

# INTERNATIONAL WELDING CONFERENCE - 1999

15th - 17th February, 1999  
at New Delhi

Summing up of proceedings on 17th February, 1999

by  
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Fellow Delegates,

At the very outset I wish to compliment the Technical Subcommittee, headed by Mr. Samidas and assisted by Dr. Suresh, for the massive collection followed by scrutiny of 119 technical papers, with 98 selected for presentation in technical sessions and 21 selected for poster session. It is a great effort, the 98 papers printed together with the advertisements and offered in two volumes, weighing almost 4 kg. The entire effort of compiling & printing to a high quality standard, with due attention given to every relevant detail, is indeed praiseworthy. Mr. Samidas and his co-members deserve praise. To the printer at Trichy we say "well done". As far as we delegates are concerned, we need not deny ourselves some credit for bravely & patiently carrying the total kit weighing almost 5 kg. during the three days.

The booklet of programme schedule is just the right size - pocket size - containing the sessionwise details. I am glad that this format is now being adopted for every national seminar.

We were fortunate to have two eminent engineers in our midst to deliver the keynote address and the inaugural address. This selection was very apt because both Mr. Mittal and Mr. Prasad, through their respective giant organisations, are closely associated with and have contributed to the progress of the welding industry. Their comments and advice are of great relevance to our Institute, more so at a time when the part of our Institute has to be enlarged for playing a more active and dominant role in the overall rapid advancement in the field of welding science and technology.

Keith Hartley Memorial Lecture delivered by Mr. Gopinath, was remarkable for both the scope of coverage and the manner of presentation of the text and visuals. Mr. Gopinath's lecture served to provide us wealth of information on product, materials, processes and testing methods, and how the whole unit of BHEL at Tiruchy has evolved during the last 35 years so as to occupy a position of eminence and justifiable pride in the industrial status of our country.

Prof. Dutta delivered Sir L. P. Misra Memorial Lecture on a topic of great national importance - HRD in welding technology. Prof. Dutta highlighted the deficiencies and strengths of the technical education system, and the need to step up the output of qualified technical personnel, filling the gap in continuing education, and the role which IIW can play effectively for augmenting the output of trained personnel. His indepth knowledge and his vast experience as a teacher and as a researcher, will be an asset for our Institute in the years to come, when the Institute will be called upon to become increasingly active in the field of welding education and training. Thus both Mr. Gopinath and Prof. Dutta have enlightened us with a great deal of information and given us food for thought. We are thankful to both of them. For our Institute to be more effective, let me reiterate what I have been advocating for the last 10 years viz., employment of technical executive on whole time basis, at mutually acceptable emoluments, and making him responsible to the President, and accountable to

the Central Council. The sooner we do it, the faster will be the progress of our Institute.

Twenty-four sessions of 4 papers each, covering the various areas of the vast field of welding - processes, consumables, fabrication, metallurgy, welding systems, simulation and modelling, quality assurance, reclamation & repair, together with two separate sessions on non-ferrous & dissimilar materials and one on general topics of a wide nature. What need to be highlighted are the session of 4 papers on residual stresses and distortion, and three sessions of 12 papers on structural integrity analysis, out of which 7 were from Indian authors, an indication that we have now moved into these critical aspects of materials joining. We have reason to feel proud of the excellent work being done in WRI, IGCAR and IIT's. Let us give all the authors a round of applause.

A striking feature of this conference, as also the seminars of the last five years, is that numerous young technicians and researchers have, at a relatively young age, acquired so much knowledge. Equally important is the confidence they have gained for not only presenting papers, but also for in-depth discussions with a sharpness of mind which has been witnessed to be believed. Several sessions have benefitted through the presentation of such young, some of them budding, authors. We all are fortunate to see them display their

talent. Let me say that this in itself augurs well for the future of welding technology in India. This in itself is one single most significant outcome of this conference, i.e. encouragement to young talent.

### Poster session

I have been a strong advocate of poster sessions for three reasons :

- ▼ It leaves time for other technical papers in larger number to be included in the regular sessions;
- ▼ Person to person discussion with the author available on the spot, with no Chairman present to curb your enthusiasm and restrict your questions - a common problem which, unfortunately, is becoming a regular feature of technical sessions, with Chairman, author and participants leaving the hall with a certain degree of bitterness; and this certainly is not the objective of a seminar; and
- ▼ Authors themselves being put to test for preparing in poster format, the essence of the paper in limited space, i.e. maximum effect with minimum display. Thereby, authors are expected to show a degree of ingenuity.

The Indian Institute of Metals adopted several years ago, the poster session as a regular feature of its annual technical conference, to great advantage and with highly favourable effect.

### Number Vs. Quality

That brings me to a very important aspect of number vs. quality, enthusiasm vs. justice to authors & delegates, vis-a-vis poster session. Perhaps, another 20 papers could have been shifted to the poster session, so as to give more time to numerous highly interesting and topical papers, many of them by authors from abroad who have come all the way to contribute to the success of this conference. It is my view that we all have to rise above the number game, and have to consider the entire conference in its proper perspective. Without going into any further discussion, let me put forward the suggestion for improvement for achieving the two-fold objective of technical standard and delegate + author satisfaction. Introduce keynote or lead papers of 45-50 min., may be 5 or 6, of outstanding quality and very wide coverage in important aspects. Examples are :

1. A vision of IIW's role in the various world regions and developing countries, by Chris Smallbone;
2. Welding research developments in Australia;
3. Application of modern cutting & welding processes;
4. Welding & cutting in a sustainable world;
5. Status on the development of weldable high strength steels in Germany.

Thereby, the authors from overseas are able to share their knowledge in special areas, and the Indian delegates derive optimum benefit from the presentation and then adequate discussion. This may also be extended to outstanding papers from Indian authors. In short, such papers should be so selected and placed in the programme that they do not suffer from unrealistic time frame. Evaluation criteria have to be tightened up and then enforced, without fear or favour, in the larger interests of the delegates and the Institute. Overseas delegates should go back with satisfaction and with eagerness to come again. As things stand, all papers are treated at par, irrespective of the technical content, standard and utility to the delegates. What I am stating here is all the more valid, because the technical volumes of papers are given to delegates only on the date of the Seminar. In other countries, delegates come prepared after reading the papers. As it is not easy to implement such a procedure in our country, for several reasons such as time factor & cost, we have to adopt appropriate measures to adjust the number of papers to meet the requirements of quality standard and time frame. Hence the importance of selecting the right number of papers for a 2½ day seminar by setting a high standard. **We have to keep in mind the fact that the general standard among Indian Welding fraternity has gone up by leaps & bounds. Let us accept this fact and be fair to the delegates.** Many pa-

pers were premature and were not based on adequate work; there was undue haste. I am sorry if I have inadvertently hurt any one's feelings. My sincere desire is that we all aim at progressively higher standard and not compromise on Quality.

### **IIW & CII**

A useful lesson of lasting value to IIW & CII, is the need for continuing the joint effort in a systematic manner with a long term programme for the benefit of the welding industry, as an important part of the entire engineering industry. The first attempt was made in 1978 by the then President of IIW, Mr. Pasricha, who at that time was also the Chairman of the WCED of the CII. Thus this second effort is after a lapse of 20 years, which is quite surprising, because the Chairman of WCED over the years is usually a member of our family, and roles of CII & IIW are complimentary. Moreover, CII has steadily gained a strong position, nationally & internationally, in the past 15 years, more so after the liberalisation of economy in 1991-92. It is in the fitness of things that CII & IIW co-operate - CII as the spokesman of the industry, representing Indian Industries at Govt. levels and projecting the image to the outside world in a planned & effective manner, and IIW representing the welding professionals, and wanting to play an active role in the academic field as also in training the workforce required by Industry. Moreover, CII

has funds and also has the mechanism of collecting funds to finance on a long term basis. Let us join hands for mutual benefit, so that IIW's efforts may receive an impetus.

At the beginning of 1998 I had worked out and given in my lecture, the processwise figures of weld metal requirement in relation to the projected steel consumption. It will be useful to have a look at those figures. Noteworthy is the drop from 80-85% to 72% in respect of MMA, and as expected, the corresponding rise in the share of GMAW, particularly CO<sub>2</sub> solid wire process. The figures projected by the CII also indicate that in 2000-2001, the share of MMA will be 70% and MIG/MAG welding will be 20%. This can be looked upon as a good trend, considering that the figure was as high as 92-95% in early 80's, about 85% in 1989-90, and 80-82% in 1997-98. We all have been discussing at every seminar the need to reduce it further, keeping in mind the level of 35-30% in developed countries. While we may be somewhat satisfied with 70%, we have to ask ourselves why it cannot be reduced further. In my view, we have to examine the financial constraints.

- ▼ Investment in material handling equipment and changes in shopfloor layout;
- ▼ Cost of finance at 16-18% interest, is too high.

Another malady, or shall I say disease, is the credit system which has

gradually eroded the effective working capital, thereby forcing every industry, large & small, to approach their bankers for increase in working capital. The banker, used as he is even today to the era of controls, i.e. pre 1991-92 era, puts forward ratios/figures as per the norms, tells the industry-client that the limit has already been exceeded and that credit-control has to be tightened to recover the funds which remain blocked with the industry's customers. Thus we go round in circles, with not enough capital being available for investment in high efficiency welding processes and the related material handling equipment. This is where CII has to step in and take up the issue at the highest level, i.e. bank interest rate to be reduced and credit system to be made more manufacturer/supplier friendly. This is not easy because the state electricity boards are perhaps the starting point of industry's funds blockade. Thus there is no short cut. But then I feel there is some scope for the large industries such as BHEL, who are interested in such use by their ancillaries. Perhaps, they may invest in such equipment and give it on lease to their ancillaries. In this manner, both sides will benefit and, furthermore, the two together will be helping to increase the use of high efficiency processes. This is a thought for your consideration.

## SOJOM — 2000

In the evening of the 14th, when I was collecting the delegate kit of seminar material, including the precious lunch coupons, I was given a copy of the brochure for the next seminar SOJOM-2000. It was very attractive and it aroused my enthusiasm, but I resisted the temptation of reading it for two reasons on which I am very clear :

▼ I am aware like you all fellow-delegates, and appreciate the tremendous efforts of 30 persons or more under the able leadership & guidance of the President Mr. Burman and the Vice Presidents Babu, Dhanuka and Chaudhuri, as also Mr. Samidas and his team, during the last 12 months to organise this great event. Just like a good scotch whisky, the spirit of IWC'99 has been processed, allowed to mature and then blended and bottled through successive efficiently controlled operations of 12 months, and made ready for offering to the delegates for consumption from 15th & 17th. On the other hand, the spirit of SOJOM-2000 is still raw and hence I did not want to dilute the smooth and matured spirit of IWC'99. To be honest with you, I have not as yet read the brochure, for the simple reason that even at this very moment in the valedictory session, I am still enjoying the spirit of IWC'99.

▼ The other reason was equally important to my mind. The spirit of SOJOM-2000 may make me forget all other spirits, and I shall start looking forward to SOJOM-2000, knowing fully well how proficient WRI, BHEL & Tiruchy branch are in organising such technical events on a grand scale, combining technical content of high standard with cultural show of classical Indian dances and/or music. I have all along been impressed by this blend of technical spirit and cultural spirit which Tiruchy offers to every delegate, all this capped by hospitality which makes one feel that the seminar should be extended by a day or two. So we all have reason to look forward to this next great event SOJOM-2000. In fact this is how it ought to be so that before leaving this hall and parting, we all can say let us now meet next positively at Tiruchy in SOJOM-2000, if not earlier.

A number of overseas delegates have travelled all the way to give us benefit of their knowledge & experience. A round of applause for them. Our worthy President Mr. Burman has led the entire team from concept to completion of IWC'99. Equally important is the role played by Mr. A. K. Mukherjee, the live-wire Secretary. Please give them a big hand.

Compliments to Mr. Gehani and his team for the splendid arrangements

at this venue, this main hall and the other two halls for the sessions, the lighting, projection, + light and bottled water for the Chairman of each session. Arrangements for tea/coffee & lunches, and quality & selection of dishes. I must say that all this was done thoughtfully and with great care for every detail.

**Fellow Delegates :**

We all have enjoyed the feast of technical papers and discussions, together with food. The entire conference has been organised and the proceedings conducted with so much care & hospitality for the delegates. The organising committee members

and a host of volunteers have toiled for days, weeks & months, especially in the past few days. They have made it a memorable conference. May I suggest that we all show our appreciation of their tremendous efforts. Let us show it with a long standing ovation.

Thank you very much.



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