that a sharp and clear focus will be kept on our manpower needs while setting up our institutes and training centres.

6. Linked up with this matter is the question of identification of gaps that exist in technology, in equipment and the consumables. This identification of gaps has been done by the NCST panel on "Joining Machinery". The intention now is that with the help of The Indian Institute of Welding, supplemented by the efforts of the important equipment manufacturing units, we should bridge these gaps in equipment and technology within a given time frame. We have also to expose the industry to the newer equipments and technology and attempt to develop them as far as possible indigenously with a view to meet the special problems under Indian conditions. For this, as you are already aware, it has been decided to set up a Central Welding Research Institute at Trichy. This would be the "mother" Institute with some regional institutes in the different parts of the country. To start with, the thinking is to set up a regional institute at Vizag at Bharat Heavy Plates & Vessels Ltd. which is a major user of welding technology for modern fabrication work.

7. I am quite aware of your difficulties, *inter-alia*, in regard to adequate availability of welding quality steel structures. I am, however, hopeful that with the relenting of pressure on the available supplies of steel, the steel plants, in their own interest as well as in the interest of the industry, will be able to pay greater attention to the production of these steels. A qualitative improvement in steel production, within the existing capacity and capability in the plants can go a long way in bringing about a corresponding improvement in structures and equipment and a considerable saving in steel.

8. This, however, also requires a sizeable input of efforts by way of research and development in this and other industrial sectors. While I am not in favour of a closed door policy with regard to import of foreign technology, particularly where obsolescence means higher cost of production and outpricing of our products in foreign markets, I am equally keen that our own efforts should begin to match the technological challenges which we are facing. I have briefly touched upon the setting up of welding institutes, to start with at Tiruchi and Vishakhapatnam but talking in general terms on R&D we must step up our expenditure on this work, produce necessary equipment and above all select, train and make full use of our men to whom we entrust the R&D tasks. There has to be a fuller interplay between these and the production personnel with pressure from top management to translate the work done in R&D organisations into actual shop production technology. Scepticism about our own abilities in this field has to give place to a positive and helpful response. We, on our part, will continue to make use of the package of compulsion, persuasion and incentives to develop indigenous R&D effort because where foreign collaborations have had a run of several years, there has to be a cut off point. We will continue to be highly selective in allowing fresh collaborations. We shall continue to exhort at least the units with larger turnover to give greater attention to R&D efforts. It is also our intention that our public sector units, which have attained commanding positions in respect of some sectors of industry, must rapidly strengthen their design and development organisations and intensify their R&D work in those fields. I must confess that the performance of the Public Sector in R&D has been quite dismal so far.

9. Perhaps at this stage, it would be appropriate for me to touch upon the subject of recession to which your president has also made a reference. As we all know, we have been passing through a period of hyper-inflation and it is now being feared that we are perhaps,

at the tip of a recession. In my opinion, it is very necessary at the outset to comprehend the connotation of these words in the Indian context. In our country, our economy has been so delicately balanced that we seem to be swinging between a situation of surfeit and shortages for years. When there is less of goods and more of money, we are in an inflationary situation and when the prices tend to fall, we immediately conclude that we are in a recessionary situation. What we must understand is that demand, to be effective, is a demand at a price (HMS case). Yet I would concede that in certain sectors of the engineering industry, such as the wagon industry, lack of demand by the Railways is posing a problem but I have some good news for the wagon manufacturing units; we expect to find a reasonable solution to the price question in respect of the current orders with the Railways; a committee has been formed for this purpose of which I am also a member. There are problems in the Machine Tool and the Textile Machinery Industry but these are basically due to the fact that the resources for the bill rediscounting schemes are inadequate. We are looking into it.

10. Would I, therefore, be far wrong to think that after riding the crest of soaring prices, which brought disproportionate profits, this apprehension of the so called recession may lead us to believe that certain sectors of the industry would rather cut on production than reduce the prices? Fortunately, this is not true of the engineering industry but I cannot say the same of some of the other sectors of the economy.

11. This does not, however, mean that the present state of the economy should not be a matter of grave concern to us. The growth of industrial production in 1973-74 was zero percent; it is not likely to be more than 3 to 4% this year. However, there is an important aspect which gives me some measure of confidence to meet any situation which may arise in the future even if there is a serious recession in some countries in Europe, U.S.A. and Japan.

12. Unlike in those countries which would require a massive dose of fresh investment to set up additional capacity for a continued economic growth, what gives us the necessary resilience is the large infrastructure and capacities which we have built up in the past but where the utilisation is well below the normally accepted levels. For instance, our generation of electricity per KW installed capacity is only 4000 units as against 7000 being achieved in some of the other countries. Even if we could step up this generation to 6000 units per KW installed capacity we would add as much as

30 million additional units worth about Rs. 300/- crores. Our transmission losses are disproportionately high and even a saving of 5% would mean a tremendous gain to the country. An additional million tonnes of steel, well within our installed capacity would add about 150 crores, and an additional 10 million tonne of coal within our capability would give added Rs. 50 crores. With better availability of power and other inputs, an addition of 1/2 million tonnes of fertilisers worth about Rs. 125 crores and about Rs. 200 crores worth of additional heavy engineering equipment from existing capacity would not be an ambitious projection. These additional outputs from infrastructure facilities, such as above, adding to about Rs. 800 crores can have a tremendous multiplier effect resulting in at least a five fold increase in our production of a wide spectrum of goods as well as improvement in our service facilities bringing in the advantage of better availability of product, at cheaper prices to our people. What is, therefore, important is to put our shoulders to the task and work unitedly and work hard to put existing capacity to better utilisation and push up production. This poses both a technological challenge and a managerial challenge.

13. I need not dwell much on the question of technological challenge that higher utilisation of capacity imposes; you are all familiar with this in the industry but merely by way of illustration I would cite the example of the output that we get from our LD convertors vis-a-vis the normal international standards.

14. As far as the managerial challenge is concerned, it must embrace the management of human resources which, above all, calls for leadership of a high order and a systematic programme for management development. It has also to embrace management of materials, finance, maintenance and operation if full returns from the investments already made are to be achieved. In the industry, material inventory constitutes a very high percentage of the working capital. I believe that the capital blocked in inventories can be as high as Rs. 10,000 crores. The importance of proper materials management & inventory control in the present context of credit squeeze & "dear money" is, therefore, obvious.

15. Despite odds and difficulties, the heavy industry units in the public sector have been showing a steady and significant increase in production. From Rs. 281 crores in 1972-73, their production increased to Rs. 409 crores or by 46% in 1972-73, their production increased to Rs. 409 crores or by 46% in 1973-74. This year we have fixed a 37% higher target at about Rs. 566 crores.

During the first eight months i.e. April to November this year, we have achieved a production of Rs. 346 crores which is 89% of the target and this is 43% higher than the production attained during the corresponding period last year. During 1972-73 these units incurred a loss of Rs. 9 crores but during the last year they showed a profit of Rs. 13 crores i.e. there was a turn around of Rs. 22 crores. This year we expect a higher profit of Rs. 35 crores. In this, Jessops, under the dynamic leadership of your President, Shri Shahaney, have played a very important role; their production this year is expected to be Rs. 34 crores against a figure of Rs. 24 crores last year. A significant increase in production has also been achieved in the private sector with regard to machine tools, textile machinery, commercial vehicles, scooters, mopeds and three wheelers and in the case of many other items of industrial machinery and capital goods. Similarly what proper management of human resources can do when dynamic leadership is provided is now well known to you considering what has happened in the DVC during the last 3 or 4 months.

16. During the last year and also recently a number of measures have been taken to facilitate production or save on imports. These include the freedom to diversify production in the industrial machinery, machine tools and heavy electrical industries. Permission has also been given for the import of design and documentation upto a value of Rs. 5 lakhs in a year for manufacturing any equipment which otherwise had to be imported. Noting that price controls in the context of rapidly escalating prices have lost their relevance and were hurting production without being of any benefit to the consumer, these controls have been in some cases replaced by a system of parametric surveillance leading to self discipline in prices by the industry.

17. You would have also noticed that during the last few weeks a definite tilt has been given to the Government machinery towards developmental or promotional efforts rather than mere regulatory function. A review of the Industrial (Development and Regulation) Act has, therefore, been taken up. Similarly in order to expedite policy decisions, an Industrial Policy Group consisting of four Secretaries to the Union Govt. has been constituted to advise on matters like development of industries, production monitoring, import substitution, licensing restrictions, export production, investment plans in private and public sectors, pricing policies, policy on foreign collaboration and policy on import of capital goods. This Group will also examine the area of intersectoral complementarities

between various sectors of the industries. A list of feeder industries, which supply essential materials and components to the core industries is also under formulation, the intention being that these feeder industries, which would include the welding industry, are sustained at optimum production levels to maintain continuous flow of materials. It will also be necessary to plan coordination with the financial institutions so as to ensure free flow of funds to selected and important industries. Credit planning in an inflationary situation is essential so as to relate it to the concept of growth of selected industries nodal to the economy. High level committees have been constituted to go into these questions as well as to examine streamlining the procedures for allocation of raw materials. We believe that at this moment it is necessary to consolidate the gains from the capacity created in the past and to put it to optimum utilisation as I have mentioned earlier.

18. In the present economic situation, with a very large expenditure of foreign exchange on our imports particularly on oil & oil products a heavy responsibility rests on us for boosting our exports of non-traditional items. There is a very attractive market for the export of steel based engineering goods including structures. Fortunately the steel supply position in respect of many of these industries has also considerably eased and even export of surplus primary steel is being thought of. It would be logical to export engineering goods based on such surplus steel whatever be the value added and we have, therefore, taken up the matter with the concerned authorities for a relaxation of the 25% value added stipulation. I am also glad to inform you that only yesterday a decision has been taken to do away with the allocation formula for pig iron which permitted allocation only to the extent of the best figure of past consumption during the last three years. Industrial units would now be free to ask for pig iron corresponding to their full capacity; Corresponding requirements of hard coke would also be met. We should, therefore, take this opportunity to step up our export of engineering goods to the maximum, particularly in lieu of unprocessed prime steel or pig iron. It would be of interest to you if I mention that the Committee which was set up under my Chairmanship to go into the problems of export of engineering goods submitted its report about a month ago. This Committee has made some far reaching recommendations and their main thrust is to allow a greater freedom to the production apparatus in the country, set up at huge cost of our resources, from avoidable constraints and bottlenecks in order to increase production and generate surpluses for exports. A fall out of the measures recommended will be that some of the formalities and delays inherent

in the present procedures could be dispensed with so that we could achieve a higher production in a comparatively shorter time with marginal additional investments and impart to the industry the necessary sensitivity and flexibility to adequately react to our domestic demands as well as to the fast changing economic scene abroad. It is also envisaged that the measures recommended would help us to reduce our over-burden of non-productive administrative expenditure.

19. Specific measures necessary for the export of equipment, joint ventures, consultancy services and civil construction work especially in the oil rich countries have received special attention of the Committee. Noting that, despite our best efforts, long delays in the disbursement of duty drawback and cash assistance continue, it has been recommended to entrust this function to the nationalised banks who should have a more appropriate culture and orientation to deal with such matters ensuring greater promptness.

20. This Committee has expressed confidence that if the suggested measures are implemented without undue delay, engineering exports, can be stepped up

from the level of about Rs. 150 crores in 1973-74 to about Rs. 600 crores in 1978-79, more or less, at constant prices mainly through better utilisation of the existing capacity and with marginal investments. The feeling, however, at the meeting of the Board of Trade held on the 11th of this month was that a figure of Rs. 1000 crores by way of exports of engineering goods could be achieved within the next 3 or 4 years provided all the impediments, which came in the way, were quickly removed.

21. Gentlemen, you would forgive me for having taken a lot more of your time than what I had originally intended. I have also touched on the problems of industrial growth and production since these are vital in the present context from the point of view of our very survival although perhaps not strictly germane to the deliberations of this evening ; for this I seek your indulgence. With these few words may I thank you once again and wish all success to the Institute in the years to come.

Thank you.