

REPORT ON THE NATIONAL WELDING SEMINAR – 2001

The Indian Institute of Welding, Chennai Branch organized the National Welding Seminar-2001 (NWS-2001) in the industrial metropolis of Chennai at the GRT Convention Centre, T. Nagar, between January 07 and 09, 2002. This National Welding Seminar was the first one of the new millennium.

The NWS was attended by 126 delegates from a wide cross section of welding fraternity and included representatives from welding electrode manufacturers, equipment manufacturers, fabricators, research institutions, educational institutions etc. NWS-2001 was inaugurated in a colourful inaugural ceremony in the Marie Gold Hall of the GRT Convention Centre by Dr. Baldev Raj, Director, Materials, Chemical and Re-processing Groups, Indira Gandhi Center for Atomic Research, Kalpakkam - 603 102, and President-Elect, Indian Institute of Welding. Shri S. K. Burman, Past-President, Indian Institute of Welding, was the Guest of Honour at the function. The inaugural ceremony was anchored by Shri Hasan Shaikh, Secretary, Local Organising Committee, NWS2001. The NWS got off to a start with a rendering of the invocation song by four little girls of the Kendriya Vidyalaya, Kalpakkam. The devotion with which the children rendered this song forced the Almighty above to

show his choicest blessings for the success of NWS, which had been plagued with an unprecedented uncertainty till it really got off. The invocation was followed by a very hearty welcome to the participants to the NWS and to the ever-green City of Chennai by Shri R. Ravi, Chairman, Local Organizing Committee, in his welcome address. The NWS was formally inaugurated by lighting of the "Kuthuvilakku" (lamp) by Dr. Baldev Raj. Traditionally, the lighting of the lamp signifies the burning of evil and awakening of the inner soul. This was well achieved by Dr. Baldev Raj in his inaugural address, which had the stamp of a technocrat, a leader and a visionary. He awakened the welding community by setting out in clear terms the challenges faced by the welding industry vis-a-vis productivity,

Cost and quality. He stressed on the needs to develop processes to join modern materials, such as ceramics and intermetallics, to develop methods to model these and existing techniques so as to develop decision support systems and neural networks for welding, and on the need to adopt the six sigma technique for quality management. Shri S. K. Burman, the Guest of Honour, released the Souvenir and Proceedings of the National Welding Seminar and presented the first copy of each

to Dr. Baldev Raj. In his address, after releasing the Souvenir, Shri Burman recalled his long association with the Indian Institute of Welding and its mighty contributions to the development of welding science, technology and education in our country. He expressed the full hope that the same would continue in right earnest. He stressed the need for unity in the Indian welding fraternity. The inaugural function came to a close with a Vote of Thanks by Shri Hasan Shaikh.

The technical sessions got off to a flying start with a thought provoking plenary lecture by Professor K. Prasad Rao, Head, Department of Metallurgical Engineering, Indian Institute of Technology, Chennai. In his lecture, Prof. Prasad Rao dwelt on the latest in welding techniques vis-a-vis welding of modern materials such as friction stir welding, micro-resistance welding, micro-plasma arc welding, ultrasonic welding, micro joining for electronics, microwave welding, wire bonding. Prof. Prasad Rao dwelt at length on application of microwave welding to join ceramics, plastics, hermetic wafer, biomaterials, nanomaterials etc. He also discussed on computer applications in welding vis-a-vis decision support system, predictions using simulation and modeling, real-time process controlling and robotics.

The technical deliberations spanned over two days after lunch on 07.01.02 till lunch on 09.02.02. During this period, the papers were presented in twelve sessions of oral presentations and one session of poster presentation. In all, 46 papers, 39 in oral sessions and 7 in poster sessions were presented during the NWS. Parallel sessions were conducted to accommodate such large numbers of papers. For the first time in NWS, a separate session was allotted for the undisturbed conduct of poster sessions. The broad categories in which the papers were presented were : Welding Metallurgy and Weldability (2 sessions), Welding Processes (2 sessions), Residual Stresses and Distortion, Design and Fabrication of Welds, Properties of Weldments (2 sessions), Non-Destructive Evaluation and Quality Assurance, Modelling and Simulation (2 sessions), Advanced Welding Processes. The delegates very actively participated in the deliberations and discussions on the various high quality papers at the seminar. Leading personalities in the field of welding chaired the technical sessions and conducted the proceedings in a very professional way. The proceedings of the NWS were brought out in the form of CDs. These CDs are available on sale.

The Seminar Banquet was held on the night of 07.01.02, at Hotel GRT Grand Days. Spirits of all types and of all delegates reached dizzy heights with accompaniment of

music prior to the dinner on what turned out to be a memorable evening.

This year, the National Welding Seminar received tremendous support from various companies who despite all odds of one postponement sent their delegates to the NWS, thus ensuring its success. In spite of the recession in Indian industry, about 25 companies supported NWS by way of advertisement in the Souvenir. A very special mention should be made of the first in the history of NWS. Government agencies such as Board of Research in Nuclear Sciences, Mumbai, Department of Science and Technology, New Delhi, Defence Research and Development Organisation, New Delhi, and Council of Scientific and Industrial research, New Delhi, supported the NWS by sanctioning Grant-in-Aid. A very special mention should be made of RMEC Projects, Pune, who cosponsored the Seminar Banquet with the Organising Committee on 07.01 .02.

Another very special feature of this NWS was the coverage given by Raj TV network in its industrial news bulletin. Before the NWS, it carried a special programme on the Indian Institute of Welding. This programme featured a briefing by Shri R. Ravi, Chairman, IIW, Chennai Branch, on the activities of IIW, particularly the AMIIW Examination. Raj TV covered the inaugural session of the NWS for its news bulletin.

The NWS came to a close on the afternoon of 09.01.02 with a very lively panel discussion followed by a valedictory function. Professor V. Nagarajan, Director (Retd.), Materials Group, Vikram Sarabhai Space Centre, Thumba, and presently Visiting Professor at the Department of Metallurgical Engineering, Indian Institute of Technology, Chennai, chaired the Panel Discussion and was also the Chief Guest at the Valedictory Function. Besides Professor Nagarajan, the panel comprised of leaders in welding industry viz. Dr. Shaju. K. Albert of IGCAR, Dr. S. Manoharan from WRI, Mr. J. K. Sur from Surarc, Mr. C. C. Girothra from Weld Specialities, Prof. Sunil Pandey from IIT, Delhi. The main thrust of the one hour-long panel discussion was on health and safety in welding practices. Controlling of hydrogen in welds, welding education and training, quality assurance were other points that were discussed.

Shri R. Ravi, Chairman of the Local Organising Committee, anchored the valedictory function. The grand personality of the Indian welding industry, Mr. D. S. Honavar, summed up the National Welding Seminar in a speech that reflected the man's genius, experience and vision. The full text of his summing-up speech has been submitted separately to the Editor of Indian Welding Journal for publication so that everyone is benefited. In his summing up, Mr. Honavar called for unity in the weld-

ing community for the healthy growth of IIW. He lauded the very high standard of the technical papers at the NWS and also the contributions of national laboratories such as IGCAR, WRI, DMRL for the high quality research work carried out by them. He called upon those assembled to formulate a followup action on the problems posed during this NWS and implement it in a timebound fashion so that the welding fraternity could reap the fruits of this NWS. Mr. Honavar identified the challenges before the welding fraternity in the 21st century viz. quality standard, rising cost vs. competition, productivity vs. investment required, HRD vs. VRS. While covering the health aspects in welding, he appealed to those assembled to make health and safety practices a part of suggestion schemes for employee motivation, in their companies. Lastly, he congratulated the organizing committee for having successfully organized this NWS and having taken care of every minute detail in making the delegates comfortable.

In his valedictory address, Prof. Nagarajan complimented Mr. Honavar for a very lucid summing up of the three days of NWS. He stressed the importance of welding in our day-to-day life as well as hi-tech sectors such as aerospace and nuclear industries. He went down the philosophical lane by comparing the IIW motto "Dwe Ekam" to the unity of two hearts and appealed for ever lasting unity in IIW. Prof. Nagarajan announced the winners of the D&H Secheron Award and the Weldman Award for the best oral and poster presentations at the NWS-2001. Shri M. Vasudevan, A. K. Bhaduri, Baldev Raj of IGCAR, Kalpakkam, and K. Prasad Rao of IIT, Chennai, won the D&H Secheron Award for their paper "Modelling and Prediction of FN in Stainless Steel Welds Using Bayesian Neural Network Analysis and Comparison with Other FN Prediction Methods". The Weldman Award was won by S/Shri G. Madhusudhan Reddy, Amol Gokhale of Defence Metallurgical Research Laboratory, Hyderabad, and K. Prasad Rao of IIT, Chennai, for their paper "Effect of Pulsed Current and Arc Oscillation

on the Microstructure, Pitting Corrosion Behaviour and Tensile Properties of 1441 Grade Al-Li Alloys Welds".

Shri Hasan Shaikh, Secretary, Organising Committee, proposed the Vote of Thanks. The curtains were drawn on National Welding Seminar-2001 by singing of the National Anthem by the delegates.

The Local Organising Committee (LOC) wishes to place on record its thanks to Dr. Baldev Raj, Shri S. K. Burman and Professor V. Nagarajan for their unstinted support in making this NWS a grand success. It also wishes to thank all the companies for sending their delegates despite all odds and ensuring the success of NWS. The LOC thanks the advertisers and the government agencies for their financial support. Thanks are also due to GRT Grand Days and GRT Convention Centre for the excellent arrangements for the conduct of the NWS.

HASAN SHAIKH
Secretary, NWS-2001