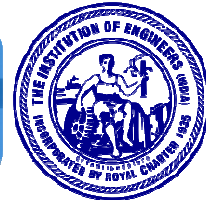
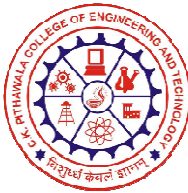


A Report on
Five Day National Level STTP (webinar)
On
Retrofitting & Rehabilitation of Old Structure

1-5 February, 2021



In Association with

The Institution of Engineers (India)

Organized by

Navyug Vidyabhavan Trust

C.K. Pithawala College of Engineering and Technology

Civil Engineering Department, Surat – 395007, Gujarat

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▪ **Coordinators**

Soumita Bid, Assis. Prof., CED, C.K.P.C.E.T , Surat

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REGISTRATION LINK

<https://forms.gle/W9nKW8e8NdNT5tWMA>

About The Institution of Engineers (India)

The institution of engineers (India) or IEI is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform for sharing professional interest. IEI established in the year 1920, with its headquarters at 8 Gokhale road, Kolkata - 700020, has served the engineering fraternity for over nine decades. In this period of time, it has been inextricably linked with the history of modern- day engineering. In 1935, IEI was incorporated by royal charter and remains the only professional body in India to be accorded with this honor. Today, its quest for professional excellence has given it a place of pride in almost every prestigious and relevant organization across the globe. IEI functions among professional engineers, academicians and research workers. It provides a vast array of technical, professional and supporting services to the government, industries, academia and the engineering fraternity, operating from 123 centers located across the country. IEI provides grant-in-aid to its members to conduct research and development on engineering subjects. IEI conducts section a & b examinations in different engineering disciplines, the successful completion of which is recognized as equivalent to degree in appropriate field of engineering of recognized universities of India by the ministry of human resources development, govt. Of India. Every year large number of candidates appear for these exams. For details, please see: www.ieindia.org

About South Gujarat Local Centre

Established in 1969, the South Gujarat Local Centre with an excellent infrastructure including a building "Mahida Bhvan" a library, One Auditorium (AC), Two Conference Room (AC) including audio visual facility and CCTV and Board Room all rooms connected with WIFI facility.

About Institute – CKPCET

C. K. Pithawala College of Engineering and Technology is a self-financed Institute which started its functioning in December, 1998 affiliated initially with Veer Narmad South Gujarat University, Surat and now with Gujrat Technological University, Ahmedabad. C. K. Pithawala College of Engineering and Technology is being managed by the Navyug Vidyabhavan Trust which was founded in February, 1965. Within a short span of its operation, the college has provided all the necessary facilities to help the students. The college has all the necessary infrastructure and facilities like classrooms, well-established library, laboratories containing modern facilities to provide better education in technology.

Mr. C. K. Pithawala has been the driving force for the setting up of this college named after him and is continuously drawing inspiration from him. This institute of learning in particular, like many others, owes a great deal to his vision, understanding and missionary zeal right from its inception to its blossoming.

About Civil Engineering Department

The Civil Engineering Department is the youngest department of the institute. It was established in 2005 offering UG courses. The insight of the department is to train proficient graduates by inculcating in them fundamental knowledge of Civil Engineering interspersed with professional expertise and research orientation integrated with ethics in order to prepare them to confront various career challenges. An intake of 60 students being departments asset, they are nurtured with motivation and lifelong learning attitude. The department has facility of new high-tech tools and technologies at various laboratories. The dynamic and strong team of faculty and support staff with the balance of qualification, experience and enthusiasm is our real strength.

About National Level STTP

Structural rehabilitation and retrofitting are very important in a country like India. Indian construction sector is facing plethora of issues. Cities like Mumbai, Delhi and Surat are very congested. Many structures are old and beyond their expected design life span. It is not always possible to demolish existing structures. Proper repair carried out at right time would help in minimizing the cost and time, therefore it is considered to be important. In case of new structures, while utmost care is taken at planning stage, due to many unknown variables, there remains a possibility of structural imperfections, in form of cracks etc., which develop by completion stage. It is not possible to re-build the whole structure. Under such scenarios advanced techniques such as structural rehabilitation and retro fitting find their applications. It is a developing field and therefore applied research and development efforts are going on to innovate new techniques, improve existing techniques, and to adapt them to Indian scenario.

This online STTP is expected to provide exposure on recent trends and practice in the area of structural engineering for Retrofitting & Rehabilitation of old Buildings and seeks to accelerate research and development by creating opportunities for upcoming technocrats to develop network and exchange ideas with established leaders.

Scope of STTP

The goal of the all-India webinar is to define the most important research needs in the fields of repair, strengthening and rehabilitation of buildings in order to protect them and their occupants against natural hazards. The emphasis of the all-India webinar is directed toward earthquake resistant buildings. Participants would be Students, structural designers, constructors, and materials specialists experienced in the repair, strengthening, and rehabilitation of buildings.

Contents of STTP

- Why rehabilitation is required?
- Protection of concrete.
- Rehabilitation of industrial structures.
- Planning and development of heritage structures a case study- Surat old fort.
- Repair and rehabilitation of RCC buildings.
- Repair and rehabilitation of bridges.
- Conditional assessment of existing RCC structures.
- Advance waterproofing techniques in India.

The eminent professors, researchers, designers and engineers contributing in these areas will deliver the lectures during the program and share their experience and expertise with the participants. The course will benefit to the participants from academics, R&D institutions, utility engineers, research scholars and students.

About Participants

There was total 142 participant were actively participant in this five-day national level STTP out of which 81 academicians, 19 Industrial person, and 42 students (Ph.D. Scholar/Diploma/UG/PG) in National Level STTP (Webinar).

Eminent Speakers

- Dr. Atul Desai, Professor, CED, SVNIT, Surat
- Mr. Laxmikant Thakkar, MD, Shivam Concrete Technology & Consultancy Pvt. Ltd., Vadodara.
- Er. Chirag Baxi, GM, K Retroflex solutions from Surat.
- Er. Nilesh Shah, Shah Associates, Surat
- Er. Satyam Kansara, Proprietor of S.K. Engineers, Surat.
- Er. Sumesh Modi, Principal Conservation Architect, Surat.
- Er. Chandan Kumawat, MD of Buildfix Ladder (The building Doctor).
- Mr. Pranav Desai, VP, Research, Innovation & New product development, Nuvoco Vistas Corp. Ltd. Mumbai.
- Mr. Raghunath Patil, R & D manager, CDIC, Nuvoco Vistas Corp. Ltd. Mumbai.

Programme Schedule

Date & Day	10:00-10:30	10:40-12:40	12:40-1:20	1:20-3:20
1/2/2021, Day-1	Inauguration	Er. Sumesh Modi Principal Conservation Architect Surat Planning and development of Heritage structures	Lunch Break	Er. Chandan Kumawat MD, Buildfix Ladder (The building Doctor) Conditional assessment of existing RCC structure

Date & Day	10:00-12:00	12:00-1:00	1:00 -3:00	3:00 onwards
2/2/2021, Day-2	Mr. Laxmikant Thakkar Ex-MD, Shivam Concrete Technology & Consultancy Pvt. Ltd., Vadodara. Why Rehabilitation is required Case study on rehabilitation of bridges	Lunch Break	Dr. Atul Desai Professor, CED, SVNIT Repair & Rehabilitation of structure due to temperature load, vibration and earthquake load	Question & Answer Feedback
3/2/2021, Day-3	Mr. Pranav Desai VP, Research, Innovation & New product development, Nuvoco Vistas Corp. Ltd. & Mr. Raghunath Patil, R&D Manager, Construction Dev. & Innovation Centre Nuvoco's Ready to use, wet bagged concrete solutions for repair and retrofitting	Lunch Break	Er. Satyam Kansara Proprietor of S.K. Engineers Repair and Rehabilitation of RCC buildings	Question & Answer Feedback
4/2/2021, Day-4	Mr. Chirag Baxi G.M., K.K Retroflex Solutions, Surat Protection of Concrete	Lunch Break	Mr. Chirag Baxi G.M., K.K Retroflex Solutions, Surat Rehabilitation of industrial structure	Question & Answer Feedback
5/2/2021, Day-5	Er. Nilesh Shah Shah Associates, Surat Stability assessment and role of NDT	Lunch Break	Er. Chandan Kumawat MD, Buildfix Ladder (The building Doctor) Advance waterproofing techniques in India	Question & Answer Feedback

Inaugural Session

The STTP was chaired by Chief Guest Mr. Sandeep Pingale (Founder and MD, E-construct Design and Build Pvt. Ltd.), Rahul Pithawala (Trustee, C.K. Pithawala College of Engineering and Technology), Dr. Anish Gandhi (Principal, CKPCET), Dr. Reena Popawala (Head Civil Engineering Department, CKPCET), Prof. Soumita Bid (Assistant Professor, CKPCET and STTP Co-Ordinator) and Mr. Anuj Chandiwala (Lecturer, CKPCET and STTP Coordinator). All participants were also present during the inauguration of STTP.

As per the Indian tradition, the STTP was inaugurated with Prayer by Prof. Mital J. Dholawala (Assistant Professor, Civil Engineering Department, CKPCET), Prof. Soumita Bid (STTP Coordinator) had welcomed all. She had given introduction of all Dignitaries on the dais and invited guests.

Dr. Anish Gandhi, Principal, CKPCET Engineering Campus shared his views for the program. He informed that CKPCET always supports these kinds of Short-Term Training programs through which the knowledge can be passed to students, Academician, Industrial person and Consultants for their development in modern era. He congratulated the Department for organizing such a program which indirectly benefits to society.

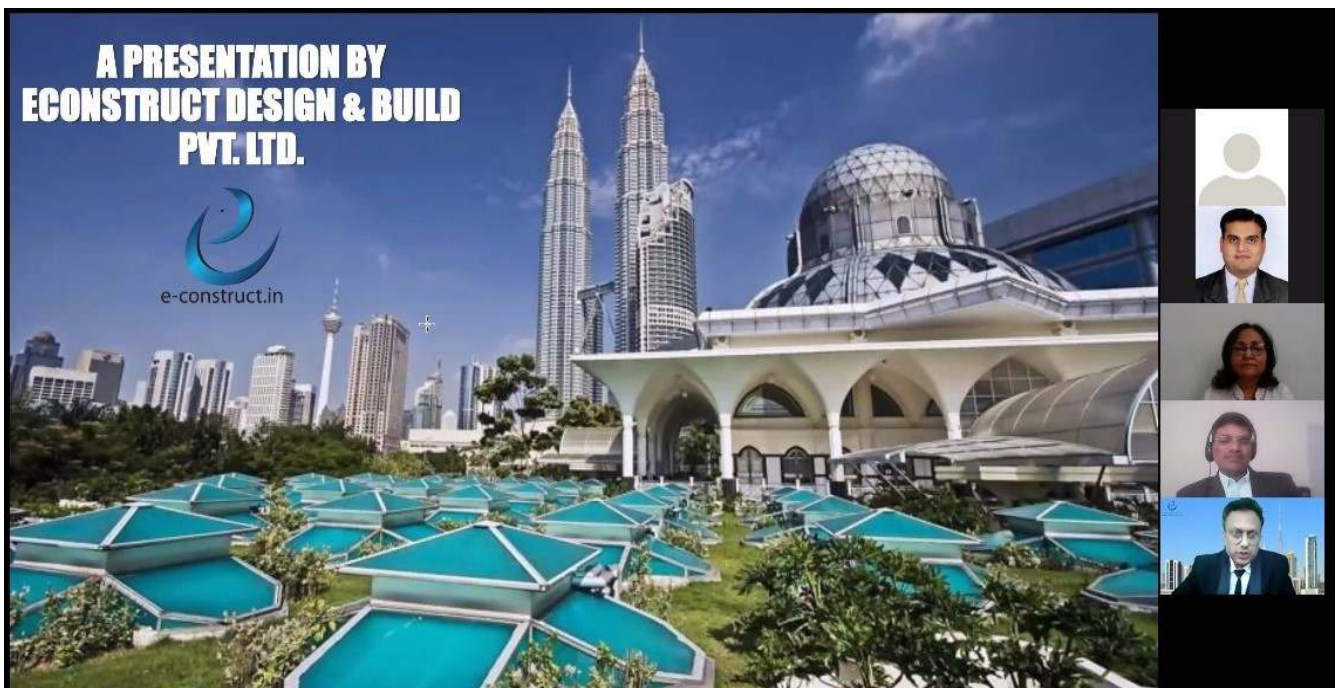
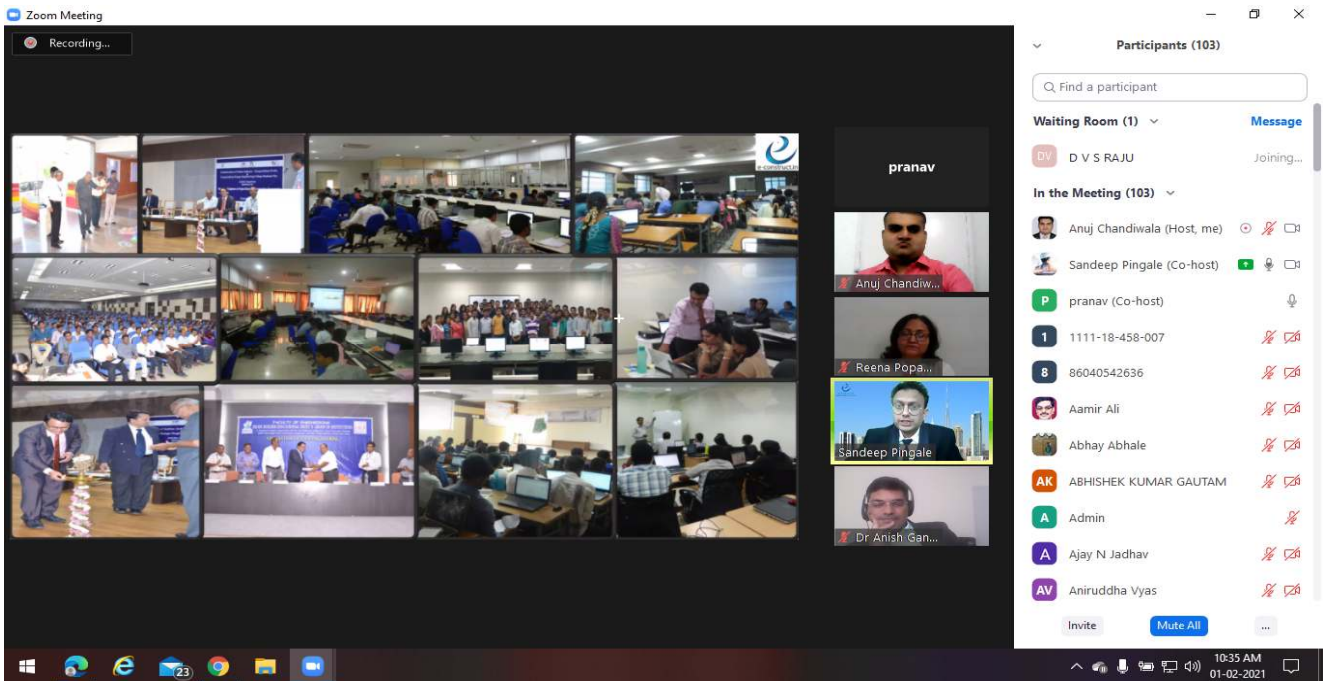
Dr. Reena Popawala, Head, CED, CKPCET introduced all about the department and its activities.

Prof. Soumita Bid, STTP Coordinator, had briefed all about the STTP and its importance. She explained various outcome of the program. She had given brief outline of program and requested to all participants to enrich their knowledge from this STTP by effective participation.

Mr. Sandeep Pingale, Chief Guest, gave the inaugural address explaining upcoming project of Anubhava Mantapa – A government project and the need for the retrofitting and rehabilitation of structure. He gave best wishes to the Department for successful completion of the STTP.

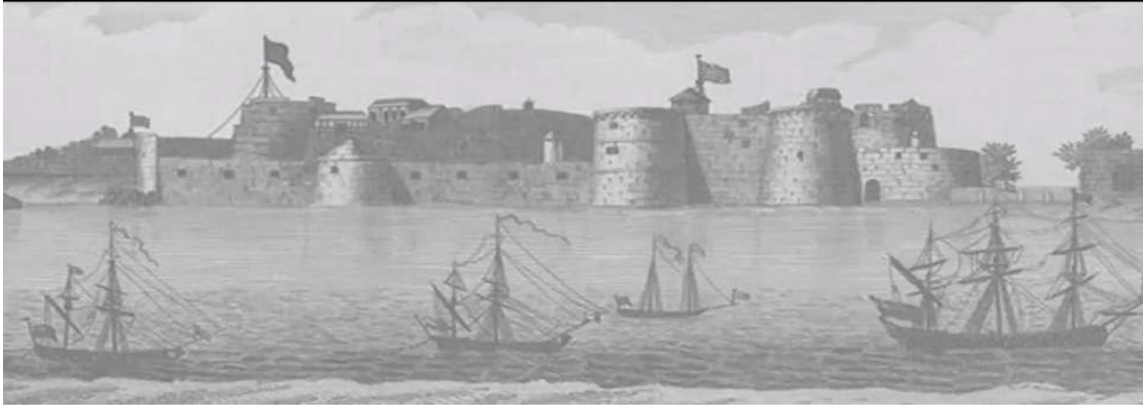
All the technical sessions were delivered then after as per the schedule by experts from relevant fields.

Glimpses of Inaugural function and all days of STTP on Retrofitting & Rehabilitation of Old Structure are given below:



Mr. Sandeep Pingale, Chief Guest, inaugural address explaining upcoming project of Anubhava Mantapa – A government project and the need for the retrofitting and rehabilitation of structure.

Day-1 (01/02/2021) Morning Session



COMPOSING SUBSTANCE : CONSERVING A HERITAGE PRECINCT AT CHOWK

Adaptive Re-use Plan For Surat Castle

PEOPLE FOR HERITAGE CONCERN

Presentation for **SHORT TERM TRAINING PROGRAMME**

1st February 2021



Er. Sumesh Modi, Principal Conservation Architect- Lecture on Composing Substance: conserving A Heritage Precinct at Chowk

Day-1 (01/02/2021) Afternoon Session

Serviceability & Durability Aspects

The above mentioned aspects directly influences the life of a structure on the basis of its **performance capability** "Then" & "Now" to provide the service as same on a longer run.

These are majorly dependant upon: **Weathering Effects, Carbonation effects, Indian Standard codal provisions, Efflorescence, Permeability (Porosity, Air Voids, Cracks, etc.)**



Er. Chandan Kumawat, MD, Buildfix Ladder (The building Doctor) - Lecture on Conditional assessment of existing RCC structure

Day-2 (02/02/2021) Morning Session

Factors Leading to Repairs/Rehabilitation

- Lapse during Construction of Bridge
- Wear & Tear .i.e. effect of Aging
- Unattended minor repair i.e. Poor Maintenance
- Damages due to wrong selection of type of repair/rehabilitation method
- Faulty Design
- Damages due to excess loading
- Damage due to Accident



Mr. Laxmikant Thakkar, Ex-MD, Shivam Concrete Technology & Consultancy Pvt. Ltd., Vadodara-
Lecture on Why Rehabilitation is required Case study on rehabilitation of bridges

Day-2 (02/02/2021) Afternoon Session



Dr. Atul Desai, Professor, CED, SVNIT- A lecture on Repair & Rehabilitation of structure due to temperature load, vibration and earthquake load

Day-3 (03/02/2021) Morning Session



INNOVATION

COLLABORATION

CARE

OPERATIONS

INTEGRITY


NUVOCO
Shaping a new world

Nuvoco's Ready to use, wet bagged concrete solution for repair and retrofitting

Mr. Pranav Desai, VP, Research, Innovation & New product development, Nuvoco Vistas Corp. Ltd.
&

Mr. Raghunath Patil, R&D Manager, Construction Dev. & Innovation Centre – A Lecture on Nuvoco's Ready to use, wet bagged concrete solutions for repair and retrofitting

Day-3 (03/02/2021) Afternoon Session



Basic Procedure of Repair to restore original RCC section.

- Provide the required supporting system to the structure.
- Remove weak concrete.
- Clean the rust of steel by wire brushes or sandblasting.
- Apply rust removers and rust preventers.
- Provide additional steel and shear keys all around the section.
- Provide required formwork.
- Provide a polymer/Epoxy based bonding coat between old and new concrete.
- Place the concrete of required thickness and grade and workability admixed with plasticizers.
- Apply Protective Coating on finished Surface.

Er. Satyam Kansara, Proprietor of S.K. Engineers – A Lecture on Repair and Rehabilitation of RCC buildings

Day-4 (04/02/2021) Morning Session

Zoom Meeting

Anuj Chandiwala (Host, me) Chirag K Baxi Anita Borade pranav NAJIBULLAH R...

Recording...

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Retrofitting & Rehabilitation Of Old Structure
February 1-5, 2021

Organized by
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Civil Engineering Department

C. K. Pithawala College of Engineering and Technology, Surat – 395007, Gujarat.

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KK RETROFLEX SOLUTIONS **Natural Solution (For men-kind welfare)** **Protection and Cure of Concrete**
Er. Chirag K Baxi

Er. Chirag Baxi, G.M., K.K Retroflex Solutions, Surat – A Lecture on Protection of Concrete

Participants (68)

Find a participant

Anuj Chandiwala (Host, me) Chirag K Baxi (Co-host) pranav (Co-host) 18_30 DHWANIL 180013106011 Parth Patel Ajay Jadhav Aniruddha Vyas Anita Borade anupam verma Ashwin Rohit BATCHU RAMANJANEYULU Bhavik Thanki Bhavin Shah Bindurani P.

Invite Mute All

Day-4 (04/02/2021) Afternoon Session

PPT of Technical paper of Chirag K Baxi 4.2.2021 CKP - Microsoft PowerPoint

Slide Show Review View


Font Paragraph Drawing Editing

KK RETROFLEX SOLUTIONS **Natural Solution (For men-kind welfare)** **AT THE END CONCRETE IS A DELICATE MATERIAL, LET US HANDLE IT WITH LOVE AND CARE**





Er. Chirag Baxi, G.M., K.K Retroflex Solutions, Surat – Rehabilitation of industrial structure

Day-5 (05/02/2021) Morning Session

STABILITY ASSESSMENT AND ROLE OF NDT



Nilesh H. Shah
Consulting Civil & Structural Engineer
Chartered Engineer; Registered Valuer
Sr Partner, SHAH ASSOCIATES, Surat

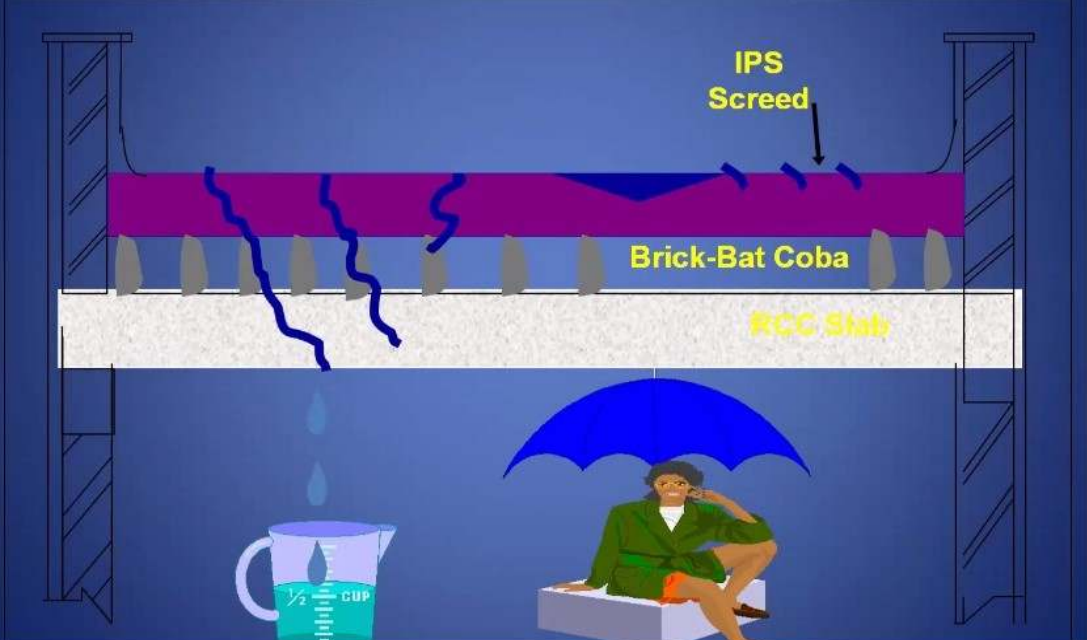









Nilesh Shah

Er. Nilesh Shah, Shah Associates, Surat – A Lecture on Stability Assessment and role of NDT

Day-5 (05/02/2021) Afternoon Session

The Traditional Waterproofing Practice



Er. Chandan Kumawat, MD, Buildfix Ladder (The building Doctor) - Lecture on Advance waterproofing techniques in India

After the session got over the question answer session was started and all the participated actively participated and ask the question to every speaker.

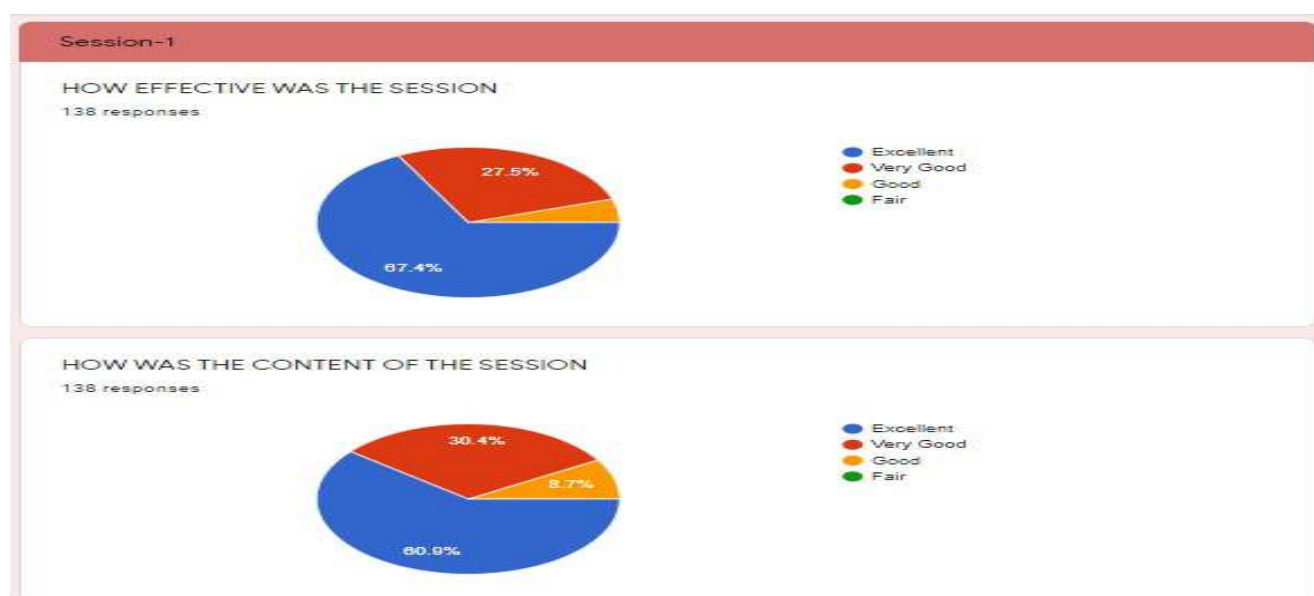
Valedictory Session

The STTP was concluded with valedictory function on 05.02.2021. In the Valedictory function, Expert of the day, Er. Chandan Kumawat, and all the participant were remained present. The concluding remarks were given by Mr. Anuj Chandiwalla, STTP Coordinator. He explained the success of the STTP by the tremendous number of participants 144, 10 Experts & 10 hrs. of intensive course teaching.

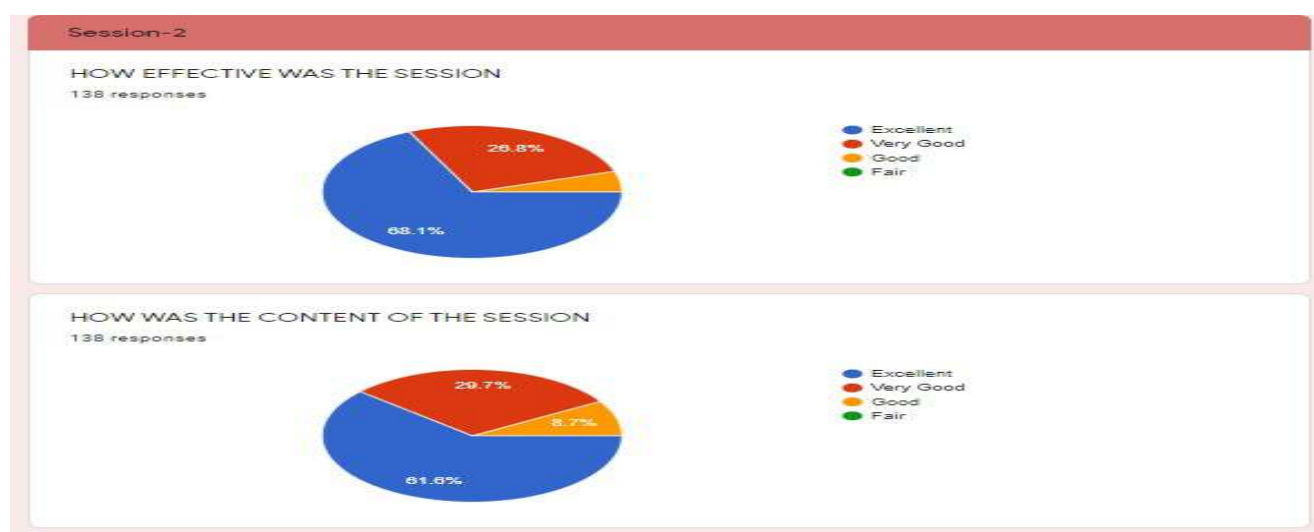
Feed Back Summary By Participant

Day-1

Session-1: Er. Sumesh Modi

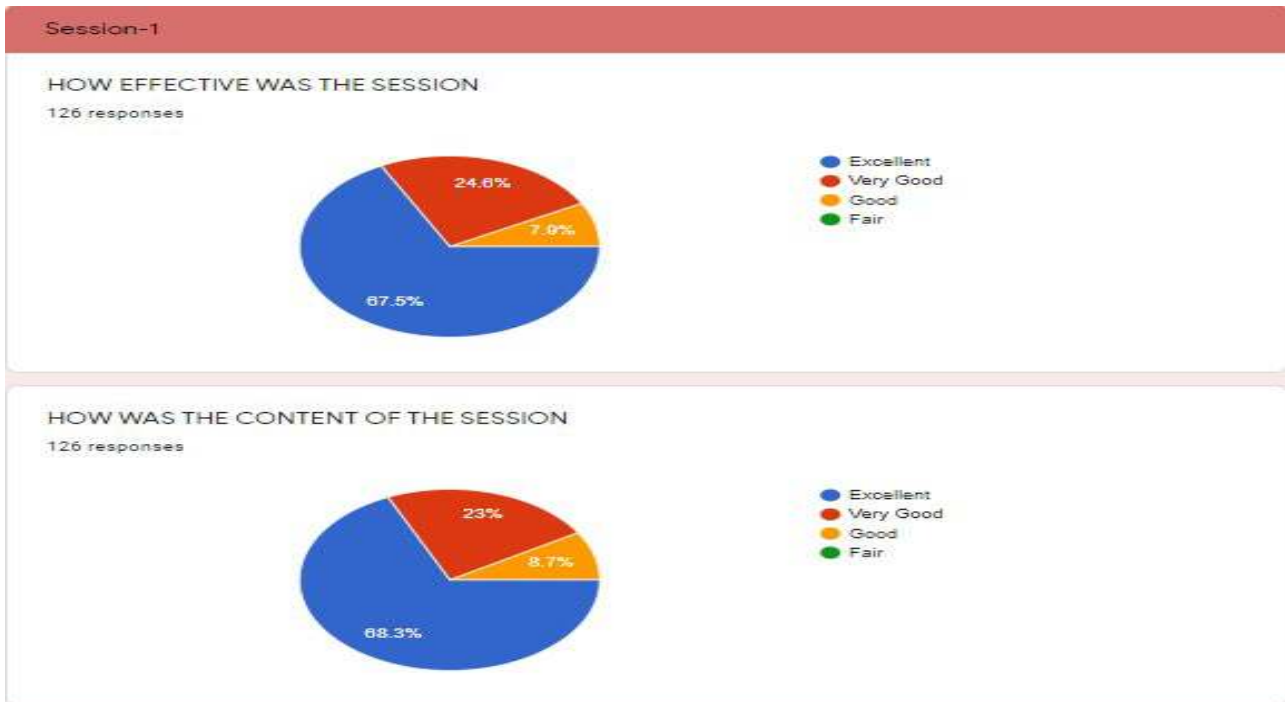


Session-2: Er. Chandan Kumawat

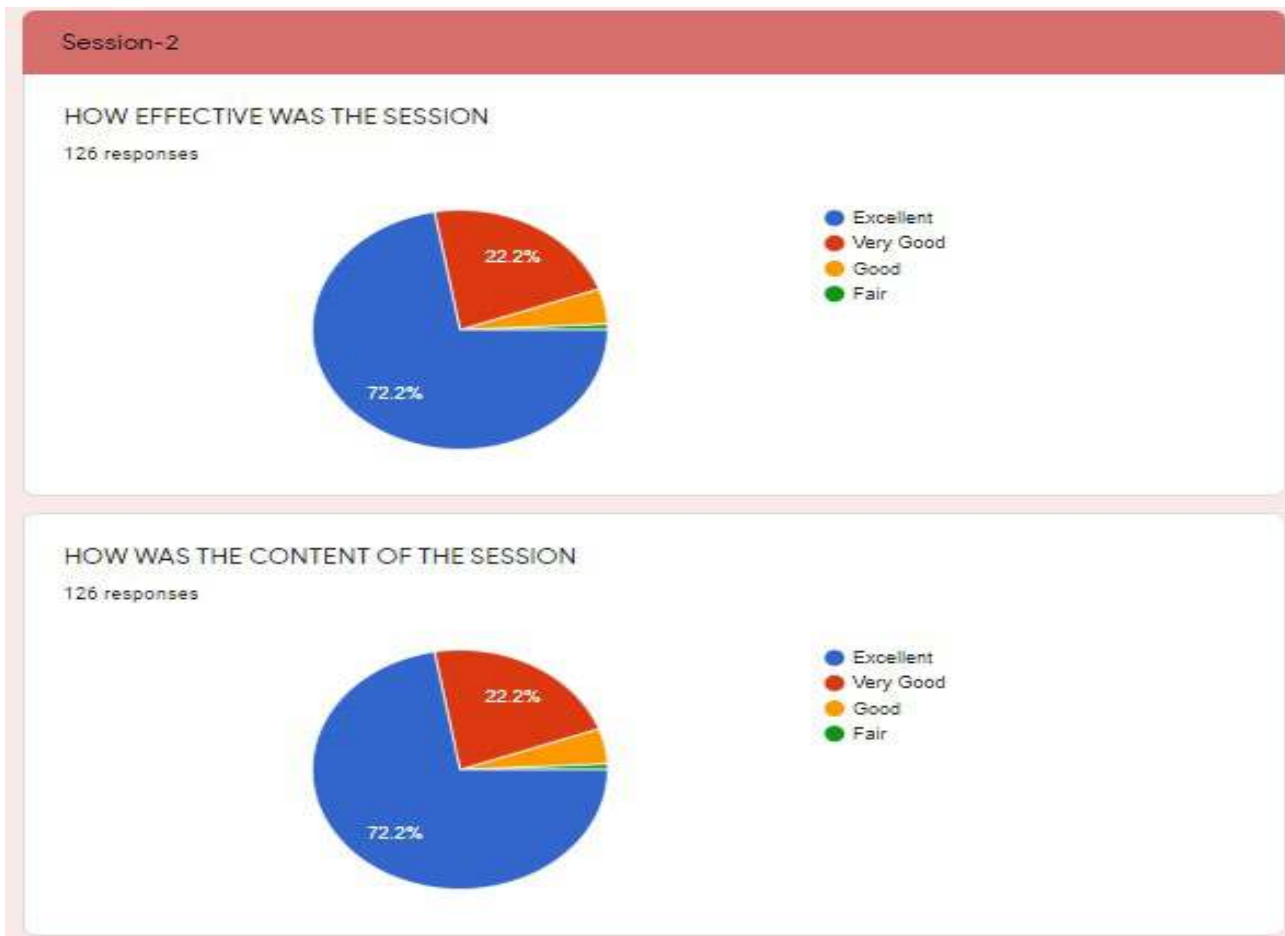


Day-2

Session-1: Mr. Laxmikant Thakkar



Session-2: Dr. Atul Desai



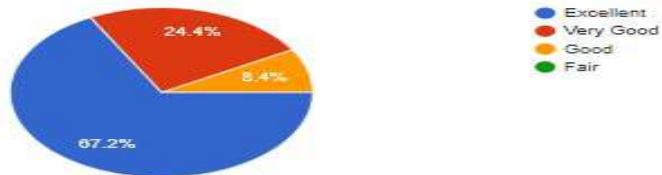
Day-3

Session-1: Mr. Raghunath Patil & Mr. Pranav Desai

Session-1

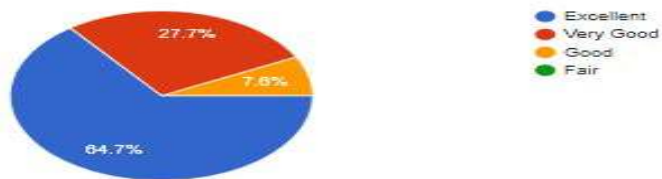
HOW EFFECTIVE WAS THE SESSION

119 responses



HOW WAS THE CONTENT OF THE SESSION

119 responses

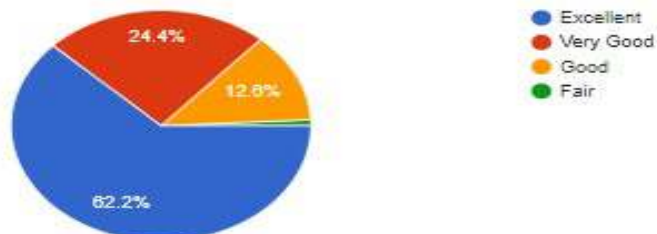


Session-2: Er. Satyam Kansara

Session-2

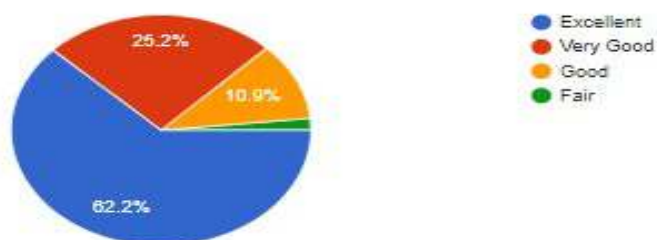
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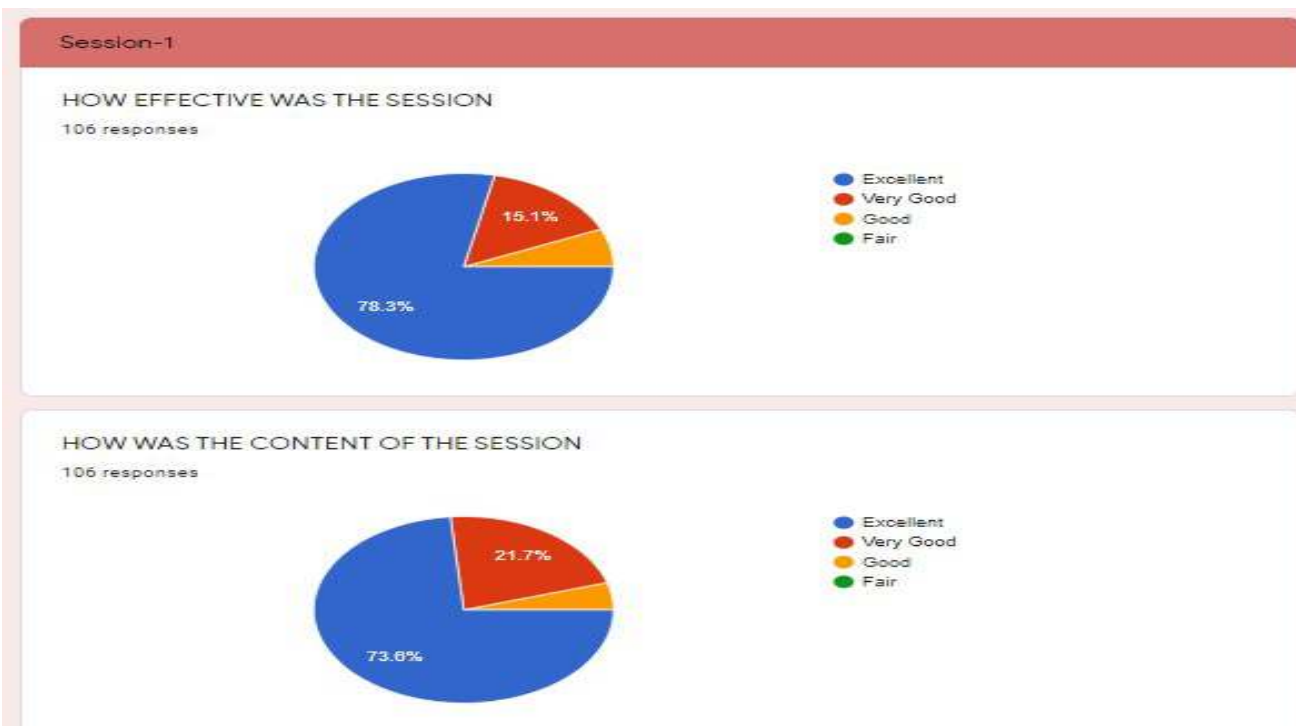
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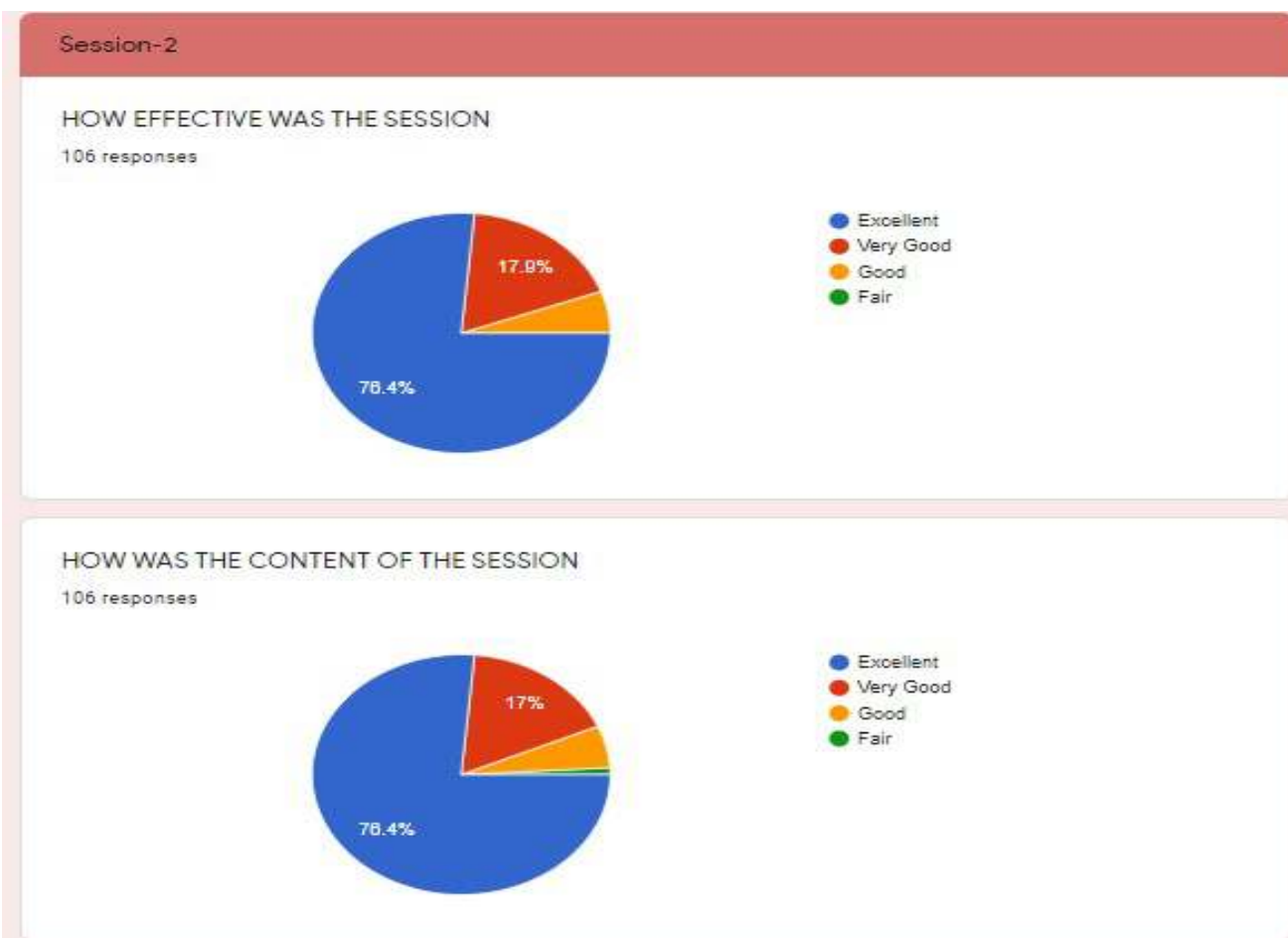


Day-4

Session-1: Mr. Chirag Baxi

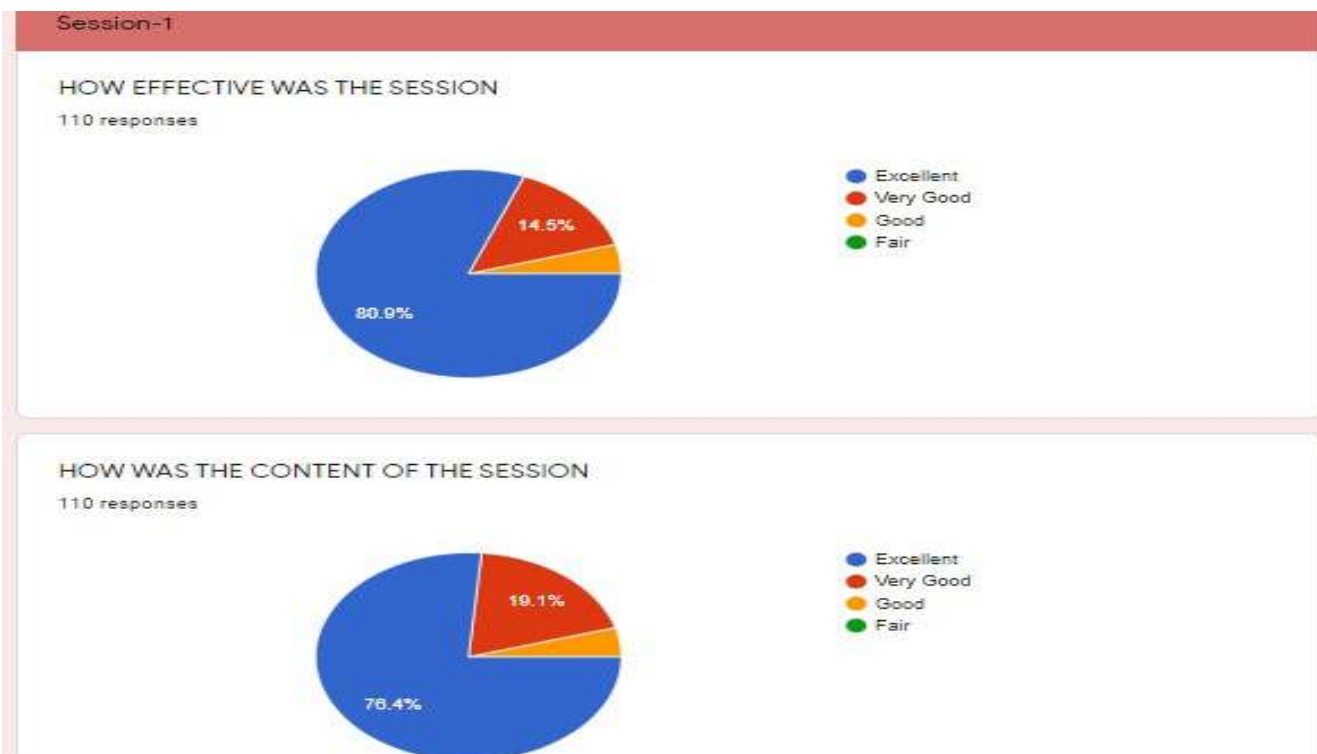


Session-2: Mr. Chirag Baxi

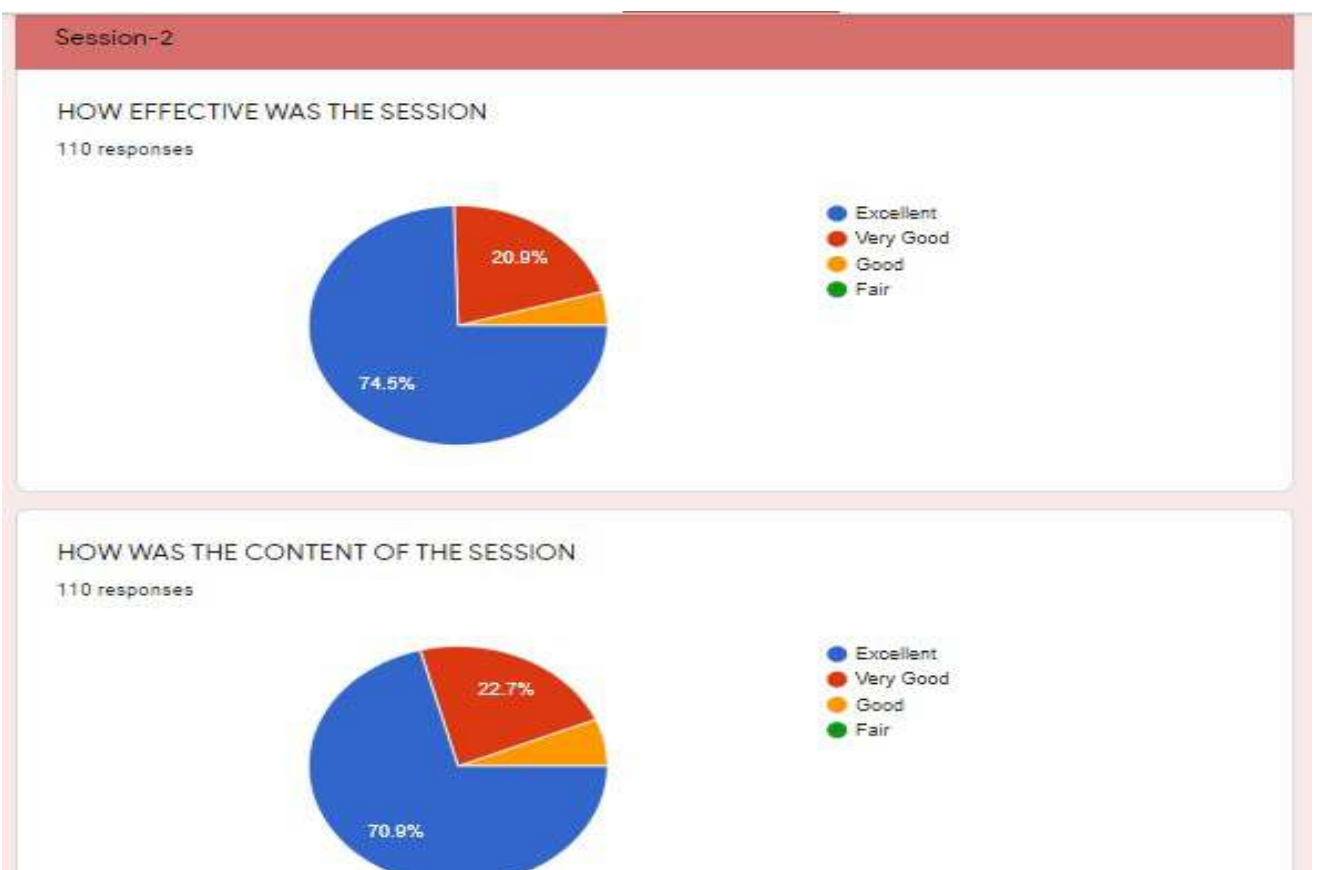


Day-5

Session-1: Er. Nilesh Shah



Session-2: Er. Chandan Kumawat



Comments from Participants

- It was really was an excellent webinar which included almost most of the topics.... congratulations to the whole team who really shared good knowledge to us.... I am really obliged to the hosting team who had coordinated so well and given me the opportunity. Thank you.
- As a member of institute of engineers (M.I.E.) and chartered engineer (C.E.), I will encourage and look forward to more such educative and informative.
- You people have done a wonderful job for arranging such a wonder valuable knowledge sharing webinar for everyone. Thank you so much for that.
- All sessions are very informative and practical oriented.
- It was fabulous and I will be eager to join these types of sessions.
- Arrange this type of webinar more so we can learn more about different method and materials used in construction work.
- Thanks to CKP to arrange this type of FDP and special thanks to chandiwala sir.
- Informative session, I gained some practical knowledge from these sessions.
- Excellent workshop where practical case studies are taken in to the sessions.... Would definitely like to attend such seminars if hosted in future also...
- It was well systematically organized & executed.



THANK YOU ALL

COORDINATORS

Prof. Soumita Bid, Assistant Professor, C. K. Pithawala College of Engineering and Technology, Surat

Mr. Anuj Chandiwala, Lecturer, C. K. Pithawala College of Engineering and Technology, Surat