



Indian Nuclear Society

Report of Activities

(April 1, 2020 to June 30, 2020)

INS newsletter

In March 2020, immediately after declaration of results of elections for INS Executive Committee (2020 2022) the country was under the grip of lockdown YouTube COVID-19 pandemic. As a result the newly elected EC could take over only on October 5 2020. Meanwhile a decision was taken within the newly elected EC to start publication of an e-News Letter so as to establish at least a one way communication with the esteemed members of INS. An ad-hoc editorial committee was set up by the President elect Shri S K Mehta under the leadership of Dr V K Manchanda, Vice-President-elect. The other members of the editorial team were Dr. M. R. Iyer, Shri R. Mago, Shri S. P. Dharne, Dr. Indira Priyadarsini, Dr. A. Rama Rao, Dr. M. G. R. Rajan and Shri S. K. Malhotra. The inaugural issue was brought out on National Technology Day that is May 11, 2020. Since then the newsletter is being regularly published on a quarterly basis and nine issues have already been published and while writing this report, the tenth (August 2022) issue is almost ready for publication. All the issues are available on the web site of INS viz. www.ins-india.org.

GST Registration

GST registration (a statutory obligation) of INS has been done in July, 2021 and since then, GST returns are being filed on a monthly basis

Monthly Statements of Accounts

The present EC has started the practice of preparing monthly statement of accounts, circulating to the EC members and approving the same in the EC meetings.

Income Tax Arrears

Income Tax Arrears on account of TDS (pertaining to previous 5 years), amounting to Rs. 600, 000 (Rupees six Lakh only) including penalty were cleared.

Board of Trustees

As per the decision of EC, the four names recommended by EC in its 246th meeting for the

Board of Trustees were referred to General Body (3000 plus members through the INS forum) for their approval. After receiving their approval through e-mail the New Board of Trustees was formed which consists of Shri S K Mehta, President, INS, Shri K N Vyas, Chairman, AEC, Dr. Anil Kakodkar, Former Chairman, AEC and Shri Anil Parab, Senior Vice President, Larsen & Toubro Ltd.

Recovery of Workshop participation fees

Dues receivable from the sponsors of participants of various INS Workshops held during 2016 – 2019, amounting to Rs 310, 000 (Rupees Three Lakh ten thousand only were recovered after issuing the pending invoices on insistence of the sponsoring companies.

INS Webinar Series

INS started a series of webinars from February, 2021 onwards. So far 25 webinars have been held on the ZOOM platform with the last one on July 16, 2022. Details of all the 25 webinars are given in the table below. Video recordings of these webinars are available on INS YOUTUBE Channel

<https://www.youtube.com/channel/UCQ0k7u45O6EJLZWGSFeYjPA>

Table : Details of INS Webinars

S.No.	Date	Delivered by	Topic
01	05 02 2021	Dr. Anil Kakodkar, Member, AEC Former Chairman, AEC, Chairman, Rajiv Gandhi S&T Com.	Nuclear energy in India in a carbon constrained world: the role of of Indian Nuclear society
02	20 02 2021	Dr. R B Grover, Emeritus Prof. HBNI & Member, AEC	Managing transition to a low carbon electricity mix in India
03	31 03 2021	Shri S K Sharma, C&MD, NPCIL	Outlook for nuclear power in India - Utility perspective
04	11 05 2021	Prof. V S Ramamurthy, Emeritus Prof., IAS	A decade after Fukushima Daiichi nuclear reactor accident
05	09 09 2021	Dr. B Venkatraman, Director, IGCAR	Glimpses into applications of ionising and non-ionising radiation in in NDE
06	16 09 2021	Prof. Sandeep Trivedi, Former Director, TIFR	Accelerating universe and its consequences
07	09 10 2021	Dr. R A Badwe, Director, TMC	Cancer in India
08	23 10 2021	Meera Venkatesh, Former Director, Phys. & Chem. Sciences, IAEA, Vienna	Applications of nuclear radiation for societal welfare
09	13 11 2021	Dr. C P Kaushik, Director, NRG, BARC	Advancement in back end of nuclear fuel cycle - Indian perspective
10	27 11 2021	Prof. M S Raghunathan, Chairman Apes Committee, National Centre for Mathematics, IIT, Bombay	Mathematics – Art that would rather be Science
11	11 12 2021	Prof. R Srikanth, Dean and Professor, School of Natural Sciences and Engineering, IAS	Role of nuclear power in India's green energy transition - Challenges and way forward
12	25 12 20 21	Prof. Shashank Chaturvedi Director, Institute for Plasma Research	Deployable Technologies from plasma science - present and future
13	08 01 2022	Prof. J Srinivasan, Emeritus Professor and Director, Centre	The Science of Climate Change

		for Climate Change, IISC campus	
14	22 01 2022	Dr. Dinesh Srivastava, Chief Executive, Nuclear Fuel Complex	Nuclear Fuel Complex: A Centre for development and processing of nuclear fuels and advanced materials for nuclear and strategic applications.
15	05 02 2022	Jitendra Srivastava, Chairman & Chief Executive, HWB	Saga of Heavy Water Board
16	19 02 2022	Dr. C K Asnani, C&MD, UCIL	Uranium mining and ore processing for energising the front end of Indian nuclear fuel cycle
17	05 03 2022	Dr. D K Sinha, Director, AMD	Milestones & vision for exploration of atomic minerals in India
18	19 03 2022	Prof, Amit Garg, IIMA	The role of nuclear energy in meeting India's net zero target by 2070
19	02 04 2022	Dr. Manpreet Sethi, Distinguished Fellow, Centre for Air Power Studies	Nuclear Terrorism and Nuclear Security – Challenges and Mitigation Measures.
20	08 05 2022	Dr. Lalit Varshneya, RRF, Electron Beam Centre, Former Head, Radiation Technology Development Division, BARC	Radiation Technology for Sewage Sludge Hygienisation: Genesis and Development
21	21 05 2022	Shri Neeraj Sinha, Senior Advisor, Neeti Aayog	The indigenous development of the advanced ultra supercritical technology for thermal power generation in India
22	04 06 2022	Dr. R N Patra, Former CMD, IREL	Rare earth industry evolution- Indian perspective and challenges
23	18 06 2022	Dr. Chandan Banerjee, Deputy Director General, National Inst. of solar energy	Overview of Solar Energy Development in India

Indian Nuclear Society Poster/ Cartoon Competition 2021 (INSPC21)

As part of celebration of Azadi ka Amrit Mahotsav, Indian Nuclear Society organised **Poster/ Cartoon Competition 2021 (INSPC21) in September 2021** with active participation of INS members and their families, DAE (serving / retired) employees and their families. Posters/ cartoons on any one or more of the following topics were invited –

- Nuclear Power is green and protects environment.
- Nuclear Reactors are safe even under extreme conditions (Earthquake/Tsunami/Air attack).
- Radiation Exposure caused by operating nuclear reactor (to public) is far less than that caused by an X ray procedure .
- Nuclear Power can coexist with Solar and Wind Power.
- Nuclear Radiations and Radioisotopes in the service of mankind

The competition got a very good response and more than 400 colourful and imaginative posters were received from a wide range of age groups. All the entries were evaluated by a panel of judges. 1st Prize was won by Ms. Kawya Kailash Gharat, a Final Year BSA student from JJ School of Arts, Mumbai. Two second prizes were awarded to Shri Sanjay Kumar, a teacher from AECS, Kudankulam and Master Aaryamaan Borgohain, a student of class 12 in AECS, Anushakati Nagar. Three numbers of 3rd Prizes were bagged by Ms. Anusree Dey of BARC, Mumbai, Shri Nagesh Hanmantu Sirsal, a visual designer from Tilak Nagar ,

Mumbai and Ms. Mrityika Chakraborty, a student of class 9 in AECS, Anushaktinagar, Mumbai.

An Exhibition of all the 400+ posters received was organized in collaboration with Atomic Energy Education Society at Atomic Energy Junior College, Anushaktinagar, Mumbai from December 17-19, 2021. Dr A.K. Mohanty, Director, BARC was the Chief Guest and inaugurated the exhibition. The Exhibition was visited by a large number of AECS students and residents of Anushaktinagar, Mumbai. Exhibition was complemented by live demonstration of BARC/BRIT models to educate the students / visitors on the role of radiation and radioisotopes in the area of Health Science. Valedictory function was held on December 19, 2021 with Dr Venugopalan, Chairman AEES as the Chief Guest. A few students while giving their feedback expressed that the exhibition created awareness about the important role nuclear science and technology plays in the developmental /societal programmes without leaving any carbon foot prints.

Prize Distribution Ceremony of INSPC21 was held on January 21, 2022 in hybrid mode at New Conference Room at TSH, Anushaktinagar. It was attended by all the eight prize winners from Mumbai physically and few prize winners attended the function virtually. Shri Mukesh Singhal, (I/ C) CMD, NPCIL was the Chief Guest on the occasion. He addressed the audience and gave away certificates and prize money to the winners present physically as well as virtually. Shri S.K. Mehta, President INS presided over the function. A few dignitaries from NPCIL, AEES and INS also attended.

Flag Hoisting at INS Office

Last Republic Day (January 26, 2022) onwards INS has started the practice of hoisting the National Flag at INS office on the occasion of Republic Day and Independence Day. Shri S.K. Mehta, President, INS hoisted the National Flag on January 26, 2022 in presence of a few office bearers, EC members and staff of INS office.

Submission of Change Report in the office of Charity Commissioner

The INS Change Report was submitted in the office of Charity Commissioner on February, 15, 2022. Secretary and Treasurer attended the hearing in this matter on March 15, 2022 and were told to submit all the earlier Change Reports (every two years irrespective of whether elections were held or not). We are seeking professional services of an advocate in the matter.

INS organises its Annual Conference INSAC 2022

The conference was organised during March 28 to 31, 2022 in DAE Convention Centre, Anushaktinagar, Mumbai. The theme of the conference was “Nuclear Power towards Green Energy in India”. The conference aimed to bring together former and current scientists and engineers to share the new developments, breakthroughs, innovations, updates of the plant performances, challenges and way forward through talks, presentations and panel discussions. The industry partners both from private and public sector who play an important role in pursuing the country’s nuclear power programme were invited to share their experiences and suggestions.

The conference was inaugurated by Shri K N Vyas, Chairman, Atomic Energy Commission and Secretary, Department of Atomic Energy in the presence of Guests of honour Dr A K

Mohanty, Director BARC, Shri B C Pathak, C&MD, NPCIL, Dr B Venkatraman, Director, IGCAR and I/C CMD, Bhavini. In his inaugural address, Shri K N Vyas complemented INS for organising the annual conference with a very important theme. He said, he felt nostalgic in the presence of galaxy of elders and dignitaries present in the audience who had guided the department in the past. He mentioned the challenges he is facing in convincing the government authorities about the need to support nuclear energy as a base load power if India has to meet the target of net zero carbon emission by 2070. In his message to the Unit heads of DAE, he stressed the need to closely collaborate with industry to accelerate manufacture and delivery of critical items in time. He expressed the need to look into production of green hydrogen in the department. He ended his talk with the advice to utilise the excellent talent in DAE to achieve greater breakthrough in emerging technologies.

Dr A K Mohanty, in his address brought out the importance of hydrogen technologies in meeting the demand for green energy. He briefed about work being carried out in BARC on several innovative technologies. He also talked about several important developments at BARC in the field of design and validation of high temperature reactors (HTRs). The HTRs are important as source of power in remote and hostile locations and in generation of green hydrogen. Shri B C Pathak brought in the important role played by nuclear power in Europe, China and in India in the recent power crisis. He stressed the need to make nuclear power economically competitive by cutting the cost of construction and completing the projects in time. He mentioned that Indian industry has a very vital role in the success of nuclear program. He suggested to industry to better orient its business to suit to the time schedule of nuclear projects and to keep up the schedule of manufacture. He expressed that the annual conference will provide opportunity to discuss and deliberate on collaborative initiative to achieve the department's targets. Dr B Venkatraman complimented INS for organising the annual conference with a very relevant topic for deliberation in technical sessions and in panel discussions. He particularly appreciated the topics chosen for the panel discussion and said he is looking forward for a fruitful outcome.

Shri S K Mehta, in his Presidential address stressed the importance of curbing green house gas emission so that the global average temperature rise can be limited to 1.5 degrees. He said given that the nuclear power plants produce stable energy with low carbon emissions, it would be logical to see that it plays a key role as the Energy (power) source alongside other sustainable sources such as wind, solar and even hydel. For PHWR based NPPs, practically in all aspects, there is a self-reliance and their performance matches to international level. Regarding LWRs which are being setup with Russian collaboration, there is a reasonably high level of Indian participation and has been steadily increasing. Higher Public Private sectors collaboration shall give better dividends. He thanked large number of senior members of INS, elders and dignitaries who came for the conference. He expressed hope that the deliberations would open up newer initiatives.

Shri S K Malhotra, Secretary INS and Convener of the Conference mentioned about the importance of the theme of the conference and the urgent need to accelerate nuclear program to meet the net zero target announced by the Government. With growing demand of electricity, he also stressed the need to accelerate green hydrogen technologies which also need advanced nuclear plants. He said that the technical and panel discussions in the conference will deliberate on accelerating capacity addition of green energy. He thanked EC

members for their support, encouragement, participation and guidance in organising the conference.

Dr A Rama Rao, Co Convener of the conference while proposing vote of thanks, thanked all the dignitaries for gracing the function and for their whole hearted support to INS and its activities. He thanked all the session chairs who had agreed to chair respective sessions and panel discussions. He thanked the industry partners who readily agreed to deliver talks and participate in the panel sessions. He thanked BARC, NPCIL and AERB for their support in organizing the conference by providing highly motivated volunteers who took control of executing the conference activities. He thanked EC members for extending moral support and appreciation at every stage. During the conference, two plenary talks and eleven invited talks were delivered and there were two panel discussions, The conference ended with a round up session of the conference.