

Productivity E-Newsletter

EDITORIAL

The Age of Artificial Intelligence; Indian Perspective

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India is moving on the trajectory of digital transformation to rekindle productivity and growth. Artificial Intelligence (AI) promises to fill the gap. A full and responsible implementation of AI will not only open new economic opportunities but also help create new opportunities for delivering services, needs and priorities in sectors like education, health, management and others through smart thinking.

Technology is changing and the Indian government has been emphasising on using new-age technology such as AI and machine learning to update the various parts that make up the government. AI has a potential to address the challenges of demographic diversity of India, it can play a critical role in not only unifying a billion-plus people in resolving social challenges, but also will add value to the economic growth of the country with the help of large companies, startups, policy makers and multi-stakeholder partnerships.

The rise of artificial intelligence and industry 4.0 has a different meaning in the country. The effects of AI will get magnified in the coming decade as the sectors of manufacturing, media and entertainment, retail (especially e-commerce), advertising, finance, healthcare, insurance, education, etc., are all impacted by these technologies. Artificial Intelligence will be a game-changer and a key factor in economic development, there is a concurrent need to arrive at frameworks that will promote its deployment taking all social factors into account. With the announcement of establishing various Centre of Excellence (CoE) for AI in the last budget speech, AI is touted to be the bedrock of Government of India's efforts to develop focus sectors like Healthcare, Agriculture, Education, Smart Cities & Infrastructure, Smart Mobility & Transportation, etc.

AI is envisioned to propel innovations in India and assist in solving social issues for the country. The sheer push from the Government to come up with policies, initiatives and even partnerships with other nations has helped India to have a stronghold in AI.

“CAPACITY BUILDING PROGRAMME FOR CENTRAL / STATE GOVERNMENT OFFICERS OF NER” AT BANGKOK, THAILAND DURING 18-23 NOV 2019

NPC successfully conducted its first ever International Capacity Building Programme sponsored by office of DC-MSME, Ministry of MSME.

The Ministry of MSME is working for development of MSMEs in the country. As a part of special focus for development of MSMEs in North Eastern Region & Sikkim, a special scheme named “Promotion of MSMEs in NER and Sikkim” was formulated. One of the components of the scheme is Capacity Building of Officers which has the objective to undertake Capacity Building of officers engaged in promotion and development of MSMEs, by deputing them for various Techno Managerial training programmes in MSME Institutions and other reputed national/international organizations.

The programme was first of its kind for both NPC and O/o DC-MSME,as well.

The programme was attended by 25 officials from Central / State Governments who are engaged in promotion and development of MSMEs. The programme was highly beneficial for the participants wherein they were exposed to the best practices followed by MSMEs of Thailand and the policies / initiatives taken by Thailand Government for the development of MSMEs and Start-ups. All the participants appreciated the quality of training and admitted that the training programme was quite helpful in their job profile and personal growth and also an eye opening for many of them.



Awareness Programmes on latest Waste Management Rules for stakeholders

In order to strengthen the Institutional capabilities of the stakeholders in respect of management of waste (Solid waste, Hazardous waste, E-waste, Bio-medical waste, Construction & Demolition waste and Plastic waste) in West Bengal, Environment Division of National Productivity Council, Kolkata under the sponsorship of West Bengal Pollution Control Board (WBPCB), Department of Environment, Govt. of West Bengal had conducted Ten various Nos. of Awareness programs at different locations for various stakeholders involved in the waste collection, storage, handling, management, treatment, pre-processing, co-processing, recycle, reuse and disposal on latest six Waste Management Rules. The fundamental principles underlying these rules include responsibility upon the manufacturers, producers and brand owners to involve themselves in extended responsibility of waste collection mechanism, recovery, recycle & reuse of waste and direct accountability of bulk generators of the waste, creation of adequate infrastructure for recycling and reuse of the waste and others.

The objectives of the awareness programs were to impart better understanding of latest waste management rules among all the stakeholders

and to promote awareness about new rules and regulations which could be adopted. Around **650 participants** were trained in the various programs organized in cities/towns spread throughout the state of West Bengal. The programme brought together the representatives from Industry, Govt. organizations dealing with Environment Management, Environmental consultants, Govt. officials related to policy & regulation on Environmental issues, NGOs and other stakeholders. The profile of participants included a heterogeneous mix of Industrial sectors, Health Care Units, Urban Local Bodies, builders and civil contractors, recyclers etc.

The awareness programs have created a benchmark for all the stakeholders under the purview of waste management by giving them exposure to the latest waste management rules & regulations so that they could learn, adopt and implement these practices in their respective organizations, which could further help them to achieve and fulfill the desired improvement in their institutional capacities.



[From Left to Right: Sh. P.K.Mishra, IAS, Secretary(Environment), GoWB, (on the podium), Shri S. Mallik, Regional Director, NPC, Kolkata, Sh.Rabijyoti Majumder, IAS, Commissioner, Dept. of Environment, GoWB, Dr. Kalyan Rudra, Chairman, WBPCB, Dr. Rajesh Kumar, IPS, Member Secretary, WBPCB, Sh A.Chatterjee, Regional Director, CPCB]

Capacity Building Programs Conducted on Six Waste Management Rules, 2016



Ministry of Environment, Forest and Climate Change (MoEFCC) has assigned National Productivity Council (NPC) to conduct 2 days capacity building program on **“Six Waste Management Rules 2016”** pertaining to solid, hazardous, bio-medical, plastic, electronic and construction and demolition waste for various stakeholders across the country. In the first phase 20 cities were selected for conducting this 2 day programme. Till date programmes have been successfully completed in 178 cities till date.

The objectives of conducting these programmes are :

- To provide insight into all aspects, challenges and solutions relating to waste generation and its assessment, planning in terms of segregation, storage, transportation, treatment and disposal faced by all officials of Corporations, Municipalities and Panchayats.
- To draw emphasis on roles and duties of various stakeholders, standards for treating and disposal of wastes, reporting requirements and other elements as given in SWM (2016) rules.

- To build capacity of all stakeholders using lectures, audio visual aids and through, discussions.

The programmes were successfully conducted in the following cities:

• Dindigul, Tamil Nadu	• Ambala, Haryana
• Gandhidham, Gujarat	• Patna, Bihar
• Tuticorin, Tamil Nadu	• Sasaram, Bihar
• Imphal, Manipur	• Alwar, Rajasthan
• Dimapur, Nagaland	• Moradabad, Uttar
• Bokaro, Jharkhand	• Haridwar, Uttrakhand
• Agra, Uttar Pradesh	• Jalandhar, Punjab
• Thrissur, Kerela	• Paradeo, Odisha
• Cuttack, Odisha	
• Ludhiana, Punjab	

STAKEHOLDER CONSULTATION MEETING ON “PROMOTION OF COUNTER MEASURES AGAINST MARINE PLASTIC LITTER IN SOUTHEAST ASIA AND INDIA” on 19th December , 2019 at Manthan Conference Hall, NPC HQ, Lodhi Road, New Delhi

As a part of the project “Promotion of countermeasures against marine plastic litter in southeast Asia and India, a stakeholder consultation meeting was organized by National Productivity Council of India, New Delhi at Manthan Conference Hall, NPC, New Delhi on 19 December 2019, in association with UNEP Bangkok and UNEP India. Approx 25 participants from various organizations and institutes attended the programme.

The agenda of the programme was to discuss with methodology adopted, progress made by India and Bangkok till date findings of the activities undertaken and get insights from the experts from participating institutes on way forward.

The opening session was inaugurated by Shri Arun Kumar Jha, IES, Director General, National Productivity Council who welcomed the delegation from UNEP Bangkok, UNEP India, NEERI, (CMFRI) Central Marine Fisheries Research Institute, National Institute of Oceanography (NIO), Municipal Corporation of Greater Mumbai, Teri, Chintan, Development Alternatives etc.

Shri Arun Kumar Jha emphasized on the promotion of counter measures for mitigating plastic pollution and also shared that the outcome of the project shall be put up to MoEF&CC for replication.

The opening remark was delivered by Ms. Kukuko Nagatani Yoshida, Regional Coordinator for Chemical Waste & Air Quality, UNEP where she conveyed the story behind this counter measure project. She expressed that there have been a lot of studies on the aforesaid subject internationally. However, very limited data has been generated from the southeast Asia / India who are perhaps a substantial contributors to the marine plastic pollution. She also communicated that strong local, committed partners are required to speed up the execution of this project in the stipulated time.

Further an overview of the Counter measure project was given by Mr. Tsubasa Enomoto, UNEP where he briefly touched upon the various aspects covered under the project including top down modelling approach, need for bottom up modelling for policy development & implementation and collaborative counter measures, primary data collection from local partners, use of GIS technology etc.



Residential Training Program on “Project Management & Financial Management” during November, 04-08, 2019 at Port Blair, A & N.

Economic Services Group, NPC Head Quarters has conducted and conceptualized above residential training program with the following objectives:

- To impart concepts and techniques on Project Management to the participants;
 - To provide the participants an opportunity for sharing experiences and team learning to meet diverse challenges;
 - To provide insight into Project Planning, Implementation, Physical and Financial Management
 - To familiarize the participants on concepts and techniques of Financial Management
- Shri Rajesh Sund, Director (Economic Services), NPC, who served as coordinator and also faculty for Financial Management segment of Training Program

The Residential Training Program has been conceptualized with the objective to impart training on Project Planning, Implementation and Team, Roles and Responsibilities. Decisions regarding estimating overall project cost, leading and directing projects and teams. To enable participants to use qualitative and quantitative tools and measures to distinguish the key financial risks, Valuation techniques and tools for learning & developing unique strategies, implement correctly and set financial targets.

A total of 35 participants attended the program. These participants were from PSUs, Academic institutions, various Government Departments and other entities



Training Program on Improving Effectiveness of Private Secretaries / Personal Assistants at Puri during 26-28 November, 2019, Odisha

NPC RD Bhubaneswar conducted programme on Improving Effectiveness of Private Secretaries / Personal Assistants during 26-28 November, 2019 at Puri, Odisha. Objective of the programme was to expose the participants to the new concepts of managing office in ever changing times and also to develop behavioural skills, self management etc.

Participants were from NTPC, National Fertilisers Ltd, Western Coal Fields, Govt of Pondicherry, Industrial Development Corporation of Odisha, Bharat Dynamics Ltd, Assam Power Generation Corporation, Rajasthan Renewable Energy Corporation



Training Program on Industrial Internet of Things (IIoT) : A Gateway to Digital factory at Puri during 26-28 November, 2019, Odisha

NPC RD Bhubaneswar conducted programme on Industrial Internet of Things (IIoT) : A Gateway to Digital factory during 26-28 November, 2019 at Puri, Odisha. The programme was designed with the objective of inspiring the participants to learn to leverage these technologies for creating novel digital vision for their organization in the new era of digital economy.

The deliberation was focused on:

- Concept and benefit of Digital factory
Concept and elements of IIoT
- Carrying out Gap assessment for implementation of IIoT
- Developing a road map for moving towards digital factory

The participants are Sr Executives from NMDC Ltd , Odisha Mining Corporation

One Day Workshop on “Energy Conservation in Boilers” as part of Energy Conservation Week Celebrations-2019 Sponsored by Telangana State Renewable Energy Development Corporation Ltd (TSREDCO) and Bureau of Energy Efficiency (BEE),Ministry of Power(GoI)

National Productivity Council (NPC), Regional Directorate, Hyderabad has organized a One Day Workshop on “Energy Conservation in Boilers” as part of Energy Conservation Week Celebrations-2109 sponsored by Telangana State Renewable Energy Development Corporation Ltd and Bureau of Energy Efficiency(BEE),Ministry of Power, Govt of India, on 18th December 2019 at Hotel Katriya, Raj Bhavan Road, Somajiguda, Hyderabad. The workshop was inaugurated by Sh N.Janaiah,Vice Chairman and Managing Director,TSREDCO,

Sh Bheema Rao,DY Chief Inspectorate of Boilers,Director of Boilers,Telangana State and Dr B.Hemant Kumar Rao,Regional Director, National Productivity Council, Hyderabad

More than 50 delegates had registered for this One-day workshop various Bharat Biotech, Navbharat , Aurobindo Pharma,MSN Labs,Dr.Reddy’s laboratories, Anjani Portland Cements, GVK Bio, Inbisco India Pvt Ltd,Nakoda Chemicals Ltd, Visaka Industries Limited,HIL Limited,Hetero Labs Limited, Biological E Limited,Heritage Foods Ltd, Sanzyme Biologics (P) Ltd,3F Fuji Foods Pvt Ltd etc from across Telangana.



Preparatory Training Course on Boiler Operation Engineers (BoE) Examination for NTPC Engineers



National Productivity Council (NPC), Regional Directorate (RD) has organised four (4) number of One-day Preparatory Training Courses(PTC) for the NTPC Simhadri Engineers aspiring to appear for the Boiler Operation Engineer(BoE) examination to be conducted by Boiler Boards. Even though the course content for the BoE Examination is vast, which requires atleast 5-6 days for covering the exam syllabus, this program was designed only for one day because most of the concepts of the BoE Examination are part of the Internal Training Curriculum of NTPC which all these engineers underwent and also sparing these O&M engineers for 5-6 days of continuous training was a constraint for the management because of operational issues. So, it was felt to design a training PTC program of short duration with an objective of properly orienting the candidates themselves for preparing for this exam. The programs are conducted at the Regional Learning Institute (RLI), NTPC Simhadri Visakhapatnam (A.P) on 29th Nov '19, 02nd Dec'19, 12th Dec'19 and 14th Dec'19. There are about 25 participants for each program. Shri Durgaji Bonam, Dy Director, NPC RD Hyderabad and Shri Santhapuram Balaiah, Boiler Expert are the faculty for these programs.

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The residential training program at OIL, Duliajan, Assam during 24th Oct. 2019

A residential training program was conducted after a proposal for the same was accepted by Oil India Ltd., Duliajan, Assam. The training program was conducted for a batch of 29 employees of OIL under their flagship program SAKSHYAM. The objective of these training programs were to enhance personal and collective skills needed for effective leadership as well as interpersonal, social and communication skills to effectively achieve Organisational goals. The training program included topics on soft skills development.

The trainees included a group of employees from different Department from Level I (Grade I to Grade IV). And Speakers were Mr Manoj Verma, Deputy Director & Head, NPC and guest Faculty Mr Ajit Sharma who is an empanelled Faculty with NPC Guwahati. Mr Sharma is an MBA with over 15 to 20 years of experience.

The sessions were imparted in English/ Hindi /Assamese. A Half day field visit was also organised by NPC on 24th October 2019. NPC had provided completion certificates to all the participants and also distributed pen Drives. All the sessions were well received by the participants and they actively participated in the training



A Novel invention of “AN APPARATUS FOR AGITATION OF FLUIDS”

Mr. Nakul, Deputy Director , Economic Services Group has invented novel type of Baffles and a patent has been registered in his name on 04.09.2019 in India. The application for USA has been filed.

Field of the Invention:

“Embodiments of the present invention generally relates to fluid mechanics and more particularly to an apparatus for agitation of fluids”.

The patent details are as follows:

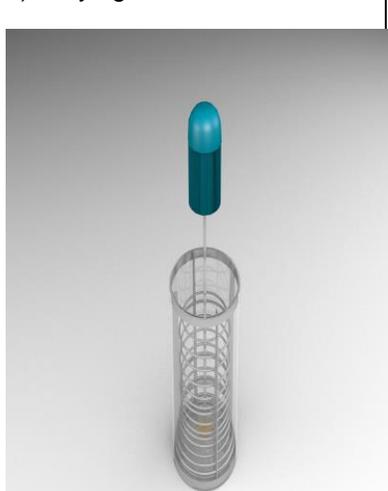
Registered Patent No.: 319855 Date of Grant: 04.09.2019 Application No.: 201811041891

- Brief about the invention
These are two novel type of baffles a)Sharp edge (Triangular); b) Varying Width having width gradient from 0.3 to 0.8 being mounted on side walls of agitation vessel & chamber.
- Main advantages and benefits of these novel type baffles
The edge over existing and conventional baffles system are categorized as follows:
 - ✓ Applicability i.e. ease of fabrication & Installation
 - ✓ Augementation of capacity(Reduction in Batch Time) & Improvement in Effectiveness of Mixing and agitation of fluids
 - ✓ Cost Benefit i.e. Better control over Batch Process Parameters such as mixing time, uniform temperature of process fluids
 - ✓ Less impact on Environment i.e. minimum resource requirement & wastage
 - ✓ The type a) sharp edge Baffles has established & tested advantages for improving mixing effectiveness for less viscous suitable for ETP plants, chemical and food processing industrial products, which are less temp. sensitive
 - ✓ Type b) varying width has got wide range of applications ranging from Chemical Process Reactors, Shell & Tube Heat Exchangers and Earthquake Resistant Bridge(Flyover) shock absorbing system by overcoming **tensor component and shear stress**.
 - ✓ Type (b) baffles has got application edge due to its varying width(wider at the bottom of chemical Reactor) can accommodate more no. of coils and can create extra Heat Transfer Area for temperature sensitive products. In shell & tube Heat Exchangers configure placements of these baffles will reduce the operational cost of Heat Exchangers.
 - ✓ Type b) baffles in bridge application will eliminate the existing and conventional spring shock absorbing system (**Bridge pic.**)

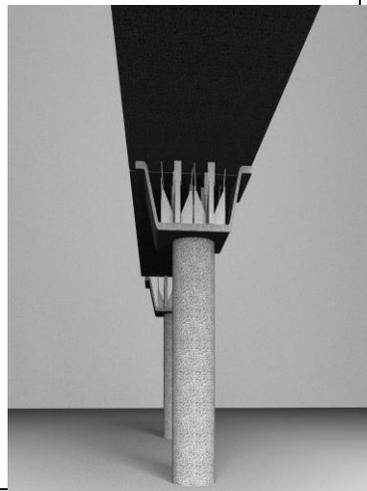
a)SharpEdge



b) Varying Width



Bridge Application



Upcoming Training Program

- TPM and TQM Working together NPC/HQ/T/T/2019-20/03 06-07 January, 2020 NPC Conference Hall, New Delhi
- One-day Advanced Manufacturing course for Food Safety Supervisor - FoSTaC course of FSSAI NPC/HQ/53/SYS/16/01/20/89 10th January, 2020 New Delhi
- Organizational Productivity through Digital Transformation NPC/HQ/IT/T/2019-20/08 13-17 January, 2020 Port Blair
- 2-Day Workshop On Advance Excel NPC/HQ/SP&BD/T/2019-20/01 18-19 January, 2020 New Delhi
- 2 Days Workshop On Enhancing Productivity Of Entrepreneurs NPC/HQ/SP&BD/T/2019-20/02 18-19 January, 2020 New Delhi
- Effective Office Administration & Financial Management NPC/HQ/ES/T/2019-20/14 20-24 January, 2020 Port Blair
- NPC/HQ/IE/T/2019-20/04 24 January, 2020
- Effective Office Management & RTI Act, 2005 NPC/HQ/HRM/T/2019-20/07 27-31 January, 2020 Munnar
- 2 Days Integrated Workshop On Cyber Security & Women's Safety NPC/HQ/SP&BD/T/2019-20/03 1-2 February, 2020 New Delhi
- 2 Day Workshop on Commercial Contract Drafting & Negotiation NPC/HQ/SP&BD/T/2019-20/04 1-2 February, 2020 New Delhi
- Leveraging Industry 4.0 Technologies for Productivity Enhancement 3-7 February 2020 AIP Chennai
- Smart Manufacturing System NPC/HQ/IE/T/2019-20/06 6-7 February 2020 Noida
- Digital Workplace : Essentials for non-IT Executives NPC/HQ/IT/T/2019-20/09 10-14 February, 2020 Goa
- Industry 4.0-Strategies, Challenges & Roadmap for Productivity Enhancement NPC/HQ/CoE/02/2019-20 13-14 February, 2020 New Delhi
- Work life Balance & Stress Management NPC/HQ/HRM/T/2019-20/08 17-21 February, 2020 Port Blair
- Smart Manufacturing System NPC/HQ/IE/T/2019-20/07 2-6 March, 2020 Goa
- Negotiation & Conflict Resolution Strategies NPC/HQ/HRM/T/2019-20/09 9-13 March, 2020 Dalhousie
- Workshop on "Challenges of Cold Chain Management in India" NPC/HQ/AB/T/2019-20/05 19 March, 2020 Bhubaneswar
- Role of Innovation & Creativity in the Digital Transformation NPC/HQ/IT/T/2019-20/10 23-27 March, 2020 Kanyakumari
- Effective Office Administration & Financial Management NPC/HQ/ES/T/2019-20/17 24-28 March, 2020 Gangtok, Sikkim

Upcoming Training Program

- Productivity Tools and Techniques 25-29 November, 2019 Mysore
- Kaleidoscope Leadership and Enhanced Productivity through Grid 02-06 December, 2019 Hyderabad
- Achieving Swachha Bharat Abhiyan through 5S 18-22 November, 2019 Hyderabad
- Vigilance for Organizational Efficiency 18- 22 November, 2019 Visakhapatnam
- Artificial Intelligence and its possible implementation in Indian Context 02-06 December, 2019 Kochi
- Sales & Marketing-Junior Management 3-5 December, 2019 Chennai
- Energy conservation & audit in thermal utilities 9 – 13 December, 2019 Mangalore
- Workshop on “Smart Food value chain” Dec.11-Dec-19 Hubli
- Advancement in Air Pollution Control Techniques 12-13 Dec-2019 Chennai
- Advance Course on RTI Act, 2005 (Problems, Issues and Challenges in RTI Act , 2005 implementation and CIC/SIC Judgments) December 2-6, 2019 Goa
- Project Planning , Implementation, Monitoring and Evaluation 08-12 Dec, 2019 Hyderabad
- Effective Office Management & Administration and General Financial Rules & CCS Rules, Noting and Drafting, Vigilance Management 09 – 13 December, 2019 Shirdi
- Advance Course on Secretariat Effectiveness for ES, PPS, PA, PA, PS & Office Staff 16-20 December, 2019 Kovalam
- Waste to Wealth 18-22 November, 2019 Kochi Workshop on Waste to Profit through 3R 17-20 December, 2019 Mysore
- Improving Leadership, Managerial and Administrative Skills December 16-20, 2019 Goa
- e-governance & Advance IT Tools: transforming Government Sector 16-20 December 2019 Goa
- Establishment Rules, CCS rules, Noting & Drafting and Vigilance Management December 23-27, 2019 Kanyakumari
- Leadership & Team work for performance Excellence 30th Dec. -03 Jan, 2019 Goa
- Resource Management, Monitoring and Evaluation 09-13 December, 2019 Goa
- Managing finance for improving organizational performance and effective cost management December 16-20, 2019 Portblair
- Good Governance & Transparency through RTI 16-20 December, 2019 Goa
- Internal auditors program ISO 14000 & ISO 45000 16-18 December, 2019 Chennai
- Leadership and enablers of achieving business excellence 16-20 December, 2019 Bhubaneswar
- Smart Manufacturing System 16 – 20 December, 2019 Mysore
- Exploiting Renewable Energy Technologies for Industrial Applications Dec16 to Dec-19 Chennai