

Vol.7 Issue 1

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May-June, 2021



Shri Parimal Rai, Chief Secretary, Govt. of Goa Inaugrating New Building of IBC (H.Q)



K.

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From President's Desk



Dear Readers,

IBC regrets its inability in publishing the March-2020 to April-2021 issues of 'Built Environment' due to pandemic of COVID-19 virus. To keep the activities of IBC live and dynamic during this pandemic period, we have organized series of Webinars on various technical subjects for which reports are given in this issue.

With globalisation, large cities have become hubs of development, attracting thousands of people from smaller cities and rural areas. As a result, these metropolitan cities have seen an enormous rise in population. However, cities generally have not been able to develop resources and infrastructure in sync with the growing population. Disposal of solid waste has become one of the biggest challenges in these cities besides adherence to the social distancing norms in this pandemic due to COVID 19. World over large metropolitan cities are currently trying to cope with the gigantic issue of increasing solid waste. The most prominent problem regarding solid waste is its enormous quantity.

The number of landfills available to dispose of garbage has not increased with the growing garbage generation. As a result, garbage piles have started growing higher and higher in and around every metro city. Every day, tonnes of garbage collected from different parts of cities in landfills and most landfill sites are already way past their capacity.

Another major challenge with solid waste management is handling on account of health hazard during COVID-19, and its treatment. We do not have enough facilities to treat solid waste properly and we use antiquated systems and processes that render treatment inefficient. Another challenge is down to us, the people, and our self centered attitudes. We are okay with waste as long as we don't see it which means dumping of garbage goes unnoticed where it is not in our immediate line-of-sight. It works very well for us. We don't recycle enough - as a nation, India actually recycles less than a third of all the waste we could actually recycle. We also don't compost anywhere close to enough.

Urgent government initiatives and money, coupled with use of modern techniques and bio solutions, will help cities mitigate some of the issues with solid waste management, a permanent solution will however not materialise without a dramatic change in societal attitudes.

(Pradeep Mittal)

CONTENTS

From President's Desk.....	1
Inauguration of Additional Two Floors of IBC Headquarters Building.....	3
Webinar on "How to use Air-Conditioners in COVID-19 Times".....	5
Technical Seminar on "Green Building Movement: An Overview" at Kota.....	7
Webinar on "Impact of COVID-19 on Construction Industry".....	9
IBC Delegation meets Shri Vinit Kumar Jayaswal, Director General, CPWD.....	11
Webinar on "COVID-19 and revisions necessary for Planning of Smart Cities".....	11
2nd National Executive Committee Meeting of IBC held at Kota.....	13
Webinar on "Exodus of Migrant Workers from Construction Industry-Effects & Various Mitigation measures including Housing for Construction Workers".....	16
Activities of State/Local Centres	
West Bengal State Centre-Kolkata.....	21
Kota Local IBC Centre	21
Chennai Local IBC Centre.....	22
Surat Local IBC Centre.....	22
Bihar State Chapter -Patna.....	25
Mumbai State Centre-Maharashtra	26
Chhattisgarh State Centre-Raipur.....	27
Jaipur Local IBC Centre.....	27
Webinar on "Mechanisation of Construction Sector of India to make it Globally Competitive"	27
World's 'Largest' Meditation Hall Inaugurated Near Hyderabad.....	29
Webinar on "Sewage Treatment Plant (Johnkasou) in Water Management and Pollution Abatement".....	31
Rail, Road, Metro: RRTS Station to Connect three Modes at Delhi's Anand Vihar	32
Webinar on "A Holistic Approach to Waterproofing & Thermal Insulation of Buildings".....	33
White-Topping Technology Extends Longevity of Roads.....	34
Webinar on "Fire Safety in High Rise Buildings".....	34
Hydrogen-CNG Buses likely to hit Delhi roads shortly.....	36
Webinar on "Sustainable Architecture Strategies".....	36
India's First Electric Bus Commenced Commercial Operations in Himachal Pradesh.....	38
Webinar on "Importance of Quality Based Selection of Consultant for Quality Control and Supervision".....	39
India's First Inter-city Electric Bus service between Mumbai and Pune launched.....	39
Webinar on "Development Vis-à-vis Conservation".....	40
Webinar on "Role of Engineers in Development of Country".....	41
ट्रेन में सिगरेट पीते ही कड़केगी बिजली.....	43
Webinar on "Artificial Intelligence in Construction Management".....	43
वीरान घरों को संवारकर पर्यावरण की रक्षा एवं स्वरोजगार की अलख जगाते दो युवा.....	44
Webinar on "Simple & Comprehensive Building Estimating".....	44
भूकंप आने से पहले अलार्म कर देगा सचेत.....	45
Webinar on "Innovations and Patent".....	46
कोच्चि की चारों अवैध इमारतों की गई ढेर.....	46
Webinar on "ENTRAPPED DAMPNESS-The Cancer of RCC Structures, its causes, impacts and management to increase their AUL (Actual Usable Life)".....	47
सूर्य के रहस्यों को सुलझा रहा अंशु कुमारी का आविष्कार.....	48
Webinar on "Challenges before Building Industry due to Covid-19".....	48
780 किमी का होगा ग्रीन एन.एच. कॉरिडोर.....	50
Webinar on "Reimagining Indian Urbanisation and Design".....	50
जहां मर्ज, वहीं मार करेगा नैनो कैप्सूल.....	51
Webinar on "Fire Safety in Buildings".....	52
Heat Could Change the Face of Europe.....	53
Distribution of Covid Kit to IBC Staff for Protection against Pandemic.....	54

INAUGURATION OF ADDITIONAL TWO FLOORS OF IBC HEADQUARTERS BUILDING, NEW DELHI by Shri Parimal Rai, Chief Secretary, Govt. of Goa & Past President, IBC on 13th November, 2020



Shri Parimal Rai, Chief Secretary, Government of Goa & Past President, IBC inaugurated the Additional two Floors of IBC Headquarters Building on Friday, the 13th November, 2020 in the presence of Shri Pradeep Mittal, President, IBC; Dr. S.P.S. Bakshi, Past President; Shri R.N. Gupta, Vice President & Chairman and Managing Director, Ramacivil India Construction Pvt. Ltd; Shri Anant Kumar, Spl, DG, CPWD & Vice President; Shri V.R. Bansal, CE, North DMC & Executive Member; Shri Gian P. Mathur, Director, Gian P. Mathur & Associates & GC Member among others. Shri O.P. Goel Founder President, Dr. A.K. Mittal, Immediate Past President, Shri K.B. Rajoria, Past President, Chairman of Construction Committee and

many Governing Council & Life Members of IBC joined virtually through Cisco Webex platform.

Shri Rai congratulated all the members of the Construction Committee and all members of IBC for completion of the dream project of IBC.

Shri Pradeep Mittal, President, IBC expressed his sincere thanks to Shri Parimal Rai for gracing the occasion as the Chief Guest. The President also conveyed his sincere thanks to all those member who extended their honorary services including those who paid donation for completion of the Project.



Shri Parimal, Rai, Chief Secretary, Government of Goa & Past President, IBC being welcomed by Shri Anant Kumar, SDG, CPWD & Late (Dr.) SPS Bakshi, Past President, IBC



Interior of Building, Ground Floor Entrance and President Room



Interior of Seminar Hall at Third Floor

The President also thanked all the construction committee members for their regular visits during execution of work and taking part in Construction Committee Meetings. He specially thanked Shri Pushpkant representative of M/s G.P. Mathur & Associates, Shri N.S. Rawat, E.E. (Elect.), CPWD, Shri D.N. Katwa, E.E. (Civil), CPWD and Shri N.K. Singh, Dy. Secy. (T), IBC for taking keen interest in execution of work.

The President also thanked Shri V.R. Bansal, C.E., North, Delhi Municipal Corporation for extending his full support in getting the timely approval of completion plan from local body.

Shri O.P. Goel, Founder President, IBC also expressed his sincere thanks to the construction committee and the President, IBC for completion of the additional floor of IBC Building.

The existing double storey IBC building has now been vertically extended and two additional floors have been added making it four storied. The completion plan of the building has been approved by local body. As per approved plan, total floor area of the building of all 4 floors is 1238.28 sqm. Lift of 8 Passengers capacity of Schindler make has been installed. D.G. Set of 62.5 K.V. A.

capacity has also been installed for power backup. 30KV Roof top Solar P.V. Plant has been installed at roof top for utilizing solar energy.

All floors of the building are well furnished now. Halls and Rooms with facilities like T.V. Set, Internet, A.C. etc are now available for arbitration and other meeting purposes. Space for seminar hall has been created at 3rd floor with seating arrangement of about 70 to 75 persons.

IBC CONGRATULATES



Shri Anurag Jain assumed the Office of Vice Chairman, Delhi Development Authority (DDA) on June 15, 2020. Shri Jain born on August 11, 1965, passed his B.Tech. in Electrical Engineering. He is an IAS officer of 1989 Batch of Madhya Pradesh Cadre.

He has vast experience in various capacities in different sectors.

Webinar on “How to use Air-Conditioners in COVID – 19 Times”

Indian Buildings Congress (IBC) in association with ISHRAE held the webinar on 29th April, 2020 on the topic “How to use Air-Conditioners in COVID - 19 Times”. Eminent speakers/ experts delivered their technical lecture.

Shri M.P.Agarwal, in his initiating note informed that COVID-19 pandemic has adversely impacted the lives of millions of people across globe and highlighted the importance of precautions to be taken in use of air conditioners in conditioning the indoor air quality.

Shri Pradeep Mittal, President in his welcome speech welcomed Shri Anant Kumar, Special DG, CPWD;

Shri Richie Mittal, National President, ISHRAE; Shri Vishal Kapur, Chief, Technical Committee, ISHRAE; Shri Gautam Baliga, Chair, Technical Group, Healthcare, ISHRAE; Shri C.K.Varma, Chief Engineer, CPWD; Shri O.P.Goel, Founder President, IBC; participating EC and GC Members of IBC, and all other participants. He briefed the viewers about the history, vision, role and activities of IBC in Built Environment. While informing the prevalent circumstances as to how India along with most of the countries of the world is facing the adverse effects of Covid-19-Corona virus where millions of lives are suffering from this disease, he expressed the necessity of the webinar in knowledge sharing on protection measures to minimize the risk of COVID 19 infection in the indoor environment.

Since the topic selected for webinar was very much relevant to the present day demand in COVID-19 circumstances, there was overwhelming response of the participants.

Shri Anant Kumar, Special DG, CPWD, gave the introduction of the expert panelist/ speakers who spoke and made their presentation on the topic.

Shri Vishal Kapoor, Chief, Technical Committee, ISHRAE, while expressing relevance of the topic of webinar in line with the vision of IBC on Built Environment informed about the role and activities of ISHRAE. It was informed by him that ISHRAE has already issued “COVID 19 Guidance Document for Air conditioning and Ventilation”. While informing the different transmission routes from corona virus infected person through direct contact and indirect transmission, he made his presentation on the indoor environment requirements. Most of large cough and sneezing droplets from patients infected by this disease, falls on nearby surfaces and objects, where people can get infected by touching those

infected surfaces or objects.

Much smaller infected particles released during coughing and sneezing stay airborne for hours and travel over larger distances which may also aid in spread of the disease. He mentioned there is no such reported data or studies to rule out the possibility of the air borne particles route in spread of this disease. Infectious disease can spread by several routes including transmission through air. Small particles (less than 5 microns) released during cough/sneeze stay airborne for hours and can be transported over long distances. Small droplet nuclei or residue are formed from droplets usually within milliseconds in the air, which shrink in size due to the process of evaporation and desiccation in low humidity. These smaller particles in air can travel with dust particles, shoes and clothes etc.

Mechanical ventilation – HVAC can reduce the airborne concentration of the virus and thus reduce the risk of transmission through air. He informed the importance of range of indoor environment temperature and humidity so as to make the virus ineffective. He mentioned that with relative humidity band of 40-70%, indoor temperature of 24 degree centigrade for humid climate and 30 degree for drier climate regions like Delhi was optimum to reduce the risk of this virus.

For residential units using air conditioners, it was advised that recirculation of cool air by room Air conditioners, must be accompanied by outdoor air intake through slightly open windows and exhaust by natural ex filtration. Fresh Air intake through a fan filter unit will prevent outdoor dust entry (containing high levels of PM 10 and PM 2.5 particles) and exhaust through kitchen and toilet exhaust fans kept operational.

Horizontal-flow Evaporative Coolers installed in windows can effectively cool a room or a section of a room. Windows must be kept open to release humid air. Portable evaporative coolers that do not draw outdoor air are not recommended, since their cooling reduces with humidity rising inside the space. Evaporative coolers must draw air from outside to ensure good ventilation.

Fans should be operated with windows kept partly open. If an exhaust fan is located at a nearby location then it must be kept running to exhaust air for better ventilation.

The best action to limit risk of COVID-19 infection by air is to ventilate indoor environments with outdoor air as much as possible. Mechanical ventilation systems

and air conditioning systems, which provide ventilation, can perform this function more effectively than simply opening the windows, because they improve the quality of the outdoor air with filtration.

He informed key operating guidelines for all categories of ACs which included for keeping the AC filters always clean, providing adequate ventilation and allowing fresh air entry inside through fresh air fans. Inspecting and cleaning the indoor unit coils, Mool mantra is replacement of inside air with fresh air continuously preferably by keeping negative pressure inside. Keeping heat recovery wheel on off mode to reduce cross contamination, keeping toilet and kitchen exhaust fans in operating mode,

In buildings without mechanical ventilation systems it is recommended to actively use open-able windows. Add a TFA (treated fresh air) unit if recommended. Fresh Air intake impacts cooling performance. Install UVGI (Ultraviolet germicidal irradiation) for larger Ducted Units and AHUs to keep Coils continuously clean and disinfected. It is advisable to inspect the AHUs and ducts for Air tightness and low leakage.

Shri Gautam Baliga, Chair, Technical Group, Healthcare, ISHRAE, made presentation on healthcare issues. As hospitals are the first line of defense in this pandemic situation, he suggested to change the existing rooms into non-circulatory system isolation rooms for COVID 19 Patients to meet the huge requirement of isolation rooms/ spaces.

On an emergency basis, this Non-circulation can be achieved by blocking off the return air vents in the COVID-19 patient room.

He stressed to make sure that the AHU has the provision to receive adequate outdoor air supply. The outdoor air source for the AHU shall not be from within the building and all care shall be taken to avoid intake of outdoor contaminants, to the best possible extent. Additionally, an independent exhaust blower shall be provided to extract the room air and exhaust out into the atmosphere, preferably, after suitable "exhaust air treatment". The exhaust air quantity shall be greater than the supply air quantity such that a negative pressure of minimum 2.5Pa (preferably >5 Pa) is achieved in the room. It is advisable to install differential pressure meters to measure this metric. The supply of air quantity shall be such that it will provide a minimum of 12 air changes per hour. The position of the extract air in the room shall be just above the head of the patient's bed.

The exhaust air is most likely to contain particles carrying a viral load and hence a suitable technique should be deployed to prevent the spread of infections. Treatment of exhaust air can be done preferably by HEPA filtration which is the best method. HEPA filters shall be tested and certified for performance in accordance to international standards and shall be of minimum of H13 (EN1822-1) filter class or equivalent. When HEPA Filtration is not possible, treatment of exhaust air by Chemical disinfection is acceptable. When both the methods are not viable, the exhaust air shall be let off into the atmosphere through an upward plume at a height of 3 m above the tallest point of the building, thereby lowering the viral load concentrations to insignificant levels by dilution. This exhaust discharge shall be well away from other air intake points and populated places.

The other two options available for exhaust air treatment are UV irradiation and heating.

Since the exhaust systems could have viral load deposits, some of which may be active, therefore, Suitable personal and environmental protection protocols shall be followed during any maintenance activity on the exhaust system, for personnel protection and to avoid environmental spill.

To avoid the significant risk to the health care workers as well as a possibility for environmental spread of virus laden particles in keeping many COVID 19 patients together in a single room, he suggested, make-shift individual patient isolation enclosures to provide the necessary protection.

For those who are not yet ill, but have been exposed to COVID-19 and have potential to become ill, quarantine/ separation of individuals is necessary. A quarantine centre shall be well ventilated and preferably be maintained at a negative or neutral differential pressure.

He also informed of the necessary guidelines as how to start offices and public facilities/ commercial establishments before opening to public use after lifting the lockdown alongwith safety guidelines for the technicians to follow necessary protocols.

Few question of the participants were also answered by Shri Vishal Kapur

Shri C.K.Varma, Chief Engineer, CPWD while summing up the session, expressed that it was a very exhaustive but short session where viewership was maximum. He also expressed his profound thanks to Shri Anant Kumar, Special DG, CPWD and Shri Pradeep Mittal, President, IBC for their initiative in organizing this Webinar.

Technical Seminar on “Green Building Movement: An Overview” at Kota



Dignitaries on Dais

A Seminar on the **“Green Building Movement: An Overview”** was organized on March 01, 2020 at Maheshwari Resort, Bundi Road, Kota (Rajasthan) by IBC. Shri Pradeep Mittal, President, IBC was the Chief Guest of the Inaugural function. The Inaugural function commenced with lighting of ceremonial lamp by the Chief Guest who was joined by Shri O. P. Goel, Founder President; Shri C. L. Verma, Member IBC Executive Committee & former Additional Secretary PWD Rajasthan; Key note Speaker Prof.(Dr) Madhura A.

Yadav, Founder Director of the School of Architecture & Design at Manipal University Jaipur; Shri Manish Jain proprietor of Manish Jain & Associates Kota, Chartered Engineer, Govt. approved Valuer; Shri Dharendra Mathur, Founder of Kota Local IBC Centre & former C.E. PWD Rajasthan; Shri Padam Kumar Jain, Chairman Kota Local IBC Centre & former C.E. PWD Rajasthan; Shri R. P. Sharma, Secretary Kota Local IBC Centre. The Seminar was attended by large number of professionals besides IBC Executive Committee members from various states and several high ranking dignitaries.



Shri Pradeep Mittal, President IBC; Shri O. P. Goel, Founder President IBC; Shri C. L. Verma along with other dignitaries, lighting the Ceremonial Lamp

Shri P. K. Jain, Chairman, Kota Local IBC Centre and former C.E. PWD Rajasthan in his welcome address while expressing gratitude to the President, IBC for his guidance, highlighted the journey of local centre since its inception in the short duration of 6 month and about the technical Seminars conducted by it in association with IEI and UltraTech Cement. He thanked for the moral support received in past from all IBC Members, Engineering Departments, Architects, Builders, Rajasthan Technical University Kota, Engineering Institutes etc. in successfully holding the Seminars and expressed that success of any technical seminar depends upon the support of all professionals.

Shri Pradeep Mittal, President IBC, the Chief Guest of the seminar, in his address shared the aim and



Shri Padam Kumar Jain, Chairman Kota Local Centre Delivering the Welcome Address



Shri R. P. Sharma, Secretary, Kota Local Centre Delivering his Speech



Prof. (Dr) Madhura A. Yadav making her presentation

activities of IBC in detail. He expressed that seminar on Green Building movement are for introspection. He also thanked the Kota local centre for arranging the seminar on the subject which is need of the day.

In his Opening remarks Shri R. P. Sharma, Secretary, Kota Local Centre and anchor of the function expressed the importance of 'Sthapatya Veda' which is the knowledge of Vedic Architecture. He also emphasized the need of the five elements — air, earth, fire, water and space in building design.

Main keynote Speaker, Prof.(Dr) Madhura A. Yadav, Founder Director of the School of Architecture & Design at Manipal University, Jaipur, in her presentation on the subject **"Green Building Movement: An Overview"**, discussed the important criteria like site selection & planning for green house construction, various global rating systems to define green buildings and need of adopting fundamental concept of Architecture. She emphasized the role of architects who should strive for minimization of resource usage and energy consumption, taking advantage of alternative energy sources and either utilizing locally available or recyclable materials. They should take lessons from the vernacular architecture that were known centuries years ago- following the topography of the place, designing in accordance with the local traditions, making use of wind and sun. The building must grow from the site. It must react for its surroundings, it must reflect life. Architecture should always be site specific and climate responsive. She also emphasized the role of integrated design process.

Another Key Note Speaker Shri Manish Jain, proprietor of Manish Jain & Associates Kota, Chartered Engineer, Govt. approved Valuer in his address on **"Green Buildings Design Concept"** informed that Green Building in its design, construction or operation,



Shri Manish Jain, Keynote Speaker making his presentation

reduces/ eliminates negative impacts and can create positive impacts, on our climate and natural environment by way of preserving precious natural resources, improving indoor environmental air quality and our quality of life. He emphasized the importance of 7 major elements i.e., Site selection, Occupants comfort & well being, Indoor air quality, Energy, Waste management, Building material and Water management in design and also briefed about the advantages of Green Building.

Shri Dharendra Mathur, Founder of Kota Local IBC Centre, President of PREAS & former C.E. PWD, Rajasthan proposed the vote of thanks. He thanked the Chief Guest of the seminar Shri Pradeep Mittal, President of IBC; Guest of Honour Sh. O. P. Goel, Founder President



Shri Dharendra Mathur Presenting Vote of Thanks

IBC; Shri C.L. Verma, Executive Committee member IBC & former Additional Secretary PWD, Rajasthan; all the members of IBC Executive Committee and all the participants for sparing their valuable time to grace the occasion despite their busy schedule. He also thanked the Kota local IBC Centre management committee for their untiring efforts for wonderful arrangements and their continued support in making this seminar successful. He also thanked the IBC members and participants for their supports in making this seminar successful. He also thanked all sponsors of the event and expressed to get similar support from everybody in future.

Webinar on “Impact of COVID-19 on Construction Industry”

The Indian Buildings Congress, held a webinar on 3rd May, 2020 on the subject **“Impact of COVID-19 on Construction Industry”** to understand the impacts of the pandemic on construction industry and to find out the viable solutions for resumption of the construction projects held up due to lockdown. Eminent speakers were invited from construction industry, who presented their views for re-starting the construction work of projects in this post COVID -19 lockdown scenario.

Shri Pradeep Mittal, President, IBC, in his welcome note, welcomed Shri O.P.Goel, Founder President, IBC; Shri K.B.Rajoria, Keynote speaker, and Past President, IBC; Shri, Shobhit Uppal, Past President, IBC and Jt. M.D. M/s Ahluwalia Contracts (I) Ltd.; Shri R.N.Gupta, CMD, Ramacivil India Construction Pvt. Ltd.; Shri Hitendra Mehta, Mehta & Associates LLP, Architect & Urban Planner; Shri H.P.Gupta, Hon. Secy, IBC and all the viewers/ audience of the programme. He said that post COVID-19, on lifting of the lockdown, restarting the construction projects may be very difficult because most of the migratory construction labour has already left to their home town or is not available & there may be funds problem due to economic slowdown.

Shri O.P. Goel, Founder President, IBC while thanking everyone joining the webinar, informed that the COVID-19 epidemic has caused worldwide distress, dislocation, Lockdowns and cessation of all activities to save precious lives. All construction activities have come to grinding halt as is where is. Fear psychosis and problem out of physical and economic distress has led to dispersal

of migrant workers jeopardizing the early resumption of works. The epidemic has led to serious economic crisis around, construction workers and employees have to be looked after without any return as there is no activity. The whole scenario of construction industry will undergo massive change. In the running contracts the claims of huge damages, compensation and renovation of the sites are foreseen, which will have to be settled by the parties urgently and Govt will have to provide guidelines and relief for the same. Future contracts will need redrafting to take care of the possible scenario.

Shri K.B.Rajoria, Past President, IBC in his key note address, underlined the importance of the subject of the webinar to the construction industry in view of the changed environment where human race is at a stake. Besides the health care workers who are fighting this pandemic as corona warriors he lauded the role of engineers who are at the back of arranging and maintaining water supply, electricity, air conditioning and all other services for smooth functioning of hospitals. He also informed that CREDAI has issued SOP/ work restart guidelines. The working agencies will have to undergo these guidelines and will have to bear the additional cost on account of implementation.

Shri Shobhit Uppal, Joint MD, Ahluwalia Contracts (I) Ltd. & Past President, IBC, in his address informed that the global economical growth has come down and there may not be any growth in the financial year 2020-21. There could be several challenges and there is lot of uncertainty in restarting the projects and the life will be

very difficult as most of the migratory construction work force has either travelled back to their villages or adamant to leave. Virtually there will be no workforce available on lifting of lock down. Lakhs of workers needed by the industry will have to be quarantined on their return to work, will have to be trained to new safety norms, work will have to be done in three shifts with reduced labour in each shift to maintain social distancing, raw materials will be in short supply, which will reduce the productivity as well as increase the cost of completion of the project. Contractors will have to gear up to the new requirements. Trained workers will be in short supply necessitating the mechanization of many major construction activities.

Shri R.N.Gupta, CMD, Ramacivil India Construction Pvt. Limited and Vice President, IBC while lauding and appreciating the role of Government in effectively controlling the situation in this pandemic situation, expressed that after lifting of lockdown by the Government, he suggested few short term and long term measures to be initiated by the Government for resumption of construction works/ activities and reviving the construction industry from COVID-19 effects. Few such measures as suggested by him are immediate grant of extension of time for completion of balance work of projects by the departments, immediate release of outstanding due payments of the contractors, strict time lines for speedy approvals, faster settlement of construction disputes, additional mobilization advance without bank guarantee, ensuring availability of raw construction materials, grant of interest free mobilization advances. Waiving the cost of insurance of workers & employees, cost on account of extension of Bank Guarantee, waiving of panel interest during COVID-19 lockdown period and 3 months thereafter on loans for construction taken by builders, idle cost of labor, machinery and infrastructure to be borne by Govt., due to COVID-19 effect and relaxation in eligibility criteria of intending bidders for the work/ tenders in post COVID-19 period.

Shri Hitendra Mehta, MD, Mehta & Associates and EC Member, IBC, in his address informed that in Post COVID-19 situation, there will be more space requirement on account of social distancing, health and safety consideration. Planning and designing norms of residential, commercial, institutional buildings, developmental norms of cities & townships, street scaping,

parks, lawns, public gathering buildings, etc. will have to be revisited by the Government. On account of social distancing requirement major changes are expected in transport sector also like passenger capacity of existing mode of transport will have to be reduced thereby increasing the cost of public transport, number of public transport vehicles will have to be increased, the road lanes may have to be increased, private transport vehicles may further increase. Sweeping changes in construction project management & labour management are also expected. Off site construction activities with repetitive modules will be promoted thereby loss of employment of non-skilled workers. Work from home practice will increase, thereby reducing the requirement of office spaces, transport. The estimated cost and construction cost of projects will increase because of adoption of health norms, safety norms, social distancing, cleaner working sites, and insurance of workers in the project. Sensor based app may be necessary to maintain social distancing in workers & BIM Project model may have to be utilized.

The President IBC thanked everyone in making the webinar successful. He also mentioned that the recommendations flowing out of this webinar will be sent to the Government of India for its consideration to implement. Accordingly the recommendations of the webinar have already been submitted to the Govt. of India for their consideration.

Invitation of Nominations for election to Governing Council of IBC 2021-22

Nominations for elections to Governing Council of Indian Buildings Congress were invited vide Invitation of Nomination No.IBC/GC/2020 dated 31.10.2020 in various Categories under Rules 9.1.3.1 to 9.1.3.10 of Memorandum of Association, Rules & Regulations of IBC

On the request of many members, as they could not submit their nomination papers due to Pandemic of Covid 19, the date for submission of nomination papers is hereby extended as under:

Last date for receipt of completed

Nomination Form in IBC Head office 30th July, 2021

Withdrawal of nominations 10th August, 2021

The nomination form may be downloaded from IBC Website www.ibc.org.in

The nomination submitted earlier by the member will remain valid and they need not to submit the same again.

IBC Delegation meets Shri Vinit Kumar Jayaswal, Director General, CPWD

A delegation of Indian Buildings Congress (IBC) consisting of President Shri Pradeep Mittal; Vice Presidents Shri Anant Kumar & Shri R.N. Gupta and Honorary Secretary Shri H.P. Gupta met Shri Vinit Kumar Jayaswal, Director General, CPWD on June 18, 2020.

IBC delegation congratulated Shri Vinit Kumar Jayaswal, on his recent appointment as Director General, CPWD. The Director General, CPWD warmly welcomed the IBC delegation.



**President IBC Congratulating
Shri Vinit Kumar Jayaswal, DG, CPWD**

During the meeting the President IBC appraised the DG that CPWD is one of the founder member of IBC and DG is also a designated Governing Council member of IBC. President further informed about the important technical activities being done by IBC at present and

sought his support on the following issues:

- To advise and encourage CPWD professionals to enrol as members of IBC. The D.G., CPWD assured to take up with senior officers of the department to encourage the professionals working under their control for enrolment as members of IBC.
- To advise and encourage CPWD Professional for active involvement in technical activities of IBC for better dissemination of knowledge among all stakeholders.



Meeting in Progress

- To grant adequate funds from CPWD for construction of additional floors in existing IBC building.

DG, CPWD patiently heard the delegation and assured all-round support in IBC activities.

The meeting was fruitful with active involvement of all present. At the end, the Honorary Secretary, IBC thanked the DG, CPWD for sparing his valuable time for IBC delegation and for his positive approach in various IBC activities.

Webinar on “COVID-19 and revisions necessary for Planning of Smart Cities”

Indian Buildings Congress organised a Webinar on the topic **“COVID-19 and revisions necessary for Planning of Smart Cities”** on 19th May, 2020. Shri Shalil Rai Shrivastava, Addl, CEO, Nava Raipur Atal Nagar Smart City Corporation Ltd & E-in-C Nava Raipur Atal Nagar Vikas Pradhikaran, delivered the key note address. Shri Chetan Vaidya, Senior Urban Advisor, GIZ, Former Director NIUA & SPA; Sh. V.R.Bansal, Chief Engineer, North Municipal Corporation of Delhi & EC Member, IBC; Shri Hitesh Vaidya, Director, NIUA, also made their presentation/ speech.

At the outset, the President, IBC Shri Pradeep Mittal welcomed all speakers and viewers in the webinar. This webinar coincided with the 85th birthday of Shri O.P. Goel, Founder President of IBC which

fell on 18th May a day before the webinar was held. Shri Pradeep Mittal congratulated and conveyed his best wishes to Shri O.P. Goel on his 85th birthday and wished him healthy & peaceful life in the years ahead. The President mentioned about the unmatched contribution of Shri O.P. Goel in advising IBC in all its activities and towards society in nation building and other social activities. The President briefed the viewers about the role, vision and activities of IBC towards Built Environment and called upon non- IBC members among viewers/ audience for enrolling themselves as life member of IBC for knowledge sharing through this bigger platform having experts from different field. He also expressed the need of revisiting the norms

for planning, designing and construction of smart cities in line with requirement of social distancing and health norms due to COVID- 19 pandemic.

Shri K.K.Kapila, CMD, ICT and Past President, IBC also conveyed his good wishes to Shri O.P. Goel Founder President on his 85th Birthday. He mentioned that besides being an outstanding professional, Shri O.P. Goel is also outstanding person as he keeps donating in charity. He appreciated the initiative of the President IBC in holding the webinar in this difficult time of COVID-19 and wished all success for the webinar.

Every speaker congratulated and conveyed their good wishes to Shri O.P. Goel, Founder President on his 85th birthday and expressed their hope that he will continue to guide us in future also like previous years.

Shri Shalil Shrivastava, in his keynote address, mentioned about the infrastructure planned, designed and constructed in Nava Raipur smart Capital city. He informed that Nava Raipur is the India's first smart Greenfield city of 21st Century and most of the gadgets provided in this smart city serve the requirement of social distancing and health norms /SOP of COVID-19. He mentioned that having done, roads, water supply lines, electric lines, recycled water lines, optical fibre communication net work etc, more than 30% area is green. The city is surrounded by 500 mtr wide green belt. In the city, UMS, Smart governance, ITMS, City surveillance system, Smart network, data centre and IBMS system have been setup. About 250 CCTV cameras have been installed in the city besides 100 in bus shelters. Keeping in view the priority to Health, the systems have been adopted. All these systems, analyse the data, detects and gives alerts of crowd gatherings, congestion to maintain social distancing in public places. All services like, street lights, water supply lines are mapped on GIS where detection and monitoring of faults, leakage, quality & quantity of 24x7 water supply is automatic. Remote monitoring of Building services through IBMS is being used. Payment of utilities bills, building permission and other citizen centric services are web-based/ mobile app based. For office e-file management / movement system has been in practice. All these systems available in the Nava Raipur smart capital city are very much helpful in this COVID-19 times

for maintaining social distancing to restrict spread of COVID-19.

He also mentioned that AI based thermal screening system to keep records of movement of individuals on real time basis, GI based tracking & mapping solutions, GIS mapping of quarantine places are being used to monitor the individuals in hot spot areas. Mobility and access management system, issuing of bulk passes to the people with the help of ICT, tele consultation for patients with mobile testing laboratories have been set up where initial check of the patients is done without physically visiting doctor/hospital. Virtual class rooms and digital libraries have been set up which are accessible to all students, tutors and researchers etc.

Shri V.R. Bansal, Chief Engineer, North Delhi Municipal Corporation in his speech briefed about the health protection measures being carried out by MCD in its jurisdiction during COVID-19 pandemic. He also briefed about the history of Spanish flu, yellow fever etc. He further mentioned that in the light of new social distancing norms, the local bodies will have to consider revising the norms for planning & designing of cities and its buildings, like, open areas for allowing more natural light, wide segregated balconies, more plinth areas for residential accommodation, additional space in homes to accommodate work from home space requirement, increase in width of staircases, corridors, More fire floors in high rise buildings, more number of lifts, more parking areas in public buildings, increase in height of buildings, more ventilation by discouraging central air conditioning, creating more negative pressure for cleaner air circulation in the buildings, providing hands free fixtures, fittings of doors & windows, faucets & flushing of toilets etc. New anti microbial materials for construction will have to be thought of.

Shri Chetan Vaidya in his presentation briefed the viewers about more requirement of empowering local bodies, revision of urban housing and physical planning norms, re-orienting Architectural & Civil Engg., need of evidence based solutions, remodelling existing buildings, etc. in the light of social distancing norms as a health protection measures in this COVID-19 Times.

Shri Hitesh Vaidya, in his concluding speech while informing that more than 60% COVID-19 positive cases are in metropolitan cities stressed the need of revisiting the norms for planning & designing of buildings, encouraging socialising through phones, creation of more digital infrastructure to make most of the services contact free. He mentioned that to meet requirements of local public there is need to become vocal to use local knowledge & local product for local public. He expressed the need to adopt settlement & neighbourhood approach for local area

plan, co-ordination between different agencies, use of technology, use of modern gadgets of decision making, interdependent urban & rural planning friendly approaches.

Shri O.P. Goel Founder President, IBC, in his address thanked everyone for their good wishes on his 85th birthday and wished that community, society and professionals will gain enormously from the webinar.

At the end of webinar, the President, IBC thanked all speakers and everyone who joined the webinar.

2nd NATIONAL EXECUTIVE COMMITTEE MEETING OF IBC held AT KOTA

The 2nd Executive committee meeting of IBC was held on March 1, 2020 at Maheshwari Resort, Bundi Road, Kota (Rajasthan) under the Chairmanship of Shri Pradeep Mittal, President, IBC. The meeting was attended by 17 members including 4 invitees. For enhancing the membership base of IBC, the E.C., constituted a committee to review the

existing guidelines and criteria to become life member. The E.C. also approved to add two more categories viz 'Monumental Structures & Recreational Schemes' in Built Environment for submission of entries by the intending participants for IBC Awards.

Glimpses of IBC Executive Committee Members being welcomed on their Arrival at Kota



**IF YOU WANT TO SHINE
LIKE A SUN, FIRST BURN
LIKE A SUN.**

Dr APJ Abdul Kalam

To mark the occasion, mementoes were also presented to the Chief Guest Shri Pradeep Mittal, President IBC; Guest of Honour Shri O. P. Goel, Founder President & Executive members of IBC.



Shri Pradeep Mittal receiving Memento from Shri P. K. Jain



Shri O. P. Goel being honoured by Shri C. L. Verma



Shri O. P. Goel receiving Memento from Sh Dharendra Mathur



Dr. S. P. S. Bakshi receiving Memento from Shri M. L. Kalwar



Shri B. Majumdar receiving Memento from Dr. S. L. Jain



Shri Abhai Sinha receiving Memento from Shri B. L. Malav



Shri R. N. Gupta receiving Memento from Shri V. K. Jain



Shri V. S. Verma receiving Memento from Shri Dharendra Mathur



Shri H. P. Gupta receiving Memento from Shri V. K. Jain



Shri Sanjeev Kumar Lohia receiving Memento from Shri A. K. Sahu



Shri V. R. Bansal receiving Memento from Shri Sunil Bohra



Shri K. K. Gupta receiving Memento from Shri V. K. Porwal



Shri C. L. Verma receiving Memento from Shri B. D. Maheshwari & Shri R. P. Sharma



Prof. (Dr.) Madhura A. Yadav receiving Memento from Smt. Anju Sharma

Webinar on “Exodus of Migrant Workers from Construction Industry-Effects & Various Mitigation measures including Housing for Construction Workers”

Indian Buildings Congress organised a Webinar on the topic **“Exodus of Migrant Workers from Construction Industry-Effects & Various Mitigation measures including Housing for Construction Workers”** on 9th June, 2020 at 5.00PM. Eminent speakers were invited who presented their views on the topic. The Panelist Dr. K.K.Pandey, Professor, Urban Management Coordinator, IIPA; Ms. E. Jayashree Kurup, Editor-in-Chief, MBTV; Sh Manish Gupta, Managing Director, BSBK Ltd. and Dr. Akshaya Kumar Sen, Joint General Manager, HUDCO delivered their speech.

Shri Pradeep Mittal, President, IBC in his opening address welcomed Shri O.P. Goel, Founder President, IBC, all the panelist, Shri H.P.Gupta, Hony. Secretary, IBC and all the viewers/ audience. He briefed everyone attending the webinar about the history, role and vision of IBC. While expressing the relevancy of the topic of the webinar in the present day scenario of COVID-19, he outlined the main reasons for exodus of migrant workers, effect thereof on industry and necessity of setting up mitigation measures to bring them back for revival of the industry. He mentioned that most of the migratory construction workers had bitter experience during the lockdown as they faced acute problem of fooding and lodging. Instead of showing empathy and owning them, the industry made excuses, did not pay wages to workers during the lockdown of this natural calamity and thought it better to get rid of them.

On account of lockdown & shutting down of all the major industries including construction and its allied industries, the migrant construction workers/ daily wagers who were basically the operating backbone of the industry, they became suddenly jobless. Their income sources vanished and the lock down has been a cause of severe misery of women and children. The workers were left with no money to feed themselves, for paying rents and to meet their day-to-day needs. Therefore, most of the workers migrated to their native places for their survival. Many workers alongwith their families and children were forced to travel hundreds of kilometres on foot to reach their native places. Government also had to run more than 4250 shramik special trains to send the migratory labour to their native places.

Lockdown caused disruption to the economy and the livelihoods, especially of the lower middle class, lower class and working classes residing in slums. Since most of them live in slums, lack space, sun, air, clean water and sanitation, the Covid pandemic has exposed them more to the epidemic and made them more vulnerable in view of their congested and unhygienic living conditions. The President, IBC, suggested for a systematic analysis of their working, fooding and living conditions towards ensuring to create a healthy, resilient working and living environment as a confidence building measures for this working class.

He also invited attention towards the apathy of various state Governments in dealing with the situation which though have amassed huge funds under the labour cess collected from the industry meant for the welfare of the labour, but it appears the same has not been judiciously utilized that could meet the basic needs of fooding, shelter, transportation etc., of the labour during this pandemic to stop the migration.

The President, IBC suggested to the Government and industry to revisit their policies and to take initiatives in mitigating problems of migratory construction workers by re-assuring their safety, better working conditions, attractive wages, compulsory insurance of worker, EPF, ESIC & Pension facilities, arranging special trains/ transport to bring them back without charging any cost from them besides ensuring welfare measures for workers and their families at work site/ work places like housing, fooding and hygienic living conditions, schooling for their children, primary health care centres near their housing etc. so that workers remains free from these worries for him and his families and concentrate on work. He made a call to the Industry to prepare Multi-model mitigation measures on these lines for migratory labour suiting to their needs as a confidence building measures.

Shri O.P.Goel, Founder President, IBC while thanking everyone joining the webinar, informed that the COVID-19 epidemic has caused worldwide distress, fear psychosis, phobia among the working class, led to their dispersal, lockdown to save the lives JAAN and JAHAN, jeopardised the entire industry by bringing all activities

including construction activities to a grinding halt as is where is. Relaxation of lockdown in a phased manner and resumption of activities is a big challenge for which remobilisation of workers is necessary by developing confidence building measures to attract them back.

He suggested pool of workers be formed by the lending states and work centres by the borrowing states. Works is to be continued with available labour strength. All workers be registered and compulsorily provided EPF, ESIC and other benefits on individual continuous basis without reference to employer and change of employment. Govt. to change rules in this regard. Presently this facility of EPF & ESIC is not available to all workers because of the prevalence of sub-contracting system. The present day situation could have been dealt with in better way had this system of EPF & ESIC existed for all workers. Workers should be given incentives to come back.

Shri O.P. Goel also suggested the need of long term, measures for the workers like more mechanisation of construction activities and skilling of workers involving lesser non-skilled work force; registration of all workers irrespective of the fact whether they are employed by any contractor or are waiting for employment in the pool, stable mechanism to look after their welfare, suitable accommodation atleast at all major project sites; rented accommodation arranged by Government under Govt. schemes at subsidised rates in place of Jhuggies and suitable transport facilities between work place and the housing.

Dr. K.K. Pandey, Professor, Urban Management Coordinator, IIPA, described the construction sector to be most important area in the economy which provides around 8% employment. For resumption of functioning of the construction industry, he expressed the utmost importance of the role of contractors and the industry in bringing back the migrant construction workers, as they know the addresses and whereabouts of most of the workers. The States should arrange trains and buses and bear the expenditure for bringing back the migratory work force. Local bodies should provide land free of cost, where the industry can construct the housing for migratory workers which can be rented out to them on affordable terms and conditions. He also expressed the need of converging different available schemes for benefit of workers and registration of each worker for

covering them under EPF, ESIC, insurance, pension etc, and for keeping their proper records.

Ms. E. Jayashree Kurup, Editor-in-Chief, MBTV in her speech expressed that the COVID-19 has changed the world for ever. The contract labour which fled in large number has disrupted all the construction activities. Despite the fact that the contractor knew their projects will stall for longer period, they did not help the workers and allowed them to leave. Since the workers did not know as to when their income will restart, they preferred to leave for their villages in the hope that at least they will get food. Industry should not expect labour to spend for their transport to return. The labour basically wants job security, safety at work places, attractive wages, free basic facilities of electricity, water, primary schools, health care facilities, hygienic housing and transport from their housing to work places and back. On completion of each project the construction workers are bound to move from place to place in search of work. Therefore, Industry should not expect the workers to buy the houses. Instead the industry should consider providing community fooding & dormitory type accommodation at site on Gujarat model or cheaper and affordable rented accommodation to labour. Industry should assist the labour in opening of their Jan-Dhan Bank accounts, making available smart mobile phones for general banking, loading Aarogya setu app which will work well. She also expressed that interstate migration of labour should be discouraged and most of the labour should be employed within their native districts. She quoted that in the recent past the builders in Uttar Pradesh have assured the Government that they will employ the local labour which has migrated back to their native places.

Shri Manish Gupta, Managing Director, BSBK Ltd. in his speech discussed more about the user perspective, problems they are facing in the industry due to non availability of workers on their projects. He informed that his company is in the affordable housing and is using newer technologies where it has trained the labour over the period. He mentioned that the reasons for inter-state migration of construction labour are not understood. West Bengal labour moves to Jharkhand and the Jharkhand labour moves to West Bengal for work whereas the labour can work within their states. In the present scenario interstate transport of labour is difficult. He pointed out bureaucratic problems in employment of local labour

too. He expressed the need of skilling the local labour by skill development institutes of the Government/ industry. However he expressed his apprehensions that skilling of local labour will take another 6 months and there is no guarantee whether these workers after getting skills will work locally and will not migrate. He also mentioned that the monsoon is likely to start and the works will remain suspended for another three to four months which will resume not before end of September, 2020, thus the economy condition is not going to improve in the next 3 to 6 months. He emphasised the need of paradigm shift in the industry and to redesign the housing for workers suitable for the Post Covid-19 requirements. He also advocated the rented accommodations for the migratory labour as a mitigation measure to solve the housing problem of workers.

Dr. Akshaya Kumar Sen, Joint General Manager, HUDCO, in his presentation advocated the implementation of National Urban Housing Rental policy which is still in draft stage. In his detailed presentation he explained proposed accommodation could be Public Rental Shelter/ Hostel/ Ran Basera/ Awa Jawa Basera with beds and subsidized food for migrant workers for single occupancy, double occupancy, 4 occupancy and dormitory type occupancy where the monthly rent could be 2 to 5 days wages of a worker. The parking facility, multipurpose shops and ATM facilities could be provided in the housing. For the housing purpose land could be allotted by the Urban Local Bodies/ Development Authorities/ Housing Boards/ Government departments near transport terminals/industrial areas near major hospitals etc. Government could utilise the labour cess available with them for creation of this infrastructure. He also informed that Odisha has shown the way in this direction where it is incurring 47 crores out of 300 cr. Labour cess available with it in its coffers for creating the infrastructure at 18 locations.

Shri Anant Kumar, Special Director General (Tech.), CPWD in his address informed that he has been asked to prepare a policy document for creation of housing for the migrant construction workers and called upon the panelist for their workable suggestions in preparation of the policy document in this regard. He also informed that he is working on revising the specifications of the housing for construction workers in place of Katcha Jhuggies as provided in the standard tender document.

He further pointed out non-availability of land within cities near construction sites for construction of housing for the purpose. It is available only on outskirts of the city from where ferrying labour to different work sites will be impracticable. He suggested that Governments/ Local Bodies could permit extra FAR for enabling the builders to construct the housing/ dormitories for the construction labour in the beginning and on completion of the project convert the same into service areas like service centre, shopping complex, community centres, accommodation for service staff etc. For larger Projects like IIMS, IITs, Engg Colleges, Hospitals etc, the housing for construction workers to be constructed in the beginning should be designed in such a way so that on completion of the project same could be utilised by support staff/ service staff of the institute besides accommodating service centre, shopping complex etc.

At the end of the Webinar, Shri H.P.Gupta, Honorary Secretary, IBC presented the Vote of thanks. He thanked all the panelist for their valuable deliberations and the viewers for joining the seminar and making it successful.

After conclusion of the Webinar, Shri K.B.Rajoria, Former E-in-C, Delhi PWD and Past President, IBC vide his email dated 10th June, 2020 and Shri M.C.Bansal, Former Special DG, CPWD & Advisor (Tech.), IBC submitted their observations which are brought out here.

Observations of Shri K.B. Rajoria:

The Webinar was organized in excellent manner and all speakers gave outstanding presentation. Some issues, which were not covered fully are brought out here.

1. Accommodation for workmen- The situation to some extent was brought out by Ms Jaishree. It was her point of view. Concept of permanent housing for construction workers, as brought out by HUDCO, will be difficult in implementation particularly in mega cities. It is not a practical solution because land will not be available at project sites. Instead, it will be desirable that contractors organize accommodation at project site, by providing refurbished shipment containers. There should be concept of taking containers on hire. This arrangement will be good for efficiency of work and convenience of workmen. In foreign countries, this arrangement is very common. Therefore, container service should be propagated.

2. Registration of construction workers- The effect of covid-19 is that most of construction workers have gone to their native villages in different States. These workers will be required at project sites. In order to get these workers, efforts of State Governments will be necessary. It will be desirable that movement of these workers is recorded, by both the State Governments and Local Bodies as also Panchayats. This will help in tracing locations of construction worker. It will also help in manpower planning for projects.
3. Training of construction workers- The responsibility of training of construction workers should rest with principal employers. For construction sector, Government departments are generally principal employers. The responsibility given to Ministry of Skill Development should be transferred to principal employers like C.P.W.D., Railways, MES etc. They should in turn ensure that contractors employ trained worker or impart training to them. Principal employers should test their skills in systematic manner. Covid-19 effect will give opportunity to implement this change.

Kindly consider including above points in the report. We can send copy of the report to Niti Ayog, Govt. of India's different Ministries, State Governments and major construction organizations of Government.

RECOMMENDATIONS:

1. Technological inputs to be increased to reduce the requirement of number of workers. Simple gadgets for doing sundry jobs should be devised.

Types of mechanization may be worked out for different types and sizes of construction activities.
2. The skills of the workers need to be upgraded. On job and off job training may be provided. The workers may be paid full wages and other benefits during such training.

The funds available under workers welfare cess may be allowed to be used. The State Governments should place the funds with the training organizations.
3. The benefits of EPF, ESIC etc. are presently available to workers through the Contractor employing a minimum number of workers. As workers are put on job through sub-contractors, large number of workers are deprived of these benefits.

All workers individually should be registered and made eligible for these facilities. They should not get deprived in case of change of employment. During idle period, the payment should be made by the State Govts.
4. The System of registration of all construction workers with a permanent registration number w.r.t. Aadhaar Card may be put in vogue.
5. Pools of workers should be available at the lending States as also at the borrowing State. The Contractors can draw upon these pools as per requirements.
6. Accommodation for workmen- The contractors should organize accommodation for migrant construction workers at new project sites, by providing re-usable temporary refurbished 2 storied steel framed structures duly assembled with nuts and bolts, alongwith first aid and quarantine facilities, separate common toilets and separate community kitchen block with dining facility etc. in line with COVID-19 SOP requirement for construction industry.

Provisions should be made accordingly in new Contracts so that the bidders quote their rates accordingly.
7. On account of COVID-19 requirements, expenditure for making any modifications in the existing accommodation provided by the contractors should be reimbursed to them by the employer.
8. In new major Projects like IIMs, IITs, IISC, Hospital & Medical colleges campus, Para-military complexes or housing projects or projects spread in 10 acres of area or more for creating any other infrastructure, accommodation for construction workers should be designed and got constructed at the beginning of the project in such a way that the same could be economically converted into service areas like, service centre, accommodation for staff etc or used for rentable housing on completion of the project

9. The accommodation/Hostel/Aawa Jawa Basera for the migratory workers should also be constructed by the Government nearer to bus terminals, industrial areas and hospitals or any place in the vicinity where land is available having good transport connectivity. This accommodation could be allotted for specific time to the workers at subsidized rates under National Urban Housing Rental Policy. Necessary transport arrangements for the workers to travel to work sites should be arranged by the Government.
10. Registration of construction workers: All workers irrespective of the status of their employment within their native state or outside should be registered digitally compulsorily within their native state. All the basic details including Aadhaar card number etc., should mandatorily form part of the registration details. It will be necessary that movement of these workers is recorded, by both the State Governments and Local Bodies / Panchayats.
11. Pools of workers shall be formed by the lending states and at work centres by the borrowing states. This will help in tracing location of a construction worker and in dealing with all social welfare measures. It will also help in manpower planning for projects.
12. Arrangements to transport the workers back: To bring back the migrated registered workers from lending states, the borrowing State/Central Government should give incentives to workers and should make special onetime transport arrangements without charging any cost from the workers. The borrowing State Government should also make arrangements for fooding and lodging during transit as well as on their arrival at destination for a fortnight or till they get employed whichever is earlier.
13. Payment of wages to workers during normal circumstances and during lockouts / lockdown / Force majeure etc.: The borrowing State should arrange to ensure that the workers get proper wages. To deal with event of lockdown/lockouts/ force majeure or any COVID-19 like situation in future, Government should directly make payment of wages to the workers during lockdown/ lockout/ force majeure/epidemic/pandemic period.
14. Primary education, health care & crèches facilities: There should be stable mechanism of the employer under its social responsibility to provide Primary education to children of workers and health care facilities to their families near work places. There should be provision in the tender document for providing free of cost hygienic crèche facilities for the kids of workers at each construction site of work.
15. Insurance, EPF, ESIC & Pension facilities: All tender documents should contain mandatory provisions for employment of registered workers and their insurance, EPF, ESIC facility. The Government should provide compulsorily EPF, ESIC, Pension facility and other benefits to all workers through digital platform on continuous basis without reference to employer and change of employment.
16. The tender documents therefore need to be modified. The new construction Contracts should accordingly provide conditions for construction of desired accommodation to accommodate construction workers during execution of projects, by removing the existing outdated provision of temporary kutchra / pucca jhuggies like slums. The Contracts should also provide for registration of all workers and availability by EPF, ESIC benefits to all workers.

You can't cross the
sea merely by
standing and
staring at the
water

—Rabindranath Tagore

Activities of State/Local Centres

West Bengal State Centre-Kolkata

West Bengal IBC State Centre held Eastern States Conference of Indian Buildings Congress on Feb. 2, 2020 at Kolkata in its premises at Tollygunge. The participants from West Bengal, Odisha, Bihar Jharkhand and Tripura participated in Conference. Shri B.K. Dam, Chairman, West Bengal IBC Centre, inaugurated the conference by lighting the ceremonial lamp. He welcomed all the guests and felicitated them with flowers and gift. IBC Geet (song) was also played. Shri Dam apprised the history of West Bengal State Centre of IBC to all the members present. Shri Dam also apprised the gathering about various activities of West Bengal State Centre which included training of unemployed youths from underprivileged

Eastern States Conference of IBC held at Kolkata

section by conducting two seminars every year and publishing the proceedings of seminars on vital relevant current themes. He also appreciated the development of Odisha, Bihar, Jharkhand and Tripura State. Chairman and Secretaries from all the states present in the conference also elaborated activities of their respective IBC State Centres. Shri C. Debnath Vice President, IBC suggested for conducting the joint programme of two or more states in reciprocal basis. Shri Debnath also discussed some agenda of common issues of all States present in the conference. Conference ended with vote of thanks to all the members present.

कोटा चैप्टर की द्वितीय वार्षिक बैठक एवं तकनीकी सेमिनार



भारतीय भवन कॉंग्रेस कोटा लोकल सेन्टर की द्वितीय वार्षिक सामान्य बैठक एवं तकनीकी सेमिनार दिनांक 28.02.2021 को 11:00 बजे इंस्टिट्यूट ऑफ इंजिनियर्स कोटा (इण्डियों), भवन के सभागार में आयोजित की गई।

दिनांक 20.2.2021 को आई.ई.आई. सभागार झालावाड़ रोड कोटा में आई.बी.सी. कोटा लोकल सेन्टर की द्वितीय वार्षिक सामान्य बैठक का आयोजन किया जिस समारोह में मुख्य अतिथि श्री प्रदीप मित्तल, प्रेसीडेंट, आई.बी.सी., विशिष्ट अतिथि श्री धीरेन्द्र माथुर पूर्व मुख्य अभियंता सा.नि.वि. राजस्थान तथा श्री आनन्द बारदवा प्रेसीडेंट आई.ई.आई. कोटा चैप्टर ने माँ सरस्वती तथा सर् एम.विश्वेश्वरय्या जी को माल्यार्पण कर दीप प्रज्वलित किया। कार्यक्रम के प्रारम्भ में श्री भगवान दास माहेश्वरी, वाइस चेयरमैन कोटा लोकल सेन्टर व कार्यक्रम के संयोजक द्वारा पथारे गये अतिथियों तथा सदस्यों का स्वागत किया गया।

तत्पश्चात श्री आनन्द बारदवा, प्रेसीडेंट, आई.ई.आई.कोटा चैप्टर द्वारा आयोजन में प्रतिभागी आई.बी.सी.के अतिथियों एवं सदस्यों का अभिनन्दन व स्वागत किया।

श्री राजेन्द्र प्रसाद भार्मा, सचिव, आई.बी.सी. कोटा लोकल सेन्टर द्वारा प्रोग्राम का संचालन करते हुए वर्षभर का लेखा-जोखा प्रस्तुत किया।

डॉ. भरत प्रकाश सुनेजा, डीन व प्रोफेसर इंजिनियरिंग कॉलेज कोटा द्वारा 'Role of New Education Policy for Healthy Planet' पर प्रजेन्टेशन व्याख्यान दिया जिसको सभी ने सराहा व

इस व्याख्यान को आई.बी.सी. के मंच के माध्यम से राष्ट्रीय स्तर पर भी आयोजित करने हेतु अग्रेषित किया।

श्री पदम कुमार जैन, चेयरमैन, आई.बी.सी. कोटा लोकल सेंटर ने अपने सम्बोधन में लोकल सेन्टर में भागीदारी के लिए सदस्यों की भूरि-भूरि प्रशंसा कर उत्साहवर्धन किया साथ ही कोटा चैप्टर को नई तकनीकी ज्ञान को विस्तार हेतु सभी माननीय सदस्यों को अग्रसर करने हेतु निवेदन किया ताकि न केवल स्थानीय लोकल सेन्टर पर बल्कि राष्ट्रीय स्तर पर भी नये आयाम स्थापित हो। आई.बी.सी. की सदस्यता 34 से बढ़ाकर 111 तक करने के लिये सबका बहुत-बहुत धन्यवाद दिया।

डॉ. सुनेजा के प्रस्ताव का भी अनुमोदन किया कि आई.बी.सी. के प्लेटफॉर्म से नये नये अनुसंधानों का पेटेंट किया जावे जिससे स्थानीय स्तर पर किये गये शोध को पहचान दिलाई जा सके तथा नये-नये शोधों के लिये प्रोत्साहित हो सकें, जिसका श्री प्रदीप मित्तल प्रेसीडेंट आई.बी.सी. द्वारा भी समर्थन किया गया व कहा कि इसे आगामी काउन्सिल सभा में विचार हेतु रखा जावेगा।

मुख्य अतिथि द्वारा लोकल सेन्टर के सदस्यों व संस्थाओं को उत्कृष्ट कार्य करने के लिये स्मृति चिन्ह देकर सम्मानित किया।

अध्यक्षीय भाषण में प्रेसीडेंट आई.बी.सी. श्री प्रदीप मित्तल द्वारा आई.बी.सी. कोटा लोकल सेन्टर के कार्यकलापों तथा सक्रियता की तारीफ व स्थानीय विस्तार तथा इंजिनियरिंग के क्षेत्र को मध्य नजर रखते हुए सदस्यताओं की संख्या 111 से 500 तक बढ़ाने का लक्ष्य निर्धारित किया गया। निर्माण क्षेत्र में जुड़े कान्ट्रेक्टर, आर्किटेक्ट, इंजिनियर को आई.बी.सी. के माध्यम से जोड़कर निर्माण क्षेत्र में अग्रणी चुनौतियों तथा कमियों को दूर करने के लिये अधिक से अधिक कार्यशालाएँ आयोजित करने के लिये कहा। नवगठित कार्यकारिणी द्वारा अध्यक्ष श्री प्रदीप मित्तल जी को माँ सरस्वती की तस्वीर भेंट कर सम्मानित किया गया।

अंत में श्री सुरेश कुमार बैरवा अतिरिक्त मुख्य अभियन्ता सा. नि.वि. द्वारा धन्यवाद प्रस्ताव ज्ञापित किया गया व युवा इंजिनियरों को आह्वान किया कि निर्माण को पूर्ण डिजाईन प्लानिंग तथा गुणवत्ता के साथ कराया जाना सुनिश्चित करें। समारोह का समापन राष्ट्रगान के साथ सम्पन्न हुआ।

First Annual General Meeting of Kota Chapter

First Annual General Meeting of Kota Local IBC Centre was held on March 01, 2020 at Maheswari Resort Bundi Road, Kota.

The meeting was chaired by Shri C. L. Verma, Member, IBC Executive Committee & former C.E. & Additional Secretary, PWD Rajasthan; Guest of Honour Shri Dharendra Mathur, Founder of Kota Local IBC Centre & former C.E. PWD Rajasthan. Meeting was attended by eight other members of management committee of Kota local centre and local members of IBC.

In his welcome address, Shri P. K. Jain, Chairman, Kota Local IBC Centre and former C.E. PWD Rajasthan welcomed all the members present in the AGM.

He said the strength of Kota local IBC Centre has increased from 34 to 85 members during the short period of 6 month of formation of Centre and hoped to achieve the target of more than 100 members shortly.

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With the unanimous consent of local members, the management committee for the next coming year 2020-2021 is constituted as under:

Chairman	: Sh. Padam Kumar Jain, Fmr. C.E., PWD, Rajasthan.
Vice Chairman	: Sh. Bhagwan Das Maheswar, Fmr. Addl. Chief Engineer, PWD Raj.
Vice Chairman	: Dr. B.P. Suneja, Dean, Faculty of Engineering & Archt., RTU, Kota Raj.
Vice Chairman	: Sh. Suresh Kumar Bairwa, Addl. C.E., PWD Zone, Kota
Secretary	: Sh. Rajendra Prasad Sharma, Fmr. E.E, PWD, Raj.
Treasurer	: Sh. Ashok Sanadya, E.E., PWD Dn. Shahbad, Baran.

Members : Sh. Arvind Kumar Sahu, S.E., PWD, Kota; Sh. Verain Porwal, E.E., PWD, Kota.; Sh. Vijay Kumar Jain, Estate Engineer, R.A.U, Kota; Sh. Manish Jain, Consultant & Chartered Engineer; Sh. Om Jain, Architect.

The Annual General Meeting concluded with playing of National Anthem.

Chennai Local IBC Centre

Extraordinary General Meeting to elect new Office Bearers of IBC TNSC 2020 -2021

An Extraordinary General Body Meeting of the Members of the Indian Buildings Congress (IBC) Tamil Nadu State Centre was held on 1st April 2020 at 5.00 P.M. at the Lecture Hall of PWD Complex, Kamarajar Salai, Chepauk, Chennai – 600 005 to elect new Office Bearer of the IBC TNSC. Shri T.R.K. Suriyaprakash, Chairman, Indian Buildings Congress, Tamil Nadu Centre chaired the meeting and welcomed all the members present in the meeting.

Following new Officer Bearers have been elected for TNSC for the period of 2020-21 (Two years) w.e.f. 01/04/2020.

- (i) Shri C. Kalyanasundaram- Chairman
- (ii) Shri. M. Sappani Pillai - Vice Chairman
- (iii) Dr. T. Arul – Secretary
- (iv) Shri R. Jeyakumar – Treasurer

Surat Local IBC Centre

Indian Buildings Congress Gujarat Chapter Organized a Webinar on “Construction Workers Safety, Health, and Welfare in context to COVID-19” on 09th May 2020 in association with Bandhkam Mazdoor Sangathan Ahmedabad, Gujarat Contractor Association & SV-NIT Surat.

The Main points of discussion in Webinar were:

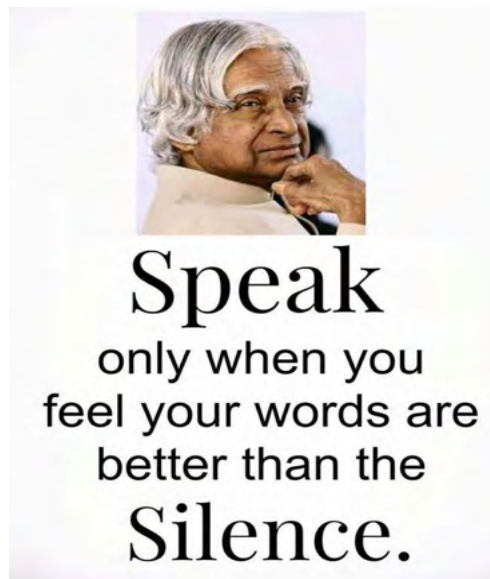
1. The real scenario of Covid-19 situation in India and precautions and measures to be taken before resuming work.

2. Study on effect of lockdown on construction site and industry.
3. How workers should follow the guidelines of lockdown on resumption of work and how to proceed further for safer construction environment.
4. Precautions to be taken by government as well as contractors for resuming work.
5. Where welfare and associations should focus.

The General outcome of the Webinar were:-

1. DISH should take strict steps towards registration of each construction project under section 7 of the BOCW Act. 1996 after discussion with RERA Chairman. Also, keep check about regular payment of 1% CESS under the BCOW Act. 1996. And, registration of each worker under rule number 58 form 29 of Gujarat BCOW 2003.
2. Workers should follow the government rules for Covid 19, for health and safety. And, it should also be monitored by district, city, and zonal based committee.
3. Workers should have the fit and fine letter to prevent from Covid 19 by their employers and help them in all situations.
4. A labour colony should be set up to maintain Social and Physical distance ,Even in room workers stay, should be included in the rules of Gujarat BCOW 2003 by making rules regarding convenience.
5. Basic requirements should be provided to workers for Clean toilet, bathing, and drinking facilities and rest time, for female baby sitting facility for their children.
6. Each site should have a board with details of site registration, number of workers, number of workers from outside states, minimum wage rate, date of payment, names of labour officers as well as construction inspectors, and phone numbers so that workers can complain. The salary of each worker is deposited directly into the bank account.
7. Daily thermal screening, testing, safety and health instructions during work, sanitizer and PPE should be provided on-site, Health check once a month, health policy should be provided, Infected worker should get leave on current pay. In case of death, the worker should be compensated under the Compensation Act.
8. If workers from outside states are working, the Labour Commissioner's Office must ensure that they have complied with the Migrant workers Act-1979.
9. Each worker should be registered under labour board. It should be valid on a pan India basis supported by issuing a portable beneficiary identity.
10. An online portal for migrant workers should be set up where mapping and tracking of employers/ contractors and laborers can take place. In which attendance of workers, salary-related information is uploaded.
11. Arrangements can be made for the workers who go to Naka to get employment by taking on-the-job, a working colony should be set up to accommodate the outside laborers, and the necessary facilities are provided.
12. Full medical check up for worker and family needed, before working on site, Pregnant women not allowed to work and provide all medical facilities.

The Webinar ended with a Vote of Thanks to all by Shri Dilip Patel, Assistant Professor in Civil Engineering Department, SVNIT, Surat, Gujarat.



Bihar State Centre -Patna

Webinar on “Testing and Purification of Drinking Water” held at Patna

The Bihar Chapter of Indian Buildings Congress, held a webinar on 17th May, 2020 on the topic **“Testing and Purification of Drinking Water”**. Eminent speakers were invited who presented their views on the topic.

Shri Harendra Dubey, Honorary Secretary Bihar State chapter, IBC in his introduction speech welcomed Shri O.P. Goel, Founder President, IBC; Shri Pradeep Mittal, President, IBC; all speakers and viewers. He expressed the importance of water to life and necessity of testing and purification. He expressed his thanks to the President, IBC for his proactive approach in initiating the process of holding webinar in this difficult time of Pandemic due to COVID-19. He expressed hope that inputs/ suggestions flowing out of the seminar will be of immense help in making available pure drinking water to the society.

Shri Pradeep Mittal, President, IBC, in his opening address welcomed Shri O.P. Goel, Founder President, IBC, Shri Rajeev Upadhyay, and Shri Harendra Dubey, all experts / speakers in webinar and all the viewers / audience. He briefed about the role and vision of IBC. While lauding the role of IBC in ‘Built Environment’ He called upon non-IBC members among viewers/ audience for enrolling themselves as life member of IBC for knowledge sharing through this bigger platform having experts from different field and to give more strength to IBC. He expressed that in this difficult COVID-19 Situation, the role of testing of water for making available pure drinking water to the society has gained more importance. There is scarcity of water across the Globe. To make available sufficient and pure drinking water to the society is a challenge. He mentioned that Water is the basic necessity of life and one cannot think of life without water. “Jal Hi Jiwan Hai”. He also expressed the necessity of conservation of water through rain water harvesting and recycling besides need of economising the costly water purification tools/gadgets being used by the users.

Shri O.P. Goel, Founder President, thanked the organisers of webinar for giving him this honour to share his views. In his address he briefed the audience about the history of IBC. While thanking every viewer of the webinar, he informed that IBC has been arranging seminars on different topics of national and international importance in Built environment for the welfare of society. Today’s webinar is also in the same series and expressed that it will benefit the viewers.

Shri Rajeev Upadhyay in his address dealt mostly about the society and institution of families and their relation with welcome drink of water to visitors. He informed that the world has revolutionised and we are evolving. Generally we do not question the quality of water when it is given to us in welcome drink during our visit to anyone’s house because we trust the quality of water. But this trust is getting shattered because of the revolution in science where there is question mark on water purification regarding its processes and whether it is absolutely pure in all aspect or simply looks clearer but contains harmful contents. He called upon the viewers to make it a habit to maximise consumption of tested pure water. He mentioned the four important processes in this regard namely Need, Availability, Disposable income and Willingness to accept the quality. He emphasised the need of testing of water instantaneously at the source.

Shri Tathagat Chakraborty in his presentation started with need of understanding water, its availability globally on surface, underground and in atmosphere, What percentage of it could be used, water deficit areas, profile of earth w.r.t water etc. He underlined the importance of testing of water to diagnose and treatment processes to deal with impurities of water in the form of contamination, physical attributes, Chemical attributes and microscopic entities present in water. Water contains many physical attributes like, suspended solids, turbidity, dissolved solids, absurd Ph Value; Heavy metals and salts, arsenic, iron, lead, mercury, Coliform & viruses. Water being universal solvent, many salts get dissolved into it. Without properly testing the water, its purity for drinking can not be ascertained. Dirty water having larger turbidity/ suspended solids can lead to death of plants in bed of river/ pond/ sea etc because the sun light will not reach the plant; death of aquatic life and increase in coliform concentration. He informed operations like mining, smelting, timber processing, glass pharmaceuticals, burning of fossil fuel and volcanic eruptions causes addition of arsenic in atmosphere which gets mixed with water. It adversely affects human health system. The coliform contamination testing is divided to find out total coliform, thromo tolerant and E-Coli. The E-Coli is a bacteria present only in human faeces and will be found in water if it has come in contact with human faeces/ excreta/ sewage. He also briefed about the permitted level of impurities in water as per WHO/APHA/ USEPA/BIS standards.

He informed that the testing of water at the site is necessary to avoid errors in sample collection, change in physio-chemical properties due to longer time lag between sample collection & testing and loss of data during transit. He informed that presently mobile onsite testing kits are being used by them which tests the water at source, gives real time test report at spot, instantly conveys the total data and test report to the dash board of central office where it is analysed centrally to ascertain the process of purification of water to make it drinkable.

Many questions of the viewers were also answered by Shri Chakraborty.

Shri Sunil Choudhary, Vice-Chairman, IBC Bihar chapter and Director, BCD, Patna, Govt. of Bihar, presented the vote of thanks. He thanked everyone who joined in this webinar. He also thanked the Founder President for his valuable guidance and Shri Pradeep Mittal President, IBC for his initiative and untiring efforts in holding the webinar. He gave his special thanks to Shri Rajeev Upadhyay and his team for their co-operation.

At the end the Webinar was concluded by Shri Harendra Dubey, Secretary, Bihar State Chapter of IBC by expressing his gratitude to all those who contributed in making the webinar a grand success.

Webinar “Integrated Water Resource Development- Need of the Hour” at Patna, Bihar

Indian Buildings Congress (IBC), Bihar State Chapter organised online Visvesvaraya Memorial Lecture on his 160th birth Anniversary of Bharat Ratna Sir Mokshagundam Visvesvaraya. Since 15th Sept was the working day, it was decided to arrange lecture on 13th Sept, 2020. Sunday at 3.30PM. The theme was “Integrated Water Resource Development- Need of the Hour”.

The key speaker was Dr. V. Jyotiprakash, Prof in Civil Engineering Dept, IIT Bombay and Dr. A.K. Pandey from Paris (France), who is also world champion of Robotics, working as a Chief Technology officer at Hanson Robotics, France & Shri Rajiv Ranjan Upadhyaya, M.D., Zentraac Consultant, Kolkata, eminent Engineer & Professional working in water sector. Delegates from Pan India attended the programme. Shri Harendra Dubey, Hon. Secretary, IBC Bihar State Chapter welcomed the panelists and delegates on IBC platform and briefed about the motto behind organizing this Webinar. He also said

that webinar is a tool in our hand to connect each other during the prevailing situation of social distancing. The Eminent speakers expressed their view points for the good of society and benefit of mankind. Chief Guest of the programme was Maj. Gen. Nilendra Kumar, AVSM, VSM.

Keynote speaker briefed about Integrated Water Resource Development as a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and emphasized its necessity in the present scenario for sustainable growth. Dr. A.K Pandey explained the application of Artificial Intelligence in water resource management very meticulously.

The Webinar was concluded by Shri Sunil Choudhary, Vice Chairman, IBC Bihar State Chapter with few words of gratitude to all panelists and participants.

Engineers Day Celebrated on 15th September 2020 at Patna, Bihar

On 15th September 2020, birth anniversary of Sir Mokshagundam Visvesvaraya, National Engineers Day was celebrated at IBC Bihar State Chapter office at Bailey Road Patna with all guidelines of Safety and social distancing laid down by government, local administration and health department. Engineer-in-Chief-Cum-Chairman IBC, Bihar State Chapter, Shri Rakesh Kumar and other members of IBC Bihar State Chapter were present on this occasion.

Mumbai State Centre-Maharashtra Webinar on “Future Trends of Building Construction Industry – Role of PMC”

Webinar on “Future Trends of Building Construction Industry – Role of PMC” was held by Maharashtra Chapter of IBC on 17/05/2020. Shri Vinod Harisingani, Sr. Vice President, Mumbai chapter of IBC welcomed Shri Pradeep Mittal, President, IBC; all speakers and all viewers who had joined to view the webinar. Shri Pradeep Mittal, President IBC in his address welcomed the audience/viewers to the webinar and briefed about the activities of Indian Buildings Congress. He emphasized about the importance and utility of the webinar that has arisen due to present pandemic of COVID-19 being faced by whole world.

He stated that post COVID-19 there will be a different type of space requirement for different types of buildings to maintain the social distancing norms. Planning and designing norms will have to be re-visited for all types of buildings. He also briefed about how the Construction Industry can take advantage of Project Management Consultant (PMC) in achieving completion of projects within specified time and budget with best quality.

The eminent speaker on the topic was Shri Suresh Sahu, MD, Supreme Engicons (India) Pvt Ltd. He started with informing the viewers about the need of PMC and various software available for-

- I. Designs and Drawings
- II. Government approvals
- III. PMC Team/Organization
- IV. Technical and Material Specifications
- V. Contract and Labour Management
- VI. Cash Flow
- VII. Timeline Monitoring and Reporting
- VIII. Quality Control and Audit
- IX. Safety Audit
- X. Hand-over/Completion

He informed that the clients can assign all the activities related to construction project starting from land acquisition, designing, planning, cost estimation, liaison with Architects, Structural Engineers, local body approvals, MEP Consultants, Site Engineers, Admin/Office, other Consultants and handing over of the project to a PMC. The PMC monitors all these activities through cloud based software application. Software connects all people involved in the project. It provides the single platform to all stakeholders. He informed in brief about the utility of different types of software used by PMC. He gave some examples of completed projects assigned to PMC.

In the end of presentation, some questions were also taken-up from viewers and were replied by Shri Sahu.

In the end of webinar Shri Vinod Harisingani, Sr. Vice President, IBC Mumbai Chapter thanked Shri Pradeep Mittal, President IBC for taking keen interest in webinar and also thanked all viewers and organizers.

Webinar held on “Challenges for Building Repair Industry due to Covid-19”- By Mumbai Chapter of IBC

Webinar on “Challenges for Building Repair Industry due to Covid-19” was held by Mumbai Chapter of IBC on 31st May, 2020. Ms. Anita Patel, Secretary, Mumbai Chapter of IBC welcomed Shri Pradeep Mittal, President, IBC; all speakers and viewers who had joined to view the Webinar. Shri Pradeep Mittal, President, in his address welcomed all the speakers, audience/ viewers to the webinar. In his address, President, IBC spoke about importance of the webinar in the light of Covid-19. He informed that earlier it was pandemic of Spanish flu pandemic of 1918 that infected more than 500 million people worldwide and killed an estimated 40 million people. Like Spanish flu, Covid-19 pandemic has also caused massive distress, dislocation, exodus of labour, lockdown/cessation of all activities. He informed about the disruptions to the economy and difficulties faced by lower middle class and workers living in slums. About repair of buildings he spoke about difficulties faced in repair work due to occupied condition of the building. He also spoke about new SOP for construction industry to meet the challenges faced due to Covid-19. He said that to maintain social distancing and to follow new SOP, space in existing public buildings shall have to be redesigned. There shall be huge demand of addition /alteration and repair work.

The first speaker on the topic was Shri Vinod Harisinghani, Sr. Vice President of IBC, Maharashtra Chapter. He spoke on the topic of water-proofing of the building source of leakage in the building i.e. from terrace, external walls, bathrooms, toilets etc. He also informed about locations where water proofing is required during construction of building such as-Terrace slab; U.G. Water Tank; Parapet Walls; O.H. Tank; Plumbing Duct Area; Chajjas/ Canopies; Lift pits; External dead walls; Expansion Joints; Toilets and Bathrooms and Basements. He enumerated various causes/factors of leakages in the building.

Next speaker was Shri Suresh Sahu, M.D. Supreme Engicon. He spoke on the topic of Advanced Structural Repairs. He informed about the causes for deterioration of RCC buildings such as-

- I. Poor structural design and specifications
- II. Poor quality of construction

- III. Poor maintenance of building
- IV. Environmental problems and aging effects
- V. Indiscriminate addition & alteration
- VI. Natural and manmade calamity.

He suggested that for restoration of stressed building retrofitting is the only solution. He displayed photographs of some of the distressed structure and the way it is retrofitted. He spoke about Do's and Dont's while doing addition/ alteration work in the building. It was a good information for a layman.

Third speaker was Shri Riyaz Sheikh, M.D. Struct Re Tech. he talked about safe and sound design of structure to avoid any future damage in the building considering all factors that causes damages to the building during its life time. He spoke about importance of the quality and quantity of water that is used for construction work. He spoke about new materials introduced these days for repair work specially for water proofing work. He also spoke about reducing the number of labour involved for repair work by using new technology and material.

At the end of the Session, Shri Pradeep Mittal, President, IBC wanted to know from Shri Vinod Harisinghani about any better alternative to brick-Koba that has been laid over IBC building in Delhi for water proofing of terrace. Shri Harisinghani suggested, if time permits brick-koba is better.

Ms. Anita Patel, Secretary, Mumbai Chapter concluded the seminar by thanking Shri Pradeep Mittal, President, IBC all speakers and viewers.

Chhattisgarh State Centre-Raipur

अंतर्राष्ट्रीय योग दिवस पर योग एवं वृक्षारोपण कार्यक्रम

छत्तीसगढ़ राज्य केन्द्र रायपुर द्वारा अंतर्राष्ट्रीय योग दिवस 21 जून, 2020 को योग दिवस तथा वृक्षारोपण का कार्यक्रम किया गया। जिसमें ग्रीन आर्मी आफ रायपुर के साथ ही आई. बी.सी. से श्री के.के. वर्मा, श्रीराजेश साहू, श्रीदीपक सनोदिया तथा श्री नीशे-न खरे आदि शामिल हुए।

Jaipur Local IBC Centre

‘चैलेंजेज बिफोर बिल्डिंग इंडस्ट्री ड्यू टु कोविड-19 विषय पर वर्कशॉप’

राजस्थान हाउसिंग बोर्ड एवं इंडियन बिल्डिंग्स कांग्रेस के संयुक्त तत्वावधान में 27 फरवरी, 2020 (शनिवार) को बोर्ड मुख्यालय में चैलेंजेज बिफोर बिल्डिंग इंडस्ट्री ड्यू टु कोविड-19 विषय पर वर्कशॉप आयोजित की गई। इस वर्कशॉप में इंडियन बिल्डिंग्स कांग्रेस के अध्यक्ष श्री प्रदीप मित्तल मुख्य वक्ता और हाउसिंग बोर्ड के अध्यक्ष श्री भास्कर ए. सावंत मुख्य अतिथि रहे। श्री प्रदीप मित्तल ने कहा कि बोर्ड ने कोविड-19 में जो काम किया है, वह पूरे देश के संस्थानों के लिए एक केस स्टडी है। पूरी बिल्डिंग इंडस्ट्री के लिए कोविड-19 का समय चुनौतिपूर्ण



था, लेकिन इस समय में भी बोर्ड ने न केवल देश में सर्वाधिक मकान बेचे, बल्कि कई महत्वपूर्ण प्रोजेक्ट लाकर सभी को चौंका दिया।

इस अवसर पर सार्वजनिक निर्माण विभाग के सचिव श्री सी.एच.मीना, मुख्य अभियंता श्री संदीप माथुर, श्री एच. डी. मेघवाल, जे.डी.ए. के मुख्य अभियंता श्री एन. सी. माथुर, रुडसिको के मुख्य अभियंता श्री अशोक चौधरी, पी.एच.ई.डी. के अतिरिक्त मुख्य अभियंता श्री बी.एस. मीना व बोर्ड के मुख्य वित्तीय सलाकार श्रीमती रेखा भास्कर सहित बड़ी संख्या में बोर्ड के अभियंता मौजूद रहे।

Webinar on “Mechanisation of Construction Sector in India to make it Globally Competitive”

Indian Buildings Congress in association with ELEMATIC India Pvt. Ltd. on 26th June 2020 at 5.00pm organized a webinar on “Mechanisation of Construction Sector in India to make it Globally Competitive”. Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P. Goel Founder President, IBC, Shri Vaibhav, Singhal, V.P. (Design), Elematic India Pvt. Ltd. Pune, Shri Shridhar Rao, V.P. (Sales & Marketing), Elematic India Pvt. Ltd. Pune, Shri H.P. Gupta, Honorary Secretary, IBC, all viewers and audiences who have joined this webinar. The President, briefed about the journey of, IBC,

its vision and role in promotion of built environment. He emphasized the necessity and importance of mechanization of the construction sector particularly in the post lockdown scenario on account of Pandemic of COVID-19 to counter shortage of the labour and practical difficulties in maintaining social distancing and various health norms in construction industry.

The President, IBC opined that various parts of the building projects like, foundations, columns, beams, slabs, walls, joinery works, toilet units, manholes, ready-made floor and wall finishes, facade etc., can be pre-casted independently in smaller segments in offsite factory under standard conditions with minimum work force. These segments can be easily transported to the site, erected in position and assembled requiring minimum concentration of workforce. The off site construction in factories will generate minimum construction and demolition waste. The quality of the construction can be assured. The construction will be faster in place of conventional practice. The off site construction with pre-cast construction will be economical in long run. He also opined that the IT and computer aids can be very much helpful in the planning, designing and construction of these various precast construction activities which should be promoted by the construction industry in its work culture in order to have a competitive edge in the national & international markets.

Shri Vaibhav Singhal, presented an overview of various precast construction activities. He mentioned that any type of building may it be Residential, Commercial or Industrial can be constructed in pre-cast system.

He explained the following precast structural systems generally adopted in precast construction:

Portal frame system,
Skeletal structural system,
Wall frame structure

He explained the manufacturing process of the following major elements of pre-cast construction.

1. Slabs- Prestressed Hollow core slabs, Double TEE-Slab, half plank slab, solid slabs and Room sized slabs
2. Walls- Load bearing , Facade and Architectural
3. Columns
4. Beams - Pre-stressed beams
5. Partition walls - Acotec non load bearing partition walls

6. Staircase

He also informed that larger spans without columns in between providing more open area can be easily constructed for commercial buildings in pre-cast technology.

He also explained the connection details of the pre-cast members. He informed that speed, less manpower, economy, better workmanship, more durability, lesser carbon foot print, almost negligible wastage and eco friendly nature are the major advantage of pre-cast construction. He also explained the necessity of adoption of BIM on the construction projects and in the pre-cast processes where the pre-cast manufacturer, steel fabricator, engineer, detailer, architect, general contractor and owner of the project can work and interact simultaneously on a common platform.

Shri Shridhar Rao, welcomed the president, IBC and explained the journey of Elematic since 1959. He explained that Elematic provides smart solutions for pre-cast construction. It has 450 patents for machineries in pre-cast construction. He informed that critical path is broken in pre-cast construction and labour requirement is reduced by 40-50%. Through his presentation he explained various sizes of plant depending upon production area of various pre-cast units.

He informed that Elematic also provides following services for successful execution of pre-cast projects:

1. Engineering services - Concept design study and full-fledged precast building design
2. Complete Architectural and MEP services design
3. BIM Services: Building information modelling to identify inter discipline clashes, visualization of construction in 3D, and development of BOQ and construction drawings extracted from 3D model.
4. Production support by training and supervision
5. PMC services at project execution stage
6. Maintenance and running of the factory by providing spare parts
7. Factory design and installation of the pre-cast factory
8. Supervision or production and installation of pre-cast elements

At the end of the webinar, Shri H.P.Gupta, Honorary Secretary, IBC presented vote of thanks. He thanked the President for his pro-active approach in organising the webinar, Shri Vaibhav Singhal and Shri Shridhar for

World's 'Largest' Meditation Hall Inaugurated by President of India on 2nd Feb. 2020 in Hyderabad



The centre that can accommodate one lakh meditation practitioners at a time was unveiled by the Hon'ble President of India Shri Ram Nath Kovind on Feb 2, 2020, to mark the 75th anniversary of the formation of Ram Chandra Mission and Heartfulness Institute, in the presence of Yoga Guru Baba Ramdev and other dignitaries.

The meditation centre is claimed to be the world's largest such facility, which is located at the global headquarters of the Heartfulness Institute and the Shri Ram Chandra Mission (SRCM) in Hyderabad. The centre imparts training in Raja Yoga system of meditation.

The centre is dedicated to the first guide of



Heartfulness Lalaji Maharaj, by Kamlesh Patel, also known as Daaji, the present guide of Heartfulness.

Heartfulness is a Raja Yoga system of meditation, which is also known as Sahaj Marg or the Natural Path. It originated at the turn of the 20th century and was formalised with the founding of the Shri Ram Chandra Mission in 1945 in India, according to the release.

Built on 30 acres, the meditation centre with a central hall and eight peripheral halls will offer meditation training free. Daaji said "The meditation centre has been carefully designed not just as a structure of physical importance but as an inspiration for all those who seek to better their lives through practise of meditation - the magnanimous gift made available to humankind by the universe."

Webinar on "Sewage Treatment Plant (Johkasou) in Water Management and Pollution Abatement"

Indian Buildings Congress on 20th July 2020 at 3.30pm organized a webinar on "**Sewage Treatment Plant (Johkasou) in Water Management and Pollution Abatement**". Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P.Goel Founder President, IBC; Shri Rio Waza, Director, Daiki-Axis; Shri Kamal Tiwari, Chief Operating Officer, Daiki-Axis; Shri K.C.Pandey, Advisor, Daiki-Axis India Pvt. Ltd; Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of built environment. He emphasized the necessity and importance of sewage treatment in water management and to contain water pollution.

The President, IBC in his address informed that with the advancement of the country towards a more developed economy, there has been an adverse impact on the environment and particularly on basic elements of life i.e. air and water which are the major causalities.

With both the population of India and its industrial landscape increasing at a phenomenal speed, wastewater volume is also rising at an alarming pace. Adding to this is the shrinking of freshwater sources like rivers, wells, and groundwater and we have an alarming situation. There is a great degree of fear that very soon water may become a premium commodity.

Contaminated water pollutes the rivers. When this water runs downstream and joins other water sources

like other rivers, the contamination further spreads. Wastewater also seeps into the ground and contaminates underground water sources. The result is that almost every water source is today heavily polluted — from rivers and wells to coastal areas.

This would be disastrous. Water is too important for us and therefore treatment of the water should get utter most seriousness. Drinking water is essential for all humans. Water is vital for livestock, the food industry, and farming. To a small extent, nature can deal with naturally produced contaminants like human and animal waste. However, the massive amount of wastewater today cannot be managed by nature alone.

Management of wastewater through wastewater treatment plants or sewage treatment plants has therefore become an urgent necessity of our cities today.

Shri O.P. Goel, Founder President, IBC and former DG(W), CPWD, in his address briefed about journey of IBC since its inception. He informed IBC was started with a view to bring all professionals and stake holders connected with building industry on a common platform connected with the built environment so as to form collective opinion related to built environment for implementation. He lauded the role of IBC in its contribution towards promotion of built environment which is sustainable, less costly, affordable, energy efficient. He further mentioned that zero emission of water from building has been made possible in buildings constructed by CPWD by way of treatment of waste water for reuse and thus water has been generated. He expressed that he was looking forward for the presentation to see how effective and successful the technology was. He expressed his gratitude to the President, IBC for allowing him to share his views. In the present day scenario of Pandemic of COVID-19, where holding of physical seminar in conventional system is practically not feasible, he appreciated the concept of holding webinars where one can join from any place without taking any trouble to travel to the venue of Seminar.

Shri K.C. Pandey, Advisor, Daiki-Axis India Pvt. Ltd., while welcoming all the dignitaries and attendees present in the webinar, in his address highlighted the importance of water. Huge water demand can be met in urban areas as well as in rural areas by treating and recycling the waste water. Therefore provision of waste water treatment is essential to reduce the demand on natural water resources. IIT Chennai in one of its study has found out that 10% investment in sewage and waste water treatment will save 80% of water. On agriculture

front in irrigation we use huge quantity of water. India uses 5600 litres of water to grow 1 kg of Rice whereas China uses 350 litres of water for growing 1Kg of Rice. . Since we have created the shortage we have to find out the solution and the best solution is use of technology by way of treatment of waste water, recycling and reuse.

Shri Rio Waza, Director, Daiki-Axis India Pvt. Ltd., gave a detailed technical presentation. He highlighted that in Johkasou-STP Aerobic & Anaerobic microorganism grow-up on PP media and treat organic matter into air & water. Thus it takes advantage of both aerobic and anaerobic processes in their packaged unit. In the process micro-organisms breakdown into aerobic micro-organisms like $\text{CO}_2 + \text{H}_2\text{O}$ that require oxygen and Anaerobic micro-organisms such as NH_3 , H_2S , CO_2 & CH_4 that do not require oxygen. In this process wastewater is comprehensively treated and then discharged. Through Anaerobic chamber and Aerobic chamber, continuous 'Nitrification' and Denitrification' is important point in their process. The process of installing and commissioning of the pre-fabricated modular packaged unit is very fast. Decentralised STP installation is recommended by them so that the waste water can be treated at site and reused at site itself without involving huge network of sewerage lines. It can treat mixed waste water from kitchen, wash basin, bathtub, washing machine & toilets together. The treated water can be utilised for gardening, vehicle wash (DTC/ Buses in Bus Depot/Metro/Railways), fire fighting, construction sites. In India it has already installed and commissioned 120 units across the country which is performing well. In India, the Johkasou has set up its factory at Vapi (Gujrat) under make in India programme.

The Johkasou –unit consists of 4 chambers. In the first chamber there is a separation box which separate solid debris or impurities in influent, circulates water and store these sediments, accumulated sludge in 1st chamber is removed by sucking machine periodically (once in 6-12 months)

2nd chamber which is anaerobic contact media chamber is the place where microorganism is growing up in media to decompose organic material contained in waste water. It filtrates and removes suspended solids in the transferred waste water, decompose organic matter, anaerobically. Nitric acid (Nitrate) is turned into Nitrogen gas (Denitrification).

3rd chamber which is Aeration chamber/ moving bed chamber is filled with moving bed media that move by blower aeration. 40-50% of this chamber is filled up with moving bed media. Activity of microorganisms attached

to the special moving bed reduces BOD aerobically. $\text{NH}_4\text{-N}$ - $\text{NO}_x\text{-N}$.

4th chamber is a 2nd Sedimentation and disinfectant chamber. Treated water is disinfected here for which chlorine device is attached in this chamber. Disinfectant act as a sterilisation agent for pathogenic organisms in the treated water before it is discharged into the environment.

This unit has a most important function of recirculation system for retreatment of the accumulated sludge and nitrified liquid from 4th chamber to 1st chamber which further go on to 2nd and 3rd chamber. The accumulated sludge and the nitrified water from 4th chamber is lifted by air lift pump/ small blower air.

The Johkasou-STP consumes low energy (50-75% less than conventional STP), works automatically-does not need operator, quickly maintainable- takes about 15 to 30 minutes for sucking sedimented sludge., treats nitrogen, does not leak/smell, sound, does not require equalisation tank, low sludge generation (50% less than conventional) and quick and easy to install (plug and play).

The Johkasou STP has 3 models AI-Type (outflow), AIJ-type outflow & AIM-type outflow. Depending upon the type of installation, the performance of different parameters of inflow i.e. BOD gets reduced from 300 upto 5, COD from 450 upto 10, Suspended solid from 240 upto 5, oil and grease from 80 upto 5 and Total Nitrate from 50 upto 10. The operation and maintenance of the Johkasou STP is much economical than conventional STP with SBR (RC), MBBR(RC) and MBR(RC), technologies.

The packaged units are capsule type for 1 to 25KLD and Cylindrical type from 20 to 50KLD having working life of 40-50 years. In places requiring large quantity of waste water treatment, multiple units are joined together.

Shri Kamal Tiwari, Chief Operating Officer in India of Daiki-Axis India Pvt. Ltd., in his address referred to the 17 Sustainable Development Goals (SDGs) also known as Global goals which were adopted by all United Nations Member States in 2015 as a universal call to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. Good health and well being besides clean water and sanitation goals are among these 17 goals to be achieved. India is also a signatory to the adoption of these goals. By referring to the 17 SDGs and other schemes of the Government like 'Har Ghar Nal by 2024', Swachh Bharat, Double Farmer's income by 2024 and Make in India a 5 Trillion economy,

he mentioned that water is at the core of all issues. To achieve the most effective formula of reduce, recycle of waste water and reuse, the Johkasou-STP being modular unit can follow speed of development, can be installed block by block and can be operated at a very low operation cost. Depending upon the source of waste water it has different type of Johkasou packages like Hotel, residences, garden, school, hospital and factory packages. The treatment units can be installed under car park or garden or it can also be above ground. He also presented many case studies.

Shri H.P.Gupta, Honorary Secretary, IBC presented vote of thanks. He thanked the President IBC for taking pains in successful organising of webinar. He thanked Shri O.P.Goel, Founder President, IBC for sparing his valuable time to guide and bless the organisers of the webinar. He thanked the Panellists for their valuable and informative presentation. He thanked all attendees of the webinar for sparing their time to attend the webinar and to make it successful.

Rail, Road, Metro: RRTS Station to Connect three Modes at Delhi's Anand Vihar

Anand Vihar in east Delhi is one of the city's biggest transport hubs with the presence of a railway station, two Delhi Metro corridors and two inter-state bus terminals on either side of the Delhi-Uttar Pradesh border. A new addition to the hub is going to be the underground Anand Vihar station of the 82-km long Delhi-Meerut Regional Rapid Transit System (RRTS) corridor, which will also seamlessly integrate these different modes of transport.

The National Capital Region Transport Corporation (NCRTC), which is building India's first RRTS corridor, said a key aspect of the planning was the integration of its stations with other modes of transport such as metro train network, bus terminals, airports and Indian Railways through walkways, lifts, escalators, foot bridges and underpasses.

An NCRTC spokesperson said, "Anand Vihar is one of the busiest public spaces linked by several modes of public transport. Lakhs of people, among them senior citizens and children, use these transport modes daily, often with heavy luggage. The lack of adequate integration leads to unsafe road crossing and numerous level changes, making the journey unsafe, time consuming and inconvenient, and ultimately forces people to shift to private vehicles."

Of the 22 RRTS stations on the Delhi-Meerut corridor, four are underground, with just the Anand Vihar station among the four in the Delhi stretch of the corridor. The underground station will have some unique features, according to NCRTC. Only one level will be below the ground. The platform will be underground but the concourse will be at the ground level. He pointed out that a typical underground Delhi Metro station was constructed two levels under the ground, with the platform usually located at a depth of 20 metres. In the case of Anand Vihar RRTS station, however, the station will be located just eight metres below ground, and the cut-and-cover method will be employed to construct it.

The construction of this station will be technologically complex as RRTS trains will pass underneath the Delhi metro Blue Line (Dwarka-Vaishali). The station design would allow safe, convenient and faster movement of commuters from Anand Vihar RRTS station to the public transport modes and vice-versa. The spokesperson claimed, "Such a design is not only commuter-centric, but will significantly reduce the construction cost of the station." The idea is that the station design will allow commuters to avoid having to step on the roads while moving from one mode of transport to another. This will be a comparatively safer, more comfortable and hassle-free travel experience for commuters. Around 11.5 km of the Delhi-Meerut corridor will be underground, of which 5.8 km from the elevated New Ashok Nagar RRTS station to BEL, Ghaziabad, will be in Delhi.

Webinar on "A Holistic Approach to Waterproofing & Thermal Insulation of Buildings"

Indian Buildings Congress on 21st July 2020 at 4.30pm organized a webinar on "A Holistic Approach to Waterproofing & Thermal Insulation of Buildings". Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P.Goel Founder President, IBC; Shri Anant Kumar, Additional, DG (Tech.), CPWD; Shri M.S.Sudish, Head of Specifications and design division of Dr. Fixit Pidilite Industries limited; Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of built environment. He emphasized the necessity and importance of waterproofing and thermal insulation of buildings in the present day scenario for ensuring leakage/seepage free buildings and comfortable thermal environment to the occupants.

The President, IBC in his address informed that in building construction, waterproofing is a fundamental aspect of creating a building envelope, to maintain a controlled environment.

On account of poor water proofing treatment, faulty construction joints, ineffective water proofing materials used or the improper workmanship there could be seepage and leakage in basement, walls, deck slab of wet areas, roofing, water retaining structures and balconies etc. He further informed that other reasons could be the materials used might have been highly porous. The surface of the walls may be faulty with minute cracks on the walls. Capillary may rise from the ground when the foundation walls absorb water and minerals from the soil. If there is a high humidity level in the building one will observe faint halos /patches of dampness on the walls.

The water proofing penetrations through a building envelope must be built in a way such that water does not leak/seep into the building. Therefore the building needs quick waterproofing if it has suffered from water damage or flooding. To be able to do the necessary waterproofing work one should know from where the problem comes.

He further informed that while taking care of waterproofing, one cannot ignore the importance of thermal insulation in today's environment of energy crisis. Thermal insulation of an Building is important to reduce energy consumption in buildings by preventing heat gain/loss through the building envelope and to provide a comfortable thermal level to the occupants.

There are many insulation materials employed to slow heat loss, such as: cellulose, glass wool, rock wool, polystyrene, urethane foam, vermiculite, wood fibre, plant fibre (cannabis, flax, cotton, cork, etc.), recycled cotton denim, plant straw, animal fibre (sheep's wool), cement, and earth or soil, reflective insulation (also known as radiant barrier) but it can also involve a range of designs and techniques to address the main modes of heat transfer-conduction, radiation, and convection materials.

Shri O.P.Goel, Founder President, IBC and former DG(W), CPWD, in his address briefed about how the IBC was formed and its journey since inception. He lauded the role of IBC in its contribution towards promotion of built environment which is sustainable, less costly, affordable, energy efficient. He further informed that water is very important for buildings but water at a wrong place is enemy of the structure. We will hear the experts and will learn further on the topic. In the present day scenario the

system of webinar will continue and the profession will continue to grow.

Shri Anant Kumar, Additional, DG (Tech.), CPWD in his address informed that waterproofing is one of the most critical item but most neglected part of execution. The involved engineers and contractors supervisors are not adequately trained in selection of proper product of treatment and supervision of the details of execution of waterproofing meticulously. We have to plan our dry and wet area properly to avoid stagnation of water otherwise it will find its way to wrong places. He informed that there is no excuse for fault in civil engineering. If waterproofing is not done properly at the relevant time of execution, it involves dismantling of all covering items including waterproofing itself for redoing the whole exercise leading to heavy cost and other related problems. If the house is not properly waterproofed, it becomes headache, spoils whole building, and spoils health leads to breathing problems and many more. The leakage/ seepage problem from upper floors to lower floors is more prominent in multi-storeyed housing societies where the occupants of the house from where the leakage percolates are normally reluctant for repairs causing lot of fights among occupants leading to court cases. If waterproofing is done properly, it gives long life to the buildings. Similarly, the thermal insulation gives thermal comfort to the occupants and reduces the CO₂ emission.

Shri M.S.Sudish, Head of Specifications and design division of Dr. Fixit Pidilite Industries Limited, gave a detailed presentation. He informed even though waterproofing as an activity contributes to 2% of the cost of construction, it is considered as one among the most sensitive aspects in creating a habitable space. The COVID-19 pandemic has shown us that the health of our buildings is more important to our quality of life than ever before. The study says the next generation will spend more than 90-95% of their time inside the buildings. A healthy built environment is no more a luxury but has become a basic necessity now.

Wet areas are usually the spaces where a lot of plumbing and sanitary fixtures are there or spaces that are exposed or subjected to high moisture, rain or water throughout the year than any other area in a building. Such spaces are mainly the toilets, bathrooms, laundries (washing area of a house), backyard, balconies or even kitchen.

Wet area (bathrooms, balconies, utilities, kitchen etc.) waterproofing is considered as one among the critical area in buildings where a foolproof waterproofing is a

must due to the following reasons.

1. There will be limited or no access to repair the waterproofing treatment if the system fails.
2. While the leakage will be on the upper floor, the impact and inconvenience due to the leakage will be experienced by the persons at the lower floor which will always result in frictions and in spoiling the relations.
3. There is always a hygiene issue associated with the leakage from the wet area.
4. Costly fixtures, including tiles/granites, commodes, shower partitions etc are to be removed for addressing the leakage issue. This will incur huge cost of removal as well as re- fixing.

The practises as followed in the Industry are

- a) Acrylic cementitious waterproofing.
- b) Crystallisation waterproofing.
- c) Polyurethane waterproofing.
- d) Water based copolymer waterproofing.

While all these systems are used in projects as per the recommendations of the manufacturer or the consultant, water based co-polymer systems are supposed to be better than other systems due to the ease of application, formation of watertight film, free from mixing or moisture curing challenges etc.

It is always important to ensure the golden principle of waterproofing "Do first time right" while deciding the system for toilet waterproofing due to the reasons as shown above.

Similarly, it is important to design the right system for roof waterproofing, which is another critical area in building construction. The following are the general requirements while deciding on the roof waterproofing.

1. Jointless system.
2. Highly durable.
3. Should be fast and easy
4. Should accommodate the movements due to thermal stresses
5. Should ensure at least a minimum level of thermal insulation properties.

The most widely seen current practises for roof waterproofing are

- a) Acrylic cementitious waterproofing.

- b) Preformed Membrane waterproofing
- c) Polyurethane waterproofing.
- d) Polyurethane Foam (PUF) insulation and waterproofing.

Acrylic cementitious systems are not a good choice for roof waterproofing where thermal stresses are more. As the elongation properties are comparatively lesser with other systems it will develop cracks easily and lead to failure.

Preformed membranes are good but due to lot of joints in the system it carries a lot of risk. These joints become critical while installation and after thus ensuring a foolproof system become difficult.

Liquid applied polyurethanes are better choice considering that the system is jointless and have superior technical parameters compared to other systems.

While various liquid applied and pre formed membranes are available in the market, a spray applied, instant setting high density polyurethane foam will be the ideal system which meets all the requirements as mentioned above.

At the end of the webinar, Shri Pradeep Mittal, President, IBC presented the vote of thanks since due to connectivity Problem, Shri H.P.Gupta, Honorary Secretary, IBC could not be joined to present vote of thanks. The President, IBC thanked the panellist and all the attendees in the webinar to make the webinar successful.

White-Topping Technology Extends Longevity of Roads

White-topping the existing bitumen (BT) roads is an optimal solution to the deteriorating urban infrastructure as it will reduce maintenance cost, extend life cycle of roads and prevent accidents, Advisor to Kerala Infrastructure Investment Board and former Chairman of Indian Concrete Institute Jose Kurian has said. He further said that the white-topped road comes between the bitumen-topped road and cement concrete (CC) road but its life cycle is as good as that of CC road. The cost of laying one km of BT road between 3.5 m and 4 m width would be around ₹1.25 crore and it would be between ₹2 crore and ₹2.25 crore for CC roads. White-topped roads were quite suitable to be used as internal roads in cities.

Explaining the process of white-topping of roads, he said the existing road is milled and a thin layer of 100 mm to 200 mm is laid with pavement quality concrete. It's a

proven technology. The cost will be around 25% more than that of bitumen roads. The average resurfacing period for asphalt road is eight to ten years, while the same for white-topped ones is somewhere between 20 and 25 years. Water would damage BT road but would not affect the white-topped ones. White-topped roads would reduce the braking time unlike on the roads dotted with potholes and also improve lighting.



The technology is catching up slowly in India. Such roads are being laid in several places such as Bengaluru, Mumbai, Hyderabad and Kerala. Around 1,000 km of white-topped roads have been laid across the country," he said.

Webinar on "Fire Safety in High Rise Buildings"

Indian Buildings Congress on 30th July 2020 at 4.00pm Organized a webinar on "Fire Safety in High Rise Buildings". Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P.Goel, founder President, IBC; Shri Atul Garg, Director, DFS, Shri Sanjay Kumar Tomar, Divisional Officer, Fire Prevention Wing, Delhi Fire Service; Shri H.P.Gupta, Honorary Secretary, IBC; all viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of Built environment. He underlined the necessity and importance of high rise buildings in the present day scenario for ensuring safety of the buildings and the occupants in case of any fire takes place.

The President, IBC in his address informed that in high rise building construction, fire safety is a fundamental aspect to be kept in view.

Fire safety should be as much a part of high-rise building occupants as a panoramic view. As one of nature's most destructive forces, accidental fires can be unforgiving. They can erupt in all conditions, at any time, and without notice. Despite best efforts by regulatory

agencies to prevent fires from occurring, fires do take place. Some Buildings have smoke alarms and others have security systems, but these devices alone do not provide complete fire safety. High-rise Buildings of all types including apartment/tenants should develop and practice a fire escape plan.

In India and many other countries in the subcontinent, awareness relating to regulations governing the use and storage of flammable materials, fire suppression requirements, exit routes and adherence to the proper guidelines that can help minimize loss of life from fire is severely lacking.

Much work needs to be done to bring awareness to the best practices to be followed in case of a fire emergency for the safe evacuation of occupants. In the event of a fire emergency, the most important requirements are to evacuate the occupants to safety, controlling the spread of fire, and extinguishing fire. Regular fire drills need to be carried out in the buildings for educating the occupants how to use the evacuation plan.

Besides conventional evacuation routes in the form of fire staircase which lacks proper care taking and are found in a unusable condition at the crucial time of fire, strategy to create alternate evacuation routes like foldable light weight frame or chutes connecting each unit in building can be thought of which can be made operational in case of fire. Further the reduced response time upto 10 minutes from the fire fighting and evacuation team will also go a long way in reducing the casualties in case of fire.

Shri O.P.Goel, founder President, IBC and former DG(W), CPWD, in his address briefed about the journey of IBC since inception. He lauded the role of IBC in its contribution towards promotion of built environment which is sustainable, less costly, affordable, energy efficient. He further informed that fire safety in high rise buildings is utmost important aspect to be taken care for safety of the occupants.

Shri Atul Garg, Director, DFS while delivering his speech informed that he was happy and honoured to share his experience on the topic. He mentioned that it was a matter of pride for him to deliver lecture in the congregation consisting of professionals involved in different field of built environment.

He informed that by ensuring fire safety in high

rise buildings one can ensure better conservation of the natural built environment. There are many active and passive systems of fire safety measures in high rise buildings from use of normal fire retarding materials/ finishes, fire extinguishers to water rising mains, automatic water sprinkler system, fire hydrants, water hose pipes/ hose reels, fire and smoke detection and alarm systems and other security systems. etc. but these devices alone do not provide complete fire safety.

There is a need to bring awareness of the best practices to be followed in case of a fire emergency for the safe evacuation of occupants and much work needs to be done to bring awareness in this regard.

Besides the fire safety systems, one need to be fire smart in high rise buildings and High-rise building dwellers should develop and practice a fire escape plan. The plan should include a sketch of the building on each floor showing all windows, doors, stairwells and any other alternate means of escape. The escape routes should be clearly marked in red on the sketch.

Fire drills should be held at regular intervals so that each high rise building dweller knows the location of all exit stairwells, fire escape routes and how to get to them as quickly as possible. Special provisions should be made for the elderly and the very young, by assigning another member of the family to help them escape safely.

The best thing an alert apartment dweller can do is to practice safety at all times. Never block windows or doors with heavy furniture; eliminate potential fire hazards by not allowing trash to accumulate in the apartment or around the building; keep kitchen air ducts free of grease; don't store flammable materials in the apartment.

Dr. Sanjay Kumar Tomar, DFO DFS in his speech informed various types of fire safety systems. He informed that active fire-protection systems include automatic fire detection and fire suppression systems. For extinguishing fire and protecting both the building and neighbouring structures, an effective fire-fighting system is essential. This includes accessible fire access routes, operational fire hydrants, and standpipe systems. Loss of life can be minimized when both active and passive life safety systems are working coherently.

An automatic sprinkler system designed, installed, tested, and maintained as per relevant codes is an active and effective fire-protection and life safety system. In

addition to providing substantial property protection, a functioning sprinkler system allows additional time to the occupants for safe evacuation.

To make all of the fire protection and fire suppression systems work effectively, coordination between local governments, local municipalities, professional designers, owners, and builders is essential. In building fires are mostly accidental. They are usually caused by human error; faulty electrical components, general negligence and improper maintenance.

Shri H.P.Gupta, Honorary Secretary, IBC presented the vote of thanks. He thanked all the speakers for their very useful and informative speech. He thanked all the viewers for sparing their valuable time to make the webinar successful. He thanked the President IBC for having organised the webinar. He also thanked the Secretariat staff of IBC for their active co-operation in making the webinar successful and meaningful.

Hydrogen-CNG Buses likely to hit Delhi roads shortly

Buses running on Hydrogen-enriched CNG (HCNG) are likely to hit the capital's roads. A four-tonne per day compact reformer-based HCNG production plant has come up at DTC's Rajghat-1 bus depot and is likely to start operations shortly.

HCNG, which is a cleaner fuel compared to CNG, will be used to run 50 Cluster scheme buses as part of a pilot project for six months. The Supreme Court had last year

According to an official associated with the project, the plant is ready and is awaiting approval from the Petroleum Explosive Safety Organisation, which comes under the Union Ministry of Commerce, and approves all gas stations and filling stations. The buses that will be run on HCNG would just require some tuning and no major retrofitting.

In July 2019, Indian Oil Corporation Limited — which has developed the technology to create HCNG — and Indraprastha Gas Limited had laid the foundation stone of the plant. According to IOCL, the use of compact reforming process is 30% more cost effective as compared to the physical blending of Hydrogen with CNG.

It was, in fact, a directive of the apex court in July 2018 that led to IOCL and IGL collaborating to put up this first

semi-commercial plant as a pilot project for conducting the study on the use of HCNG fuel in 50 BS-IV compliant CNG-run buses in Delhi.

Mixing hydrogen with CNG physically is a difficult proposition and that is why IOCL came up with the compact reforming process, which reforms CNG with no need for mixing. For the pilot project, 50 buses of the Anthony Road Transport Ltd (a cluster scheme concessionaire) will be fed with HCNG and their efficiency and emissions would be recorded for six months run and then submitted to the Supreme Court.

Four tonne of HCNG would be produced at the plant every day and the excess fuel generated would be used to run a generator, which would produce electricity.

Webinar on "Sustainable Architecture Strategies"

Indian Buildings Congress on 1st August, 2020 at 4.30pm Organized a webinar on "Sustainable Architecture Strategies". Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P.Goel Founder President, IBC; Shri R.K.Kakkar, Former, Chief Architect, CPWD; Smt. Usha Batra, Former Special DG, CPWD GC member of IBC; Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of Built environment. He emphasized the necessity and importance of sustainable Architecture Strategies in planning of buildings in the present day scenario to reduce the energy demand on non-renewable resources, CO2 emission and to encourage the use of recycled materials so as to give healthy, comfortable and thermal indoor environment to the occupants.

The President, IBC in his address informed that large scale growth of population of our country is posing threats like water scarcity, more energy requirement, increasing amount of emission of greenhouse gases etc. This scene is going to become more serious in near future and the situation is alarming. Most of the cities besides Metropolitan cities are facing acute problems of more energy consumption in buildings, increasing pollution, downfall in productivity due to less comfort to the occupants in conventionally built buildings.

Sustainable architecture involves use of processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from the stage

of placement of building on site to design, construction, operation, maintenance, renovation, and demolition. Therefore, the sustainable building design involves finding the balance between home building and the sustainable environment.

Natural lighting increases the productivity and well being of the occupants. The Architect should use passive design strategies which includes its shape and orientation, passive solar design and use of natural lighting.

Energy efficiency is the key to making our building a finely tuned, lean and green machine. Modelling will show how a high performance building envelope and superior insulation can let us choose smaller, efficient lighting as well as HVAC systems. Use of computer modelling will help in optimizing mechanical and electrical system. Regular preventive maintenance programme also needs to be implemented so that building continues to perform as per the quality at the time of commissioning.

Shri O.P.Goel, Founder President, IBC and former DG(W), CPWD, in his address briefed about how the IBC was formed and its journey since inception. He lauded the role of IBC in its contribution towards promotion of built environment which is sustainable, less costly, affordable, energy efficient. In the present day scenario the system of webinar will continue and the profession will continue to grow.

Shri R.K.Kakkar, Former Chief Architect, CPWD, in his presentation gave a overview of the topic. He started his presentation with a famous quote from Mahatma Gandhi "Earth provides enough to satisfy everyman's needs but not anyone's greed".

He emphasised the development that allows the nature to rejuvenate at the rate of exploitation. Sustainable Architecture uses a conscious approach to ecological considerations in Building (s) design through guiding principles of 3Rs 'Reduce'; 'Recycle' and 'Reuse'.

He gave a brief overview of the strategies: Validity; Site planning and landscape; Passive Sustainability Measures; Active Sustainability Measures; Use of Green Building Materials & Water conservation and recycling.

For ensuring sustainable buildings, he advised to avoid building what can be avoided; avoid buildings on lands of high environmental value like fertile agricultural

areas; flood plains, Forests; Water bodies such as Wetlands, ponds, lakes, conservation of existing flora, organic materials, check soil erosion, due consideration be given to climatological factors; orientation to Sun and Wind directions, energy efficiency through use of high efficient climate control systems; use of high efficient MEP systems; use of renewable Energy systems, promoting use of local materials and materials with low embodied energy; water conservation and recycling by aiming at Zero discharge from site and Carbon neutral building.

He concluding by saying "Sustainable Architecture may come at a higher initial cost but can be justified by using the life cycle costing method.

Smt. Usha Batra, Former, Special DG, CPWD and GC Member, IBC gave a detailed presentation on Sustainable Architecture Strategies. The architecture that seeks to minimise the negative environmental impact of buildings by efficiency and moderation in the use of resources like materials, energy and development space and the ecosystem at large is sustainable architecture. It uses a conscious approach to energy and ecological conservation in the design of the built environment.

She informed energy efficiency over the entire life cycle is the most important goal and to minimise cost and complexity, sustainable architecture prioritizes passive systems to take advantage of buildings location with incorporated architectural elements supplementing with renewable resources. She quoted few ancient buildings like HawaMahal, Jaipur; TajMahal, Agra; Fort and JehazMahal in Mandu are in harmony with nature. Urbanisation and industrialisation has changed traditional sustainable practices that needs shift from ancient to modern practices.

In view of the rapid urbanisation, she informed that there has been change from low rise to high rise buildings, from functional use of glass to aesthetical use, passive sustainability to active sustainability, more importance of passive solar to little importance of passive solar etc.

She informed that fundamentals of Sustainable design approach are reducing the requirement, consumption and wastage of the resources, selecting ecologically sustainable materials, reusing and recycling them and utilising renewable energy sources to generate energy on site to cut down energy and water consumption to less than half of the conventional buildings, and may

completely eliminate the construction and operation waste through recycling. She explained this through Smart energy Pyramid. She mentioned that sustainable design will reward the communities that embrace it.

She detailed top six sustainable architecture strategies.

For passive sustainable design she explained the importance of orientation & shape of the building with respect to sun & wind direction, appropriate wall-window ratio of 20 to 30%, use of thick/ cavity walls, shading to allow desirable sun and to cut off undesirable sun, diversion of wind direction where required, design of covered open spaces, skylights, cross ventilation, night ventilation, shading of walls & roofs etc in achieving economy in long run during entire life cycle cost of building and to provide healthy and comfortable thermal environment to the occupants. She explained these strategies with the help of case studies.

She gave details of many types of shading devices for walls in different directions and roof and the importance of their design according to the orientation of facade. She also detailed the passive features for energy efficiency of buildings in different climatic zones. After passive sustainability, to cover the gap additional sustainability can be achieved by providing insulation in walls and roofs and use of special glass in windows/ glazing as per ECBC 2017, high efficiency plumbing, electrical, HVAC and other systems. Geo-thermal studies are also required to be carried out to explore further to reduce the initial load of AC after passive sustainable design.

She detailed the Green building materials parameters; sustainable landscaping to maintain energy efficiency; storm water and waste water management systems by 3Rs [reduce, reuse, and recycle], treating waste water as a resource not a problem and power generation through renewable resources like solar PV Plant installed on Canals top which can also reduce the requirement of land for Solar PV Panels.

For disaster management she also apprised about the new inventions like: deconstruction/planned demolition, precast/new technologies/BIM, trenched services for easy maintenance safety & economy, Rescue Drones to get a real view 'eye in sky', 'Sandless Sandbags for protecting the damage from floods, 'LuminAID' which can be air-dropped into an inaccessible community immediately

following a disaster, to give the details, ESOS Smart Toilet which protects the public health by containing waste and recycles urine for use in toilets, irrigation and horticulture etc.

Shri H.P. Gupta, Honorary Secretary, IBC presented the Vote of Thanks. He thanked The founder President for always guiding the IBC team. He thanked the President, IBC for selecting the appropriate topic of webinar and taking pains to organise the webinar. He thanked the panelists for their very informative and detailed presentation. He thanked all the viewers of the webinar in sparing their time to view and making the webinar successful. He also thanked the IBC Secretariat staff in organising the webinar.

India's First Electric Bus Commenced Commercial Operations in Himachal Pradesh

India's first Goldstone's electric bus that has made its official commercial debut runs between Kullu-Manali-Rohtang Pass and is available for public transport. Goldstone Infratech Limited popularly known as Goldinfra has developed a 25+1 seater Goldstone eBuzz K7 zero-emission electric bus being used by Himachal Pradesh Transport Corporation for its commercial services. Goldinfra also claims to have successfully completed the trials at a steep gradient and over 13,000 feet altitude for the first time in the country.



This electric bus is completely made in India by Goldstone Infratech and has been certified by ARAI after extensive testing at various levels at various facilities. The electric bus can travel for up to 200

kms in a single charge. The company has conducted trials in Delhi, Bengaluru, Hyderabad, Himachal Pradesh, Chandigarh and Rajkot. Goldstone's electric buses get front and rear air-suspension to offer comfortable rides to the commuter. These Electric Buses are manufactured in tie-up with BYD Auto Industry. The electric bus can be recharged in less than 4 hours and supports fast charging technology. These buses use Lithium Iron Phosphate battery which ensure longer lifetime, better power density and is safe due to Chemical and thermal stability.

Webinar on “Importance of Quality Based Selection of Consultant for Quality Control & Supervision”

Indian Buildings Congress on 6th August, 2020 at 4.00pm Organized a webinar on “Importance of Quality Based Selection of Consultant for Quality Control & Supervision”. Shri Pradeep Mittal, President , IBC in his introductory speech welcomed Shri O.P.Goel Founder President, IBC; Shri V.S.Verma, Former, E-in-C, MP, PWD & Vice President, IBC; Shri Rakesh Singh Kushwaha, Architect & Planner M/s Kushwaha & Kushwaha; Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of Built environment. For achieving the best project results, He emphasized the necessity and importance of quality based selection of Consultant.

The President mentioned that the world is facing an ever-increasing demand for food, water, sanitation, shelter, health services, transportation, and energy. It is critical that the infrastructure and built-environment required to support these demands is planned, designed, delivered, operated, and maintained appropriately.

The President explained that in the modern day construction, modern techniques, highly educated practitioners using refined tools and techniques to deal with increasingly complex circumstances create a clear need for qualification-based selection of consulting teams. Selecting the right Consultant for a project will enhance the value of the project to investors, stakeholders and the community and will reduce the risks associated with it. Enhancing value will result in improved functional, economical, commercial and environmental performance as well as better acceptance by the communities experiencing the project.

Selecting a Consultant is one of the most important decisions an owner or client makes. Every project is unique and each has its own challenges. The success of any project depends upon obtaining the most appropriate expertise available in terms of skill, knowledge, past experience, managerial abilities and reputation. The best project results are achieved when a true professional relationship of absolute trust between the client and the Consultant can be built. This is because the Consultant must make sound, objective decisions and act in the best interest of the client as well as public. The method

of selection should therefore seek to develop mutual confidence and trust.

The President stressed that the right consultant will achieve greater certainty of project outcome and deliver value to the client in terms of enhancements and risk reduction many times the value of any fees involved. Risk reduction will be better managed through all phases of the project, from planning to completion and into operations and deliver improved safety and environmental management, better cost control, effective contract management, more confidence in timing and a reduction in disputes.

Shri O.P.Goel, founder President, IBC and former DG(W), CPWD, in his address briefed about the journey of IBC since inception. He lauded the role of IBC in its contribution towards promotion of built environment which is sustainable, less costly, affordable, energy efficient. He also briefed about the importance of right consultant in achieving the successful completion of the project to meet the aspirations of stake holders.

In the webinar Shri V.S.Verma, Former, E-in-C, MP, PWD & Vice President, IBC; Shri Rakesh Singh Kushwaha, Architect & Planner M/s Kushwaha & Kushwaha made their presentation in a very effective manner.

Shri H.P.Gupta, Honorary Secretary, IBC presented the Vote of Thanks. He thanked the founder President for his blessings to the IBC team. He thanked the President, IBC for taking pains to organise the webinar. He thanked the panelists for their very informative and detailed presentation. He thanked all the viewers of the webinar in sparing their time to view and making the webinar successful. He also thanked the IBC Secretariat staff in organising the webinar.

India's First Inter-city Electric Bus service between Mumbai and Pune launched

Union Minister Shri Nitin Jairam Gadkari on 14th February, 2020 launched India's first inter-city electric bus service between Mumbai and Pune. The company associated with this service said that they are planning to extend these services in other parts of Maharashtra and adjoining states in the near future.

The 43-seater capacity luxury electric bus is capable to operate within a range of 300 kilometres on a single



charge and would be operated twice daily between the two cities. Manufactured by Mitra Mobility Solution, the bus will be operated by Prasanna Purple Mobility Solutions which said that the firm has around 1,300 electric buses in operation.

Speaking at the event the Hon'ble Minister said from the past 4-5 years he has been making an all-out effort to see that electric buses run in large numbers on the highways of the country. He also expressed confidence that various corporations, state government corporations and private operators might order some 10,000 electric buses this year and added that the government was planning to build e-(electric) highways to facilitate the smooth operation of these electric buses.

Webinar on "Development Vis-a-Vis Conservation"

Indian Buildings Congress organised a webinar on the topic "Development Vis-a-Vis Conservation" on 22nd August, 2020 at 4.00PM. Eminent speakers were invited who presented their views on the topic. The Panelist Shri Rakesh Chaturvedi, IFS, PCCF, Chattisgarh Govt. and Shri Sameer Bajpei, Prof., NIT Raipur; delivered their talk.

Shri Pradeep Mittal, President, IBC, in his opening address welcomed Shri O.P.Goel, Founder President, IBC, all the panellist, Shri H.P.Gupta, Hony. Secretary, IBC and all the viewers/ audience. He briefed everyone attending the webinar about the history, role and vision of IBC. While expressing the relevancy of the topic of the webinar in the present day scenario, he outlined the main reasons necessitating conservation of nature.

The President informed that the world including our country is facing an ever-increasing demand for food, water, sanitation, shelter, health services, transportation, and energy. It is essential that the infrastructure and built-environment required to support these demands is planned, designed, delivered, operated, and maintained

appropriately without compromising the needs of future generation by conserving the nature and without damaging the eco-system.

The President further mentioned that the purpose of development is to meet the basic needs of the humanity, improve the quality of life for all and ensure a secure future. India is under severe pressure for coping up with never-ending demand for urban housing and the corresponding infrastructure. Considering this rapid growth, focus has to be on systematized urbanization and integrated development.

The President also mentioned that we all know the development takes place at the cost of environment. Development takes place on land which may be either forest or agricultural thereby reducing the forest or agricultural land cover. For development we need stone, sand, cement, lime, steel, bricks, timber, tiles, paints, other building materials, fuel, electricity, transport etc. Due to mining of the natural building materials like stone and sand, the natural sources of raw materials are depleting fast. Therefore, the President stressed the need of conserving the natural resources by reducing the consumption, reducing the waste, reusing the waste and recycling the waste generated.

Shri O.P.Goel, founder President, IBC while thanking everyone joining the webinar, stressed the need of conservation in the present day scenario of heavy pressure on natural resources due to increased demand of housing and other buildings.

Shri Rakesh Chaturvedi, IFS, PCCF, Govt. of Chattisgarh in his talk informed that all humanity has the duty to integrate environmental conservation with development activity at all stages and levels so as to achieve sustainable development. Keeping use of non-renewable resources and related activities within the limits of carrying capacity of the eco-systems, sustainable development promotes the well being of both people and eco-system.

Shri Chaturvedi further informed that the rate and speed at which we are using the natural non-renewable resources for the development needs, the day is not far off when these natural resources will face extinction, water will be scarce, the humanity will be sick with multiple environment related ailments like respiratory diseases and many types of allergies. Nature as a whole, the earth

and all life system should be respected. All persons have a moral and fundamental responsibility to respect and care for the community.

Shri Chatuirdedi said- protect, preserve and in so far as possible, restore the health and integrity of eco-system should be the pre-requisite of development to ensuring the functioning of essential ecological processes and life support system throughout the earth. Therefore, it is the most appropriate time we take the corrective action for change of our mindset in balanced development to ensure conserving the nature.

Shri Sameer Bajpei, Prof. NIT Raipur in his talk mentioned that manufacturing of cement, steel, tiles and other building materials and the construction processes consume not only huge energy but also produce many types of harmful gases, raise the temperature of the environment, pollute air and water. Lot of fossil fuel is used for production of energy.

Shri Bajpei further added that protection and conservation of the environment is best achieved by preventing environmental harm rather than by attempting to remedy or compensate for such harm. Activities which are likely to cause potential or actual harm to the environment shall be preceded by a thorough environmental impact assessment.

For ensuring conservation, Shri Bajpei reminded that the duty is cast upon the construction industry to follow the principle of 3Rs i.e Reduce, Reuse and Cycle. In totality our aim is to ensure that the infrastructure construction industry is armed with new age capabilities, innovative technologies in construction of buildings and infrastructure and at the same time not compromise on quality, safety, health-care and above all in conserving the environment.

At the end of the Webinar, Shri H.P.Gupta, Honorary Secretary, IBC presented the Vote of thanks. He thanked all the panellist for their valuable deliberations and the viewers for joining the seminar and making it successful.

Webinar on “Role of Engineers in Development of Country”

To commemorate the 160th birth anniversary of legendary Engineer Sir, M.V.Visvesvaraya, Indian Buildings Congress organized a webinar on “Role of Engineers in Development of Country” on 15th September, 2020

at 5.00pm. Shri Pradeep Mittal, President , IBC in his address welcomed Shri O.P.Goel Founder President, IBC; Shri V.K.Jayaswal, DG, CPWD; Shri Anant Kumar, Special, DG (Tech.),CPWD; Dr. A.K.Mittal, Former, CMD, NBCC; Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences who joined the webinar. He wished a very happy engineer's day to everybody. The President, briefed about the vision and role of IBC in promotion of Built environment.

The President, IBC expressed that National Development refers to the ability of a country to improve the social welfare of the people by providing social amenities like good educations, infrastructure, medical care and social services. The purpose of development is to meet the basic needs of the humanity, improve the quality of life for all and ensure a secure future.

He emphasised that the role of Engineers is extremely important in nation building to meet ever-increasing demand for food, water, sanitation, shelter, health services, transportation, energy, communication net work, digitalization of data, manufacturing in industries, and various processes in ensuring the growth and development of a country's economy as well as in improving the quality of life for citizens. Behind every one of these innovations, there is always an individual or a group of humble engineer. Engineers help to develop the physical infrastructure we all rely on. As such, there is an important link between a country's engineering capacity and its economic development.

Shri O.P.Goel, founder President, IBC and former DG(W), CPWD, paid his homage to the legendary Engineer Bharat Ratna Sir, M.V.Visvesvaraya. In his address he briefed about the business system prevalent in our country from Pre-British Raj era to the present times. He quoted the latest examples of manufacturing of PPE Kits and ventilators during Covid-19 by our entrepreneurs which not only met the demand of the country but are also being exported thereby saving lot of foreign reserve. He mentioned that we have to innovate and improve our performance within the country to get desired results.

Shri Goel further mentioned that Engineers are involved in all spheres and facets of development. Infrastructure is the base of all development. In the last few decades we have made significant progress in this sector. Few examples of infrastructure works where

we have made significant progress are: highways, expressways, tunnels, new railway lines, added second lane of railways track, electrification of railway track, Metros in major cities, Electrification, Solar power, Wind power, Nuclear power, Micro-Hydel, development of bio-fuel, Ports, Airports, Tourism, Buildings for different user groups, Services etc..

He lauded the role of native engineers and workmen who are 2nd to none and are in great demand across the world. He also advised for the need of improvement in attitudinal behaviour, discipline, enforcement of timelines and quality requirements. He also emphasised the need of due recognition to engineers in policy making. He concluded by saying- Given due opportunities, the engineers shall be architects of state of art infrastructure enabling emergence of 'Atam Nirbhar Bharat'.

Shri Anant Kumar, Additional, DG (Tech.), CPWD in his introductory address informed about the diverse role being played by the engineers in development of Nation for the benefit of mankind.

Shri V.K.Jayaswal, Director General, CPWD, in his address wished happy engineers day to every participant and conveyed his rich tributes to Bharat Ratna Sir M.Visvesvaraya, who was an engineering wizard and eminent statesman. He mentioned that his rich contributions and dedicated service to the nation as an engineer are inspiring and worthy of emulation by all of us. He also lauded the role of IBC since its inception in the field of Built environment. He further mentioned that Engineers are the critical agents of change and link between science and society, between policy and practice. India's ability to retain its technological edge, in large rests with the engineers.

He further mentioned that our country is going through a major phase of industrialisation and modernisation with a flood of Government construction and infrastructure projects like Bharat Mala, Sagar Mala, expansion of railways to far flung areas, smart city mission to develop 100 smart cities, Atal Mission for rejuvenation and Urban Transformation (AMRUT) for 500 Tier 2 and Tier 3 cities and housing for all by 2022 besides development by private sector. Atamnirbhar Bharat and Make in India are two major national programme designed to establish india as a global manufacturing hub. There is no need to exaggerate the role and involvement of engineers

to make these programmes successful; therefore, the engineers have more opportunities to demonstrate their excellence in implementation of these schemes.

He also called upon the engineering fraternity to demonstrate its professional and social responsibilities in an exemplary manner and to remind themselves of their duty to develop a sustainable and prosperous world in harmony with the forces of nature.

Dr. A.K.Mittal, former CMD, NBCC and past President, IBC, in his address mentioned that engineers differ from the society by the nature of their training. While the scientists try to explore the nature world and discover new knowledge about the universe and how it works, engineers apply the knowledge to solve real problems, often with an eye towards improving cost and efficiency. He mentioned that role of engineers in developing country begins with the identification of the problems faced by the people.

Role of an engineers are very crucial in all developmental sectors like, food for all by bringing more and more areas of waste land under cultivation and extending irrigation facilities; Affordable Housing facilities by designing and constructing low cost houses for the common masses; Sanitation by tackling sanitation service problems by offering different sanitation products and services at affordable prices; Waste management by converting solid and liquid waste into re-usable product; access to healthcare by way of constructing hospitals, dispensaries; Connectivity and public transportation by constructing roads, railway lines, bridges, tunnels, ports etc; Electricity – by generating power from non-conventional energy resources like Solar power, Wind Power etc. He also suggested IBC to carry out research and development for innovations of new engineering products and processes.

At the end of the webinar, Shri H.P.Gupta, Honorary Secretary, IBC presented vote of thanks. He thanked all speakers for their valuable speeches and suggestions. He thanked the President IBC for his pro-active approach in organising the webinar. He thanked all the participants who joined the webinar. He also thanked the IBC secretariat staff for their co-operation in organising and smooth conducting of the webinar.

ट्रेन में सिगरेट पीते ही कड़केगी बिजली

रेलगाड़ी के डिब्बे में छिपकर सिगरेट या बीड़ी पीने वाले भी अब बच नहीं पाएंगे। बीड़ी-सिगरेट सुलगाते ही तेज रोशनी के साथ बिजली कड़कने की आवाज जहां खुद धूमपान करने वालों को चौंका देगी, वहीं ट्रेन में मौजूद रेलकर्मियों को भी इसका पता चलने में देर नहीं लगेगी। आवाज सुनते ही टीटीई और ट्रेन का स्टाफ सिगरेट सुलगाने वाले तक पहुंच जाएगा। रेलवे इसके लिए कोच के अंदर आधुनिक सेंसर वाले उपकरण लगाने जा रहा है। यह सेंसर शॉर्ट सर्किट से धुआं निकलने पर भी सबको सतर्क करेंगे।

रेलवे कुल एक हजार कोच में यह प्रणाली लगाने जा रहा है। आम बजट से फंड जारी होने के बाद रेलवे ने पिक बुक (आवंटित बजट की लेखा पुस्तिका) में भी इसका उल्लेख किया है। देश भर के पांच सौ एसी कोच और पांच सौ नान एसी कोच (स्लीपर व जनरल बोगी) में यह सिस्टम लगाया जाना है। प्रत्येक कोच में आधुनिक उपकरण लगाने पर तीन लाख रुपये खर्च होंगे। मुरादाबाद रेल मंडल द्वारा संचालित कोचों में भी यह सिस्टम लगाया जाना है। इसको लगाने का काम वित्त वर्ष 2020-21 में पूरा कर लिया जाएगा। कोच के अंदर कई स्थानों पर सेंसर लगाए जाएंगे, जिसमें छोटी रंगीन लाइट लगी होगी। कोच के अंदर सिगरेट पीने या अन्य कारण से धुआं निकलते ही सेंसर की डिवाइस सक्रिय हो जाएगी। रंगीन लाइट चमकने लगेगी, जो बिजली कड़कने जैसी होगी।

सेंसर यदि किसी बीड़ी-सिगरेट पीने वाले की वजह से बजा तो संबंधित यात्री से 500 रुपये जुर्माना वसूला जाएगा। अपर मंडल रेल प्रबंधक एम.एस. मीना ने बताया कि इस उपकरण को कोच में लगाने के लिए पिक बुक में बजट आवंटित कर दिया गया है।

Webinar on “Artificial intelligence in Construction Management”

On the occasion of the 100th birth anniversary of Late Shri V.R.Vaish, Former, DG(W), CPWD, a renowned Engineer and an outstanding personality, Indian Buildings Congress organised Shri V.R.Vaish Memorial Lecture on 23rd September, 2020 at 5.00 pm on the topic of “Artificial intelligence in Construction Management”. Shri Pradeep Mittal, President, IBC in his address welcomed Shri O.P.Goel, founder President, IBC; Dr. Prabhat Kumar; Sh. Anil Chadha; Dr. A.K.Mittal, Former, CMD, NBCC and former President IBC; Smt. Gayatri Vaish W/o Late Shri V.R.Vaish; Shri Himangshu Vaish Son of Late Shri V.R.Vaish and CMD of Insta Power, All other family members of Late Shri V.R.Vaish, Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences.

The President, briefed about the professional journey of late Shri V.R.Vaish and his contribution to

the society and IBC. The President IBC further informed that Shri Vaish was true Karamyogi. Truly in line with the path of Karamyog shown by late Shri V.R.Vaish, the IBC is engaged in the field of Built Environment through its diverse professional activities which include dissemination of knowledge through Technical Reports, Journals, Bi-monthly Magazines, Seminars, Webinars and Conferences.

Shri O.P.Goel, founder President, IBC and former DG(W), CPWD, while speaking on the occasion recalled memories of his association with late Shri V.R.Vaish. He informed that the Sh Vaish had a very sharp memory and was very much meticulous in his working. He used to examine all matters in great details and will also go into each calculation of the detailed estimate. His method of monitoring works, audit paras, pending bill, EI, SI, CTEs para etc. was outstanding and huge pendency in this direction was cleared during his time. In our functioning let us resolve to follow the ideals of late Shri V.R.Vaish.

Shri Anil Chadha in his speech mentioned about role of artificial intelligence (AI) in different stages of planning and managing execution of the Projects. Many softwares are available in construction management. Customised softwares depending upon the specific requirement of the project can be utilised. He mentioned that for maintaining Hindrance Register, Site Order Book, Drawing Register, Land details, Site Availability reports etc softwares are available. Expert softwares for working out the estimate for individual houses and for plinth area rates are also available.

Dr. Prabhat Kumar while speaking on the topic gave a detailed presentation. In the process of rapid digitalisation, he explained the Artificial Intelligence (AI) in construction management. He explained about the self driving construction machinery used to perform repetitive tasks; Big data analysis in construction; AI in scheduling of various activities, evolving of thousands design, reduction in cost, better facility management. Through AI we can ensure better construction safety, can send alerts and warn in advance. AI database systems can inform engineers of the best construction methodology for a site, based on previous projects as well as pre-existing blueprints in the design stage. With this information, engineers can make important decisions based on evidence that may not have been available to them before. The Artificial Intelligence helps provide real-

time guidance using connected wearable, monitoring the working environment and ensuring no workers are exposed to dangerous substances, tracking the worker's physical well-being.

With the help of AI the construction Project managers can improve the waste management to improve the cost-efficiency of the process. Drones can be used to monitor safety and protect the employees. Through AI we can do better risk mitigation, can do precision application and can address labour shortage. 3D printing of houses is new technology in the direction to counter labour shortage and quality issues.

Dr. A.K.Mittal while paying his homage to late Shri Vaish, desired IBC to focus on R & D. He desired IBC to explore 3D printing in construction industry.

Shri Himangshu Vaish in his speech thanked the IBC for arranging the V.R.Vaish Memorial lecture.

At the end of the lecture, Shri H.P.Gupta, Honorary Secretary, IBC proposed the Vote of thanks.

वीरान घरों को संवारकर पर्यावरण की रक्षा एवं स्वरोजगार की अलख जगाते दो युवा

उत्तराखंड के दो युवा वीरान एवं खंडहर होते घरों को संवारकर पर्यावरण की रक्षा के साथ-साथ पहाड़ से पलायन रोकने की मुहिम में जुटे हैं। इन युवाओं ने 'माउंटेन विलेज स्टे' नाम से एक संस्था गठित की है, जिसने उत्तरकाशी जिले के धराली गांव में एक पुराने घर को उसके मूल स्वरूप में ही संवारकर वहां प्रीमियम विलेज स्टे शुरू किया है। जबकि, 1991 में भूकंप का दंश झेलने वाले जामक गांव में कुछ पुराने घरों को होम स्टे के लिए तैयार किया गया है। जनवरी 2020 के अंतिम सप्ताह से इनका संचालन भी शुरू हो गया है।

माउंटेन विलेज स्टे का उद्देश्य बिना सरकारी सहायता के दिसंबर 2020 तक सामुदायिक पर्यटन बढ़ाने के लिए चार प्रीमियम विलेज स्टे और 15 होम स्टे शुरू करना है। इनमें पर्यटकों को गांव में ही आधुनिक सुविधाएं उपलब्ध होंगी। माउंटेन विलेज स्टे के निदेशक एवं सतपुली (पौड़ी) निवासी सॉफ्टवेयर इंजीनियर विनय केडी कहते हैं कि सरकारें होम स्टे और सामुदायिक पर्यटन को लेकर कोई मॉडल तैयार नहीं कर पाईं। इसलिए उन्होंने सोशल सेक्टर से जुड़े चमोली जिला निवासी अपने साथी अखिलेश डिमरी के साथ वीरान घरों में समुदाय आधारित पर्यटन के मॉडल तैयार करने की ठानी। इसी के तहत पहला प्रीमियम विलेज स्टे धराली में 'धराली हाइट्स' नाम से शुरू किया है। पहला होम स्टे जामक गांव में 'डार्क टूरिज्म' की थीम पर शुरू हो चुका है। यहां पर्यटक 1991 के भूकंप की त्रासदी को जान सकेंगे।

अखिलेश डिमरी कहते हैं कि इस मॉडल से जहां स्थानीय लोगों को रोजगार मिलेगा। वहीं, गांव में ही स्थानीय उत्पाद भी बिक सकेंगे। धराली के प्रीमियम विलेज स्टे में स्थानीय युवाओं को निशुल्क प्रशिक्षित किया जाएगा, ताकि वे अपना रोजगार स्थापित कर सकें। धराली के मॉडल से वे ग्रामीण भी प्रेरित हो रहे हैं, जिन्होंने अपने पुश्तैनी घर वीरान छोड़ रखे हैं। लोक गायक ओम बघाणी कहते हैं कि इस पहल से न सिर्फ गांव आबाद रहेंगे, बल्कि लोक परंपराएं, भाषा, संस्कृति और लोक साहित्य भी जीवित रहेगा।

विनय केडी बताते हैं कि उत्तराखंड के पहाड़ी क्षेत्र में वीरान और खंडहर हो रहे 500 पुराने घर चिह्नित किए गए हैं। इनमें भी समुदाय के सहयोग से होम स्टे और प्रीमियम विलेज स्टे शुरू करने की तैयारी है।

Webinar on "Simple and Comprehensive Building Estimating"

Indian Buildings Congress on 6th October 2020 at 5.00pm Organized a webinar on "Simple and Comprehensive Building Estimating". Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P.Goel, founder President, IBC; Shri V.S.Verma, Vice President, IBC & former E-in-C, PWD,MP; Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of Built environment. He emphasized the necessity and importance of proper estimation in today's scenario from the point of view of realistic estimation to control time and cost overrun.

The estimated cost of a work is a close approximation of its actual cost. Estimating is the most important of the practical aspects of construction management. Thereafter depending upon financial capacity the authority has to take decision to acquire the asset or construct the building.

He informed different types of buildings depending upon the usages different parameters of estimation like residential (independent unit/ multi storeyed house or residential complex), commercial building – shops/ markets/shopping complex/ mall/ mandi; Educational buildings- School/ colleges/ university/ NIT/IIT/IIM/ Medical College/ laboratories; Health care buildings-like dispensary/Hospitals, Office complexes, Recreational Centres – Cinema halls, Theaters, Auditorium, Parks; Exhibition halls; Thermal plants; refineries; nuclear stations; defence installations; ordnance factories; armaments storages etc-the list is endless.

Parameters of estimation also depends upon the type of foundation which in turn depend upon the soil parameters and the chemistry of soil on which the building rests.

Parameters of load bearing construction are different from the RCC framed structure.

Parameters of prefabricated/ pre-engineered buildings and conventional masonry or RCC construction are different.

The parameters of estimation of a building also vary with the height of building and type of services and furnishings it has.

Further parameters of cost of building also depend upon the geographical location, atmospheric conditions, working conditions and the duration of construction involving escalation.

The President further mentioned that the designing parameters and estimation requirements thereof of each type of building not only depend upon its usage but many other parameters. Sanctioning and budgeting of any building or construction project is decided on its estimated cost. Therefore, estimation is a very responsible job which has to be given utmost importance. He mentioned that the responsibility is heavily cast on the estimator for preparation of a realistic estimate so as to enable the authorities to take appropriate decision keeping into its financial health.

Many a time, at the time of preparation of estimate either the estimator is not experienced enough to have knowledge of all relevant parameters to be considered in the estimate of building or he may be casual in his approach resulting into preparation of unrealistic estimate, leading to time and cost overrun.

Shri O.P.Goel, founder President, IBC and former DG(W), CPWD, mentioned that he is privileged to participate in the webinar and thanked the organisers for giving an opportunity to him to speak on the occasion. While mentioning though physical holding of webinar has not been possible due to the pandemic of COVID-19 but the organisers have found a very good system and has held many successful webinars in the series. He further mentioned that Sh. Verma is having versatile experience of building Projects and his experience will be of immense use to all technical people who will be greatly benefitted.

Shri V.S.Verma, Vice President, IBC and former E-in-C of MP, PWD, before making his presentation highlighted the reasons for selecting this topic. He mentioned that in the absence of SOP, whenever an estimate is discussed in any meeting with authorities, problems are being faced in presentation, in answering to the queries of different officers. On perusal of the estimate the owner of the project should be able to comprehend what he or she is going to get in the project cost. He gave his detailed presentation where he included all the possible parameters to be included in the SOP. He presented separate template for each element which are to be followed step by step so that every minute element of the project is included in estimation and estimate can be prepared and presented smartly.

At the end of the webinar, Shri H.P.Gupta, Honorary Secretary, IBC presented the vote of thanks. He thanked the speakers and all the attendees in the webinar to make the webinar successful.

भूकंप आने से पहले अलार्म कर देगा सचेत

कहते हैं इच्छाशक्ति हो तो कुछ भी असंभव नहीं है। कुछ ऐसा ही कर दिखाया है सिलीगुड़ी के 12वीं पास सुब्रतो पाल ने। सुब्रतो ने एक ऐसा सिस्टम तैयार किया है जो भूकंप आने के पहले अलार्म बजाकर सचेत कर देगा। साथ ही होने वाले नुकसान को बचाने में कारगर होगा। इसका नाम है अर्थक्वेक अलार्मिंग सिस्टम।

उनका कहना है कि पूरा सिस्टम पेंडुलम बेस्ड कांसेप्ट पर आधारित है। इसमें रिसीवर और सेंसर दो सेंसर भी लगाए गए हैं। किसी भी बड़े भूकंप से पहले आने वाले झटके को अलार्म सिस्टम से मापा जा सकता है। इसके बाद एक अलार्म बजेगा।

यंत्र को तैयार करने वाले सुब्रत पाल का कहना है की भूकंप के लिहाज से सिलीगुड़ी डेंजर जोन में है। 2015 में सिलीगुड़ी में आए भूकंप में वह खुद भी फंस गए थे और करीब एक घंटे बाद निकले। तभी उन्होंने सोचा कि क्यों न भूकंप से बचाव की दिशा में कुछ किया जाए। उन्होंने इसे लेकर 2016 में काम करना शुरू किया। करीब डेढ़ साल की मेहनत के बाद इसे 2018 में तैयार किया। इसे पेटेंट कराने को कोलकाता भेजा। वहां संबंधित विभाग ने मानकों पर परखा। इसके बाद इस यंत्र को इस साल 20 फरवरी को पेटेंट प्रमाण पत्र मिल गया।

सुब्रतो की मशीन से 3.5 रिक्टर स्केल तक के भूकंप से होने वाले कंपन या हलचल को मापा जा सकता है। यंत्र का पूरा सिस्टम पेंडुलम पर आधारित है। वैज्ञानिक भी मानते हैं कि बड़ा भूकंप आने से पहले धरती के अंदर हलचल होती है। यह मशीन उस हलचल से होने वाली कंपन को माप कर अलार्म बजा देगी। जिससे बड़े भूकंप को लेकर सचेत हुआ जा सकेगा।

Webinar on “Innovations and Patent”

J.C. BOSE University of Science and Technology, YMCA, FARIDABAD Organized a webinar on “Innovations and Patent” on 2nd November 2020 at 4.30pm. Shri Pradeep Mittal, President, IBC was also invited to deliver lecture on the topic of innovations in Construction industry. Other speakers in the webinar were Shri Dinesh Kumar VC, YMCA, Faridabad, Shri M.L. Agarwal, Head of Civil Engineering Deptt., Dr Vinkel Arora, NIFTEM, Sonapat, Ms.Aparna Jain, consultant, from Knowledgentia Consultants and Ms. Harinder Narvan, Registered Patent Attorney from Knowledgentia consultants.

The President, IBC while welcoming all the speakers and the viewers of the Webinar mentioned that he felt honoured and was thankful to the organizers for having given this opportunity to him to speak on the topic of innovations in building construction industry.

The President IBC informed that in today's scenario most widely used man made material in the world is Cement and brick by processing the materials available in its natural form, however it has a wide adverse impact on the environment. Many of today's most widely used building materials like bricks, wood, steel and glass are popular building materials and have become indispensable due to their versatility, low cost and practicality however have limitations, especially with regard to their impact on the environment. Further the conventional materials and technologies for construction takes longer time in completion of any project besides generation of huge construction waste material, fast depletion of natural resources, pollution of environment and heavy economic cost.

The President IBC informed that according to a 2017 study, the worldwide production of cement alone amounts to about 5 per cent of human-generated CO₂ emissions every year. Brick production is also blamed for a range of ills – including soil degradation from the sourcing of raw materials besides huge consumption of energy and CO₂ emission. Therefore the Engineers around the world are continuously innovating new building materials and technologies being discussed that could provide an alternative for speedy construction.

The President explained about innovations in

many construction materials. He explained about Fly Ash Cement, Programmable cement for use in place of Conventional Cement; hardened slag aggregate as a substitute of Conventional stone aggregate; 3D Printed Bio-Plastics construction in place of Conventional manual construction involving conventional brick & mortar; Hydroceramics for use in air conditioning; Bio MASON bricks as a substitute of conventional clay bricks; self healing concrete; modular bamboo, solar cells among many other materials that are reducing the burden on conventional building materials and are contributing in controlling the CO₂ generation and emission of green house gases.

The President IBC also explained about few New innovations in Construction technologies like Advanced softwares; construction-focused hardware; BIM/CAD; Cloud/ Mobile technology; Drones; Augmented reality and virtual reality etc.

Concludingly the President IBC mentioned while it's certain that many of today's leading building materials and technologies will continue being used for decades – if not centuries – to come, the development of alternatives and innovative materials and technologies is certainly promising.

All other speakers also gave very informative and useful speech.

कोच्चि की चारों अवैध इमारतों की गई ढेर

पर्यावरण मानकों का उल्लंघन करने वालों को कड़ा संदेश देते हुए सुप्रीम कोर्ट के आदेश पर समुद्र किनारे आखिरी दो अवैध बहुमंजिला इमारतों को 11-12 जनवरी, 2020 को नियंत्रित तरीके से विस्फोट कर कुछ ही सेकेंड में ढहा दिया गया। इसी के साथ अवैध रिहायशी इमारतों को गिराने की मुहिम पूरी हो गई। सुप्रीम कोर्ट ने कोस्टल रेगुलेशन जोन नार्म



का उल्लंघन करने वाली इन इमारतों को गिराने का आदेश दिया था। केरल सरकार ने समय सीमा का पालन करते हुए कड़ी सुरक्षा और एहतियात के साथ इस काम को अंजाम दिया। एहतियातन धारा 144 लगाकर सुबह आठ बजे से शाम चार बजे तक 11-12 जनवरी 2020 को 200 मीटर के दायरे को खाली करा लिया गया था।

केरल के तटीय शहर कोच्चि के मलाडु स्थित समुद्र तट पर बनाई गई कई आलीशान रिहायशी इमारतों को गिराने की यह अपने आप में अनूठी प्रक्रिया थी। 350 फ्लैट वाली चार हाई-राइज इमारतों को गिराने की मुहिम दो दिनों तक चली। कंक्रीट की इन इमारतों को बम विस्फोट करके गिराया गया लेकिन इससे आसपास की अन्य इमारतों को कोई नुकसान नहीं हुआ। मलाडु में सुनियोजित तरीके से अपनाई गई प्रक्रिया में करीब 750 किलो विस्फोटकों का इस्तेमाल किया गया।

Webinar on “ENTRAPPED DAMPNESS-The Cancer of RCC Structures, its causes, impacts and management to increase their AUL (Actual Usable Life)”

Indian Buildings Congress on 16th December, 2020 at 5.00pm Organized a webinar on “ENTRAPPED DAMPNESS-The Cancer of RCC Structures, its causes, impacts and management to increase their actual usable life”. Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P.Goel, founder President, IBC & former DG(Works), CPWD; Shri Anant Kumar, Vice President, IBC & Special DG, CPWD; Shri Ajay Kumar Harit, Water proofing Rehabilitation Consultant; Shri H.P.Gupta, Honorary Secretary, IBC; all viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of Built environment. He underlined the necessity and importance of dampness free structures/ buildings in the present day scenario for ensuring safety of the buildings and healthy built environment for occupants.

The President, IBC in his address informed that despite all precautions during construction and thereafter at the user's end, the dampness in the structures do takes place. Though the dampness is an excess of moisture that can not escape from structure, but the fact remains that dampness in a building structure is a silent and often undetected menace that can wreak havoc on the building often capable of causing severe damage to user's safety and health.

The President further informed that poorly compacted porous concrete; high water cement ratio in concrete; poor or inadequate water proofing measures in the foundation, water tank, external walls, bath rooms/

toilets; roof leakages; leaking and clogged soil, waste water, rain water or water supply pipes; defective window cills; faulty flashing; poorly fitted doors and windows; damaged render or pointing and junctions with chajjas; presence of salt in the sand used in the plaster or poor quality of construction materials often becomes cause of dampness.

Dampness in a structure can lead to decay and disintegration of materials like concrete, bricks, reinforcement, timber etc. through moss, fungus and corrosion. Combination of moisture and the air enhances the speed of carbonation and corrosion of reinforcement in RCC which ultimately leads to spalling and disintegration of concrete. The unwanted moisture/dampness in the structures enables the growth of various fungi in Concrete, Bricks and wood, causing rot or mould health issues and may eventually lead to sick building syndrome and many allergic as well as non-allergic disease to the occupants. The President stressed the need of taking all necessary preventive actions and in case the dampness takes place, a methodological approach based on solving both the obvious and hidden causes of dampness and for taking remedial actions so as to enhance the serviceable life of RCC Structures.

Shri O.P.Goel, founder President, IBC and former DG(W), CPWD, in his address briefed about the journey of IBC since inception. He lauded the role of IBC in its contribution towards promotion of built environment. He also appreciated the pains taken by the President IBC in organising 16 webinars including the present one on different technical topics at IBC head qtr level in a short span since onset of lockdown in April 2020 due to pandemic of COVID 19. He stressed the importance of dampness free buildings towards achieving healthy built environment.

Shri Anant Kumar, Vice President, IBC & Special DG, CPWD in his address, briefed about the importance of water proofing in buildings. He compared the activities towards prevention of dampness in structures with the activities of Army during peace times when it has to exert more in building its defences against the enemy. He mentioned that dampness prevention is most important from point of view of aesthetics of building; healthy built environment; convenience to the occupants/ users of buildings; prevention of fights and litigation between residents of upper and lower floors due to dampness and for increasing the life of structures.

Shri Ajay Kumar Harit, Water proofing Rehabilitation Consultant while thanking the Foundeer President, IBC and the President IBC for giving him an opportunity to make his point of view, he made his presentation with slides showing the dampness in various locations of structures like sunken areas of buildings, staircases, balconies, water tanks, tunnels etc and after treatment of damp areas by injecting anticorrosive cementitious polymer. He also suggested Box grating in place of conventional 2D grating over Khurras so as to stop choking of rainwater spouts on khurras. For effective checking of the menace of dampness he further expressed the necessity of policy of anti dampness law through legislation, strict implementation of waterproofing performance guarantee bond in letter & spirit and licensing of plumbing and water proofing contractors by the Government among other steps.

Shri M.C.Bansal, Advisor,(Technical), IBC presented the vote of thanks. He thanked everyone associated with the Webinar and all the Viewers.

सूर्य के रहस्यों को सुलझा रहा अंशु कुमारी का आविष्कार

बिहार की बेटी अंशु कुमारी ने रेडियो स्पेक्ट्रो पोलरीमीटर नामक जो यंत्र विकसित किया, वह सूर्य के रहस्यों को समझने में सहायक विवरण जुटा रहा है। सूर्य पर होने वाले विस्फोटों की जानकारी भी इसके माध्यम से दर्ज की जा रही है, समझी जा रही है। सूर्य से आने वाली चुंबकीय तरंगों के अध्ययन पर आधारित यह शोध एस्ट्रोफिजिकल जर्नल अमेरिका और सोलर फिजिक्स जर्नल में प्रकाशित हुआ है।

अंशु ने दैनिक जागरण को बताया, सूर्य के रहस्य को समझना कठिन है। दुनिया भर के वैज्ञानिक इसके बारे में जानने का यत्न कर रहे हैं। सूर्य की गतिविधियों और धरती पर पड़ने वाले प्रभाव

को जानने के लिए यह यंत्र-रेडियो स्पेक्ट्रो पोलरीमीटर मैंने विकसित किया, जो अब बेहतर परिणाम दे रहा है। शोधार्थी वैज्ञानिकों और छात्रों को इससे मदद मिल रही। यंत्र से ही पता चला कि चार साल में सूर्य पर 50 से अधिक विस्फोट हुए हैं।

उन्होंने बताया कि यंत्र को जून 2015 में रेडियो एस्ट्रोनोंमी फील्ड स्टेशन गौरीबिदानूर, कर्नाटक में स्थापित किया गया। इससे मिलने वाले परिणामों पर आधारित शोध 2019 में अंतरराष्ट्रीय जर्नल में प्रकाशित हुआ है। यह यंत्र सूर्य से आने वाली विद्युत चुंबकीय तरंगों को रिकॉर्ड कर इनका आकलन करने में सहायता प्रदान करता है। इससे धरती के तापमान, मौसम, जनजीवन और ऐसे महत्वपूर्ण विषयों में पूर्वानुमान लगाया जा सकता है।

अंशु ने सूर्य के रेडियो वेवलेंथ, कोरोनाल मास इजेक्शन और उससे जुड़े पांच बड़े विस्फोटों का अध्ययन किया। इन विस्फोटों के कारण हुए रेडियो एक्टिव उत्सर्जन और चुंबकीय तरंगों पर इसके प्रभाव के अलावा सूर्य के कोरोना (सतह) पर मैग्नेटिक फील्ड में आए परिवर्तन को समझने पर उनका शोध केंद्रित रहा। अब अंशु सूर्य पर होने वाले इन स्थलीय परिवर्तनों का अध्ययन कर रही हैं। उन्होंने पता लगाया है कि जब सूर्य की मैग्नेटिक फील्डलाइन टूटती या जुड़ती है तो उसकी सतह पर विस्फोट होते हैं। कोरोनाल मॉडलिंग से डाटा संग्रहण के जरिये वह उन संभावनाओं को जानने की कोशिश में है, जिनसे सूर्य की सतह पर होने वाली इन घटनाओं के कारण और समय की सही जानकारी मिल सके। अंशु ने 2012 में जयपुर से इंजीनियरिंग के बाद इंडियन इंस्टीट्यूट ऑफ एस्ट्रोफिजिक्स, बेंगलुरु से प्रो.आर.रमेश और डॉ. सी. कार्थीरावन के निर्देशन में सोलर रेडियो विकिरण और उसके प्रभाव पर शोध किया था।

Webinar on "Challenges before Building Industry due to Covid-19"

Rajasthan Housing Board and Jaipur Chapter of Indian Buildings Congress jointly organised a Webinar at Kota (Rajasthan) on the topic "Challenges before building industry due to Covid-19" on 27th February, 2021. Shri Pradeep Mittal, President, IBC in his address welcomed Shri Bhaskar A, Sawant, IAS, Principal Secretary, UDH & Chairman, Rajasthan Housing Board, Shri K.C.Meena, Chief Engineer, RHB, Jaipur, all viewers and audiences who joined the webinar. The President, briefed about the vision and role of IBC in promotion of Built environment.

The President expressed the relevancy of the webinar in present day requirement of post COVID-19 times, for resumption of functioning of industry and to bring the economy on rails in resolving the stalemate caused by the Pandemic.

The President briefed about the spread of Corona



Virus disease from human to human close contact with those who are infected and coughing and sneezing in open without mask protection. India along with most of the countries of the world is facing the adverse effects of Covid-19-Corona virus where millions of lives are suffering from this disease. He also mentioned that though the cases of Covid -19 had declined substantially during the last two months but after mid february 2021, the spurt in the cases has been noticed in few states which a cause of concern to every one.

During lockdown almost every industry including construction industry alongwith all its allied industries were shut down. The migrant construction workers/daily wagers who were basically the operating backbone of the industry, they became suddenly jobless. Their income sources vanished and their savings exhausted. The lock down has been a cause of severe misery of the working class. The workers were left with no money to feed themselves and to meet their daily needs. Therefore, most of the workers migrated to their native places so as to enable them to survive. Government also had to run more than 4250 shramik special trains to send the migratory labour to their native places.

On lifting up of the lockdown in phased manner, required labour is not available for execution of works. Huge numbers of workers are needed for resumption of full-fledged work in construction industry and its allied industries.

Multi-model mitigation measures for migratory labour can be thought of in re-assuring them for their welfare and to take care of their day to-day needs of fooding, living, housing, health care facilities, entertainment, and transportation etc. besides insurance of workers, EPF and ESIC facilities to their families.

There is a urgent need of framing the new urbanisation policy linking it more closely with livelihoods, jobs, health and welfare of workers. The location of living and workspaces of workers should be closer, working environment should be hygienic. The space should be adequate to avoid transmission of the epidemic. The services viz. potable water, sanitation, electricity and recycling of wastes should be hygienic with proper environmental quality, ventilation, sun and thermal comfort.

A total paradigm shift is necessary for the construction industry towards working class. Instead of considering the workers as liability, they need to be owned and considered as assets and cared utmost. The housing for labour can be constructed by the Industry or Government or both, can be arranged on lease or can be arranged on rent without putting any financial burden on the workers. The modalities can be worked out to allot such accommodation to the workers.

The President expressed that creation of additional space to take care of social distancing and health consideration needs; minimising physical contact between health worker and patient; fixing of smarter gadgets in health care buildings; arranging additional quantity of water in view of frequent requirement of washing hands and arranging required quantity of raw materials which are other big challenges resulting into higher completion cost of the projects.

The way forward to deal with the present situation appears to be mechanisation of various construction activities. Off site construction activities with repetitive modules should be promoted. The IT and computer aids are very much helpful in the planning, designing and construction of these various precast construction activities. This is the right time for construction industry to optimally utilize the IT in planning, designing and construction of more smarter cities and townships.

Shri K.C.Meena, Chief Engineer, Rajasthan Housing Board briefed about the achievements of the Board during the COVID times, through his presentation. He informed that the Board through e-auction earned revenue of more than Rs. 2000 crore by selling approximately 1500 commercial properties and 8000 houses and set an international record of sale. He also apprised about progress of other projects of common person interest.

Shri Bhaskar A, Sawant, IAS, Principal Secretary, UDH & Chairman Rajasthan Housing Board, in his address, advised the Engineers to adopt new technologies in building construction. He made a call to the Engineering fraternity to keep pace with the change in the construction technologies. He also congratulated the Rajasthan Housing Board and Indian Buildings Congress for holding the workshop.

780 किमी का होगा ग्रीन एन.एच. कॉरिडोर

प्रधानमंत्री की अध्यक्षता में आयोजित कैबिनेट कमेटी की बैठक में ग्रीन नेशनल हाईवे (एन.एच.) कॉरिडोर बनाने का फैसला किया गया। फैसले के मुताबिक ग्रीन एन.एच. की लागत 7662.46 करोड़ रुपये होगी। यह देश के चार राज्य हिमाचल प्रदेश, राजस्थान, उत्तर प्रदेश और आंध्र प्रदेश को जोड़ेगा। इस एन.एच. को ग्रीन कॉरिडोर का नाम इसलिए दिया गया है क्योंकि इसके निर्माण में गिट्टी-पत्थर का कम सीमेंट का ज्यादा इस्तेमाल होगा। सड़क निर्माण में प्लास्टिक और रियूज पदार्थों का भी इस्तेमाल होगा। हरियाली के लिए सड़क के दोनों तरफ पेड़ भी लगाए जाएंगे।

Webinar on “Re imagining Indian Urbanisation and Design”

Indian Buildings Congress organised a Webinar on the topic “Reimagining Indian Urbanisation and Design” on 20th April, 2021 at 4.00pm. Shri Pradeep Mittal, President, IBC in his address welcomed Shri O.P.Goel Founder President, IBC; Shri A.K.Jain, Former Commissioner (Planning), DDA, Shri V. Suresh, Former President, IBC, Former, CMD, HUDCO and President IGBC, Shri H.P.Gupta, Honorary Secretary, IBC; all viewers and audiences who joined this webinar.

At the outset, the President congratulated Shri A.K.Jain for authoring a new book on ‘Environment Urbanisation and Development’ on the most relevant topic of the present day requirement. The President, IBC in his address informed that in today’s atmosphere of fast changing economy, socio cultural societies, densification of population in urban areas due to migration of rural folks in search of employment and better life style, there is acute need of reimagining the Indian Urbanisation and design.

The purpose of development should be to meet the basic needs of the humanity, improve the quality of life for all and ensure a secure future. In the present day context, of ever-increasing demand for food, water, sanitation, shelter, health services, transportation, and energy coupled with increasing amount of emission of greenhouse gases, environmental pollution etc. and pandemic of Covid-19, there is need to plan the townships with such parameters which can face these challenges including pandemic situation like Corona so as to minimise damage to health of the mankind. Considering the rapid growth and rising expectations of the people, focus has to be on systematized urbanization and integrated development.

It is the most appropriate time we take the corrective action for change of our mindset in balanced development to ensure conserving the nature. To achieve the speed and scale and to meet the massive challenge, there is a need for out of box thinking, breaking the barriers in policy planning, technological use and financing.

Protect, preserve and in so far as possible, restore the health and integrity of eco-system should be the pre-requisite of development to ensure the functioning of essential ecological processes and life support system throughout the earth. The President expressed that it is the duty of the humanity to integrate environmental conservation with development activity at all stages and levels so as to achieve sustainable development.

The President requested all the stake holders for restricting use of non-renewable resources and related activities within the limits of carrying capacity of the eco-systems since sustainable development promotes the well being of both people and eco-system. Nature as a whole, the earth and all life system should be respected. Everyone has a moral and fundamental responsibility to respect and care for the community. The President also briefed about the vision and role of IBC in promotion of Built environment.

Shri O.P.Goel, Founder President, IBC in his address, informed that the IBC right from its birth has conducted large number of technical activities in the field of built environment and the recommendations made through its Seminars and conventions have been furnished to the Government. He threw light on the activities of the IBC in its last 29 years of existence. He also expressed that during last one and a half year the IBC could not to carry out its regular activities due to pandemic situation. He wished that the situation will come back to normalcy for which the country is working hard. He also wished individuals in the country to behave in a more disciplined manner and follow the health guidelines during the pandemic so that together we can conquer this monster. He also recalled the journey of our Country’s economy from rural to urban and the dynamic changes involved which he has witnessed from planning, designing and Construction of single storey buildings to multi storeyed buildings.

Shri A.K Jain, Former Commissioner (Planning), DDA, made a detailed technical presentation where with the help of real life pictures, graphs, and cartoons he explained the present scenario of the urban life of

different strata of people and the methodologies to be adopted for filling the gaps in existing and planned development. He mentioned that in 2011 the urban population of our country was 377 million which is going to explode to 600 million by 2031. The Urbanisation, has led to densification of the residential pockets, shortage of accommodation, formation of slums, poor ventilation in slums, lack of access of the 40% population in the slums to toilet facilities and potable drinking water and many more, increased carbon emission, environmental pollution, gap in demand and supply of all the infrastructure facilities and amenities. The climate change has led to formation of heat islands. He informed that the biggest share of energy is consumed in Building Industry where the Architects and Engineers have a huge responsibility how to reduce this demand and resulting carbon emission.

He mentioned that 40% population in urban areas are living in slums, some of them living in huge pipes also. More than 50% urbanisation is unplanned and unauthorised having narrow streets, no common places and facilities. In the new urbanisation where we are planning and developing multi storied sky scrapers, Malls, shopping complexes etc., we cannot rule out incorporating in the plans the slum dwellers, street vendors and small traders who meet our daily needs at our door at affordable price, informal transport -2-3 wheelers, Rickshaws hand carts etc. Despite more than 70 years of independence, the country is still poverty ridden; there is huge gap between plans and implementation. There is inequitable access of land, services, shelters and resources among the masses. The development is not sustainable. He suggested that there should be all-round development of all sections of society. He advocated the fourth Industrial revolution, encouraging Brownfield development, discouraging green field development, digital planning & resource management, mixed land use for work-life integration, sustainable transport, Transit oriented development for optimum use of land, Urban agriculture, multi crop, micro irrigation, vertical gardens, intelligent infrastructure, renewable and sustainable energy, energy efficient design, smart water and waste management, concrete recycling.

Shri V. Suresh, Former President, IBC, Former, CMD, HUDCO and President IGBC, in his speech, informed that country is growing in a big way and adding two crore additional population every year and have shifted from

Rural context to Urban Context. He pointed out the major thrust areas of development where more concentration is needed are Net Zero water, Net Zero waste, Net Zero Energy and Net Zero Carbon. He also mentioned that waste is to be treated as a solution area and not problem area.

At the end of the Webinar, Shri H.P.Gupta, Honorary Secretary, IBC presented the Vote of thanks. He thanked all the panellist for their valuable deliberations and the viewers for joining the seminar and making it successful.

जहां मर्ज, वहीं मार करेगा नैनो कैप्सूल

जहां मर्ज, वहीं मार। जितनी जरूरत, दवा की उतनी ही डिलीवरी। न दूसरे ऊतक व अंगों को नुकसान और न ही असंतुलित डोज। यह संभव होगा, नैनो पार्टिकल कैप्सूल से, जिसे आइ.आइ.टी. कानपुर के प्रोफेसर डा. प्रणव जोशी और यहां से पोस्ट डॉक्टरेट कर रही रिसर्च स्कॉलर डा. अर्चना रायचूर ने बनाया है। कार्सिनोमा, टीबी और अल्जाइमर जैसे रोगों में कैप्सूल के प्रयोग का परीक्षण सफल रहा है। अब इसे बाजार में उतारने की तैयारी है। यह 2020 के अंत तक बाजार में होगा। इस नैनो कैप्सूल को यूएस सेफ्टी फूड एंड ड्रग एडमिनिस्ट्रेशन ने मान्यता भी दे दी है।

अभी तक कैंसर में कीमोथेरेपी और टीबी और अल्जाइमर में दवा की सीधी डोज दी जाती है। इनके अपने साइड इफेक्ट हैं। कीमो का असर कैंसर से प्रभावित ऊतक के साथ शरीर के अन्य हिस्से पर होता है। टीबी और अल्जाइमर के इलाज में भी यही दिक्कत है। दवाओं की अधिक मात्रा से शरीर की प्रतिरोधक क्षमता कम होने के साथ अन्य दु-प्रभाव सामने आते थे। ऐसे में दवा केवल प्रभावित ऊतक तक ही पहुंचे, इसके लिए दो साल शोध करने के बाद डॉ. अर्चना रायचूर ने ड्रग डिलीवरी सिस्टम तैयार किया। उनके साथ मैकेनिकल इंजीनियरिंग के प्रोफेसर डॉ. प्रणव जोशी ने कैप्सूल की डिजाइन, वकिंग और मैटीरियल पर शोध किया। यह नैनो पार्टिकल कैप्सूल दवाओं को मर्ज वाले स्थान तक ले जाएगा। मर्ज के स्थान पर पहुंचने तक दवाओं का प्रभाव बना रहेगा। शरीर के अन्य मालीक्यूल या एंजाइम से प्रभावित नहीं होगा।

यह कैप्सूल ऐसे बायो पॉलीमर से बना है, जो बच्चे-बुजुर्ग, सभी के लिए सुरक्षित है। शरीर के किसी भी हिस्से को नुकसान नहीं पहुंचाएगा। तथा जरूरत के अनुसार छोटे से छोटा डोज डिलीवर कर सकेगा। इस कैप्सूल से जटिल रोगों का इलाज करना आसान होगा।

Webinar on “Fire Safety in Buildings”

Indian Buildings Congress, organized a webinar on “Fire Safety In Buildings” on 28th April, 2021 at 4.30PM. Shri Pradeep Mittal, President, IBC in his introductory speech welcomed Shri O.P.Goel Founder President, IBC; Shri Atul Garg, Director, Delhi Fire Service; Dr. Sanjay Kumar Tomar, Deputy Chief Fire Officer, Delhi Fire Service; Shri Sandeep Goel, Director, Proion Consultants; Ms. Aditi Patel, Consultants, Adira Innovations Raipur; Shri H.P.Gupta, Honorary Secretary, IBC; All viewers and audiences who joined the webinar. He underlined the importance and necessity of Fire safety in the buildings.

The President mentioned that fire safety should be as much a part of a building occupants as a panoramic view. As one of nature's most destructive forces, accidental fires can be unforgiving. They can erupt in all conditions, at any time, and without notice. Despite best efforts by regulatory agencies to prevent fires from occurring, fires do take place. Some Buildings have smoke alarms and others have security systems, but these devices alone do not provide complete fire safety. Low rise and High-rise Buildings of all types including apartment/tenants should develop and practice a fire escape plan.

Shri O.P.Goel, Founder President, IBC; in his address, mentioned about the journey of IBC and its diverse professional activities in dissemination of knowledge in the field of built environment through technical reports, journals, bi-monthly magazines, seminars and conferences. He further mentioned that due to pandemic of Covid-19, lot of webinars have been held since all physical activities have stopped. He also explained the importance of the ‘Fire Safety in the Buildings’ to keep the occupants safe. He also mentioned that the IBC in the past had held annual convention on this topic and brought out literature which was very useful. The BIS has also been upgrading the fire requirements in building from time to time and the latest is NBC.

Shri Atul Garg, Director, Delhi Fire Service, in his address stressed that the fire safety should be incorporated in the plan of buildings. One should also hire the fire consultant alongwith the Architect for integrated planning and design of the fire safety in the building drawings. After the building is constructed, the fire safety cannot be introduced in the building. He also mentioned that to make all the fire protection and fire suppression systems work effectively, coordination

between local governments, local municipalities, professional designers, owners, and builders is essential.

Dr. Sanjay Kumar Tomar, Deputy Chief Fire Officer, made his detailed presentation on three aspects-Fire safety challenges- a case study; Fire Prevention and Fire protection & fire safety plan. He gave examples of Fire on Shrey Hospital, Ahmadabad in 2020; Fire in Hotel Arpit Palace, Karol Bagh, Delhi in 2020. Few causes responsible for spread of fire in these cases were, non- early use of fire extinguishers, Main valve of fire suppression system was on terrace which was closed and the fire detection system, though provided but was on off mode.

In building fires are mostly accidental. They are usually caused by human error; faulty electrical components, general negligence and improper maintenance etc. Yet another major reason for the cause of building fires in India is the improper storage of combustible materials in habitable buildings

He mentioned that the open spaces around the building should be in conformity with the provisions contained in Part-3 of the ‘Development Control Rule and General Building Requirement’ of National Building Code. By implementing the methods of fire prevention like, design, ignition control, material control, the chances of fire breakout in the building can be minimized. Building design should be such that evacuation can be done quickly without subjecting the inmates to hazardous, unhealthy and untenable environment.

There should be an effective fire safety plan in place. The house keeping staff in hotels, Hospitals and other public buildings should be well trained and given fire safety training like hazard prevention methods and to keep all the fire escape routes free from obstruction and the combustible items away from source of fire.

Fires can spread quickly and may become life threatening in minutes. By the time one notices a fire on the floor or hears an alarm, it may be too late to plan an escape. One should not waste time and must evacuate the building immediately. The Evacuation system/ plan to escape from building in case of fire should be in place and the occupants should be trained at regular intervals for such plan through mock drills. The fire escape route plan should be well demarcated in the building so as to

enable anyone to reach a place of safety during fire.

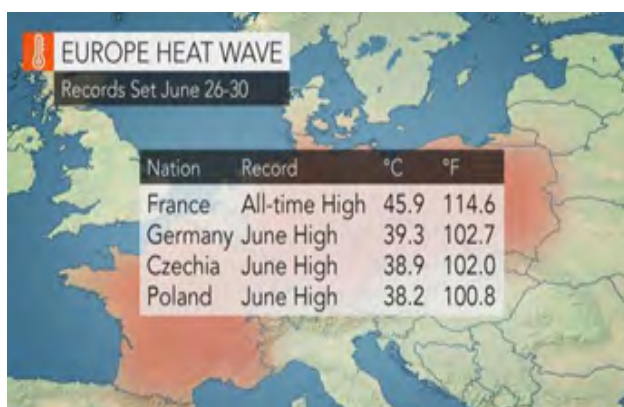
Shri Sandeep Goel, Director, Proion Consultants, in his detailed presentation explained various provisions of the National Building Code-2016 relating to fire prevention, life safety, smoke mitigation, fire protection, including fire fighting, fire detection and special requirements of occupancies etc. He further mentioned that buildings are getting bigger, taller and complex towards providing iconic attributes which has to be looked into from fire safety aspects by a Fire expert for incorporating the provisions contained in Annexure A to M in National Building Code. He emphasized for integrated and holistic approach for fire safety while planning and designing the building. He also explained the importance of Fire Tower and Fire compartment. He further emphasized the need of carrying out fire and life safety audit for all buildings having a height of more than 15 meters through third party having requisite experience in fire and life safety inspections regularly once in two years.

Ms. Aditi Patel, Consultants, Adira Innovations Raipur, in her address explained various safety measures to be taken in our daily life for prevention of fire like handling cooking gas in kitchen, handling small portable fire extinguisher in Kitchen/ hose hold, repairing the defective switch/ plug when gas is on, use of chemical spray to kill cockroach while gas is on etc. She also explained that utensils on burning gas should never be handled with loose cloth, while a electrical gadgets suddenly stops when it is connected to current should never be touched rather current should be tested with tester, use slippers while using washing machines, always properly tape the wire joints, never overload the switches/ extension cable, never use match stick to fasten the wire in extension cord/ switch etc.

At the end of the Webinar, Shri H.P.Gupta, Honorary Secretary, IBC presented the Vote of thanks. He thanked all the panellist for their valuable deliberations, the viewers for joining the seminar and making it successful and of the secretariat staff for making all the necessary arrangements for holding the Webinar.

Heat Could Change the Face of Europe

Most tourists imagine Europe as a cool place with flat-fronted buildings topped with sloping roofs. But global warming is threatening that Instagram-friendly look.



This summer, Paris and London were almost as hot as Delhi in April, on some days. Paris touched 41 degrees Celsius, London 39. Even Basel in Switzerland experienced 36 degrees.

Summers are expected to become hotter across Europe in the coming years — Paris could hit 50 degrees by 2100 — and that will be a problem because the architecture is not suitable for heat.

Back when Europe's summers used to be cool, bringing respite from its stiff frozen winters, the buildings were designed to keep the heat inside. Home builders priority is often to fit in as many exterior windows as possible. Warming European cities will need to change their architecture or adopt air conditioning bringing in light. Verandas are all but unheard of, shutters are a rare olde-worlde affectation, and awnings are exclusively for shops.

Now, Europeans are forced to think of ways to drive the heat out. Air-conditioning is extremely rare on the continent. Fewer than 5% of all European households have air-conditioning, compared with 90% in the United States," says an article in "The Washington Post". But Europeans are wary of air conditioners, as the additional energy consumption will make the air hotter. So, changing the design of their buildings is the only option.

Better ventilation and such additions as green roofs could improve things. Another basic step would be getting sunshades for windows of the type that are typical in Europe's south." And dealing with the rising temperatures will also require a cultural shift — future travellers to England might be surprised to find "the blinds down during the day,

Distribution of Covid Kit to IBC Staff for Protection against Pandemic

To maintain Covid-19 related safety measures, President, IBC Shri Pradeep Mittal & Hony. Secretary, IBC Shri H.P. Gupta distributed essential COVID KIT containing, Oximeter, Steamer, Thermometer, Masks, & hand sanitizer to all IBC Staff on 9th June, 2021 in IBC HQ Delhi



Invitation of Entries for Smt. Satya Goel Memorial Award

IBC is pleased to invite Entries for Smt. Satya Goel Memorial Award 2021. Entries for the Award complete in all respect along with Brief Profile in about 100 words of the candidate being proposed for Award should reach IBC Secretariat latest by 31st August, 2021.

Guidelines for Smt. Satya Goel Memorial Award: –

The award may be given to an outstanding woman building professional for her contribution to the profession and remarkable achievements during the last three years. Nomination may be called from members of the IBC, other professional bodies, building departments of the Government of India and State Governments, Public Sector and Private bodies involved in the built environment, etc.

The above Awards will be presented during the Inaugural Function of 25th Annual Convention of IBC.

OBITUARIES



Shri B. S. Duggal, Former DG (W), CPWD expired on March 1, 2021. Shri Duggal was Life Member of Indian Buildings Congress for last many years. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family. May God grant peace to the departed soul.



Dr. SPS Bakshi, Former CMD, EPIL and Past President of IBC expired on May 9, 2021. Dr. Bakshi, was Life Member of Indian Buildings Congress for last many years. He was associated with the Indian Buildings Congress and had actively participated in its activities and made outstanding contribution to its development. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family. May God grant peace to the departed soul.



Shri S.K. Mittal, Former Director General, CPWD expired on April 28, 2021. Shri Mittal, was Life Member of Indian Buildings Congress for last many years. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family. May God grant peace to the departed soul.



Shri Laxmi Narayan Jalani, Director, Varah Infra Ltd. expired on December 6, 2020. Shri Jalani was Life Member of Indian Buildings Congress for last many years. He was also Member of Governing Council. He was associated with the Indian Buildings Congress and had actively participated in its activities and made outstanding contribution to its development. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family. May God grant peace to the departed soul.



Shri N. C. Gupta, Former Chief Engineer, DDA expired on February 21, 2021. Shri Gupta was Life Member of Indian Buildings Congress for last many years. He was also Member of Governing Council. He was associated with the Indian Buildings Congress and had actively participated in its activities and made outstanding contribution to its development. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family. May God grant peace to the departed soul.



Shri K.B. Rai, Former Chief Engineer, Punjab PWD expired in May, 2021. Shri Rai was Life Member of Indian Buildings Congress for last many years. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family. May God grant peace to the departed soul.



Shri Rajsh Aggarwal, Managing Director, Sharav Infrastructures Pvt. Ltd expired on June 13, 2021. Shri Aggarwal was Life Member of Indian Buildings Congress for last many years. Indian Buildings Congress deeply mourns his sad demise and shares bereavement with the members of his family. May God grant peace to the departed soul.

Condolence

Indian Buildings Congress also conveys heartfelt condolences to the bereaved family of those members of Indian Buildings Congress and other renowned persons in Built Environment who lost their lives due to Covid-19 but whose information has not reached in the IBC.

We pray to the Almighty to grant peace to the departed soul and give strength to the bereaved families to bear this irreparable loss.

From Editor-in-Chief Desk

Residential colonies for middle and higher income groups – poor drainage and in turn improper maintenance

Residential colonies for middle and higher income groups are properly planned. Colony roads, service roads, water supply lines, sewer lines, drains are properly provided. A visit to any colony road reveals that colony roads and drains are not allowed to remain in proper shape by residents. Residents, for their personal interest, create several obstructions on the road, some of these are:

- (i) Flower beds are developed along the road, outside the compound of the house, obstructing normal drainage.
 - (ii) The level of compound of residential premises is generally higher than road level. A ramp is provided on the road, to have proper approaches for movement of vehicles
in the compound of residents. This obstructs road drainage as also reduces road width.
 - (iii) Drainage outlets are given on the road, inspite of the fact that all drainage system is possible through Service road.
 - (iv) The compound wall is made, partly on road space, reducing the road width. It obstructs normal drainage path.
 - (v) Temporary shed is provided on the road for parking of car/scooter.
2. In view of obstruction developed by residents, normal drainage path is obstructed. Thus during rains, pot holes and ruts are developed. Secondly the useable width of road is reduced. This creates difficulty for traffic. In turn residents blame local bodies for poor maintenance. In fact, residents are to be blamed. For proper maintenance of colony roads, Residents should behave in responsible manner.
3. Let Residents Association, Municipal Engineer and Municipal Councillor take care of drainage system. They must impress upon residents to think for drainage of colony. Residents should avoid such encroachments.



(K.B. Rajoria)

Invitation of Entries for “IBC Awards for Excellence in Built Environment 2021”

IBC Award for Excellence in Built Environment – 2021 is invited in eight categories, viz, (i) Residential units & Housing Complexes (ii) Commercial and Office Buildings (iii) Institutional Campuses (iv) Industrial Structures (v) Rehabilitation/Retrofitting of Buildings (vi) Infrastructures Projects (vii) Monumental Structures and (viii) Recreational Schemes. Award consists of a Trophy and Citation. For details, visit IBC website www.ibc.org.

The above Awards will be presented during the Inaugural Function of 25th Annual Convention of IBC. Entries for the Awards complete in all respect should reach IBC Secretariat latest by 31st August, 2021.

GSTIN 07AJOPK5636P1ZF



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DISCLAIMER : Built Environment is edited and published by IBC and the views expressed are entirely personal. The publication is based on happening and news as gathered from various sources.

Printed and Published by H.P. Gupta, Honorary Secretary, Indian Buildings Congress
Sector-VI, Kama Koti Marg, R.K. Puram, New Delhi-110022, Ph: 011-26169531, 26170197
Email : Info@ibc.org.in; indianbldgscongress@gmail.com; Website: www.ibc.org.in

Printed By: Shree Krishan kirpa Printers; Mob: 9311661244, 9811759739;
Email: shrikrishankirpa63@gmail.com

Price : ₹ 20/-