

Technical Education Quality Improvement
Programme (TEQIP)-III
Sponsored
One Week Workshop
On

**“MODELING AND SIMULATION OF
HEAT TRANSFER EQUIPMENTS USING
ASPEN PLUS”**

16 March to 21 March, 2021

Venue: Chemical Engg. Dept., P.V.P.I.T., Budhgaon

REGISTRATION FORM

No.

Full Name of Participant:

(first name) (middle name) (surname)

Designation: _____

Qualification: _____

Department: _____

Institute/ Organization Name and Address:

Mobile :- _____

Email :- _____

Date:- _____

Signature of Participant: _____

Recommendation by Head :
of the Department/ Institute _____

Seal :

CHIEF PATRONS:

Hon. Dr. Anirudhed B Pandit

In charge Vice Chancellor, Dr. Babasaheb Ambedkar
Technological University, Lonere, Raigad (MH)

Hon. Shri. Vishaldada Prakashbapu Patil

Chairman, Dr. Vasantrodada Patil Shetkari Shikshan
Mandal, Sangli (MH).

PATRONS:

Prof. S. B. Deosarkar, Coordinator TEQIP

Hon. Shri. Amit Vijayrao Patil, Trustee, Dr.VPSSM

Hon. Shri. P.L. Rajput, Chairman. Gov. Council.

Hon. Shri. A.B. Magdum, Secretary, Dr.VPSSM

ADVISORY COMMITTEE:

Dr. D.V. Ghewade, Principal, PVPIT

COORDINATOR:

Prof Unmesh S. Patil, Head, Chemical Engineering
Department, Padmabhooshan Vasantrodada Patil
Institute of Technology, Budhgaon, Sangli, (MH).

CO-COORDINATOR:

Mr. Prashant. Dhanke, Chemical Engineering
Department, PVPIT, Budhgaon, Sangli (MH).

Technical Education Quality Improvement
Programme (TEQIP)-III
Sponsored

TEQIP-3

Technical Education Quality Improvement Programme

One Week Workshop

On

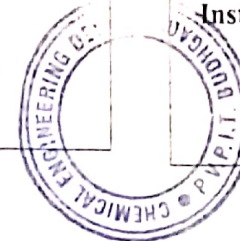
**“MODELING AND SIMULATION OF
HEAT TRANSFER EQUIPMENTS USING
ASPEN PLUS”
(Online Mode)**

16 March to 20 March, 2021

Organized by



**Chemical Engineering Department,
Padmabhooshan Vasantrodada Patil
Institute of Technology, Budhgaon, Sangli,
Maharashtra
www.pxpitsangli.edu.in**



at DBATU:

Dr. Babasaheb Ambedkar Technological University is one and only one of its kinds in the State. The University is located at Lonere, the place in the ranges of Western Ghat, at the base of Raigad fort, the place from where Chhatrapati Shivaji administered his major activities. It was established in the year 1989 by the Government of Maharashtra. Although relatively young, the University is making its mark in the field of research and technological services through its dedicated faculty and disciplined students. At present University conducts six M.Tech. and eight B.Tech. programs in various disciplines of engineering and technology. The University also offers Ph.D. in various disciplines of engineering and technology. Chemical engineering department of the university is well known for its well qualified staff and research activities. The department offers B.Tech., M.Tech. and Ph.D. in Chemical Engineering and has excellent reputation in the region. The university has been accorded the status of an 'affiliating' university of the entire State of Maharashtra from March 2, 2016, by the Maharashtra Act No. XXIX of 2014.

About PVPIT :

The institute was established in the year 1983 by great visionary Padmabhooshan Dr. Vasantraodada Patil, initially with five under graduate programmes with sole objective of rural development through technical education. The institute is approved by AICTE New Delhi, recognized and affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad. Currently the institute is offering eight programs in U.G. as well as P.G. The institute is reputed for its high academic standards, well maintained discipline and excellent infrastructural facilities. The institute is located on Sangli-Tasgaon road, at Budhgaon, which is about 7 kms away from Sangli.

About Department

The department of Chemical Engineering is established in the year 1983, initially with intake capacity of 30, later increased to 60 in the year 1998. The department has well qualified, experienced & devoted faculty. The department is well equipped with all the laboratory facilities and has strong alumni base across India and abroad.

The department has consistent placement record and continuously improving to offer excellent learning environment to students.

Department Organizing Committee:

Dr. S. L. Bhagat	Prof. S. Y. Pawar
Prof. N. V. Ghasghase	Prof. V. S. Kore
Prof. A. D. Patil	Dr. S. S. Patil
Prof. Miss. P. C. Kale	Prof. Miss. A. P. Patil

Resource persons:

Session will be conducted by Eminent Professors, researchers and experts from DBATU Lonere, PVPIT Budhgaon, along with other reputed Institutes and Industries

Who Will Benefit

Course is intended for young and junior faculties from all AICTE recognized engineering colleges / polytechnics, PhD research scholars Post Graduates in Chemical Engineering Allied discipline and young persons from Industries.

Objective:

1. To study basic concepts of Aspen Plus in modeling and simulation..
2. To create model of heat transfer equipments and its simulation using Aspen Plus with actual Hands on examples and exercises.
3. To provide a platform for interaction on recent inventions in modeling and simulation using Aspens Plus.

Topics to be covered:

1. Introduction to Aspen Plus
2. Introduction to Aspen plus Interface
3. Heat Transfer Equipments
4. Agitated Thin Film Evaporator
5. Modeling of ATFE

6. Heat Exchanger Design

7. Simulation of Flash Separation

8. Simulation of Reactive Distillation

9 Fire and explosion prevention.

The entire workshop will be conducted online through Google meet.

Eligibility Criteria:

Faculties from all AICTE recognized engineering institutes / polytechnics, PhD research scholars, PG Students in Chemical Engineering and Allied disciplines and young persons from Industries.

Registration Fee and Charges.

There is **no registration fee** for this course. The registration form duly filled with institution seal should be sent by email / post to the organizers latest by 15th March 2021. Participants are requested to email scanned copy of registration form to pvpitchemical@gmail.com.

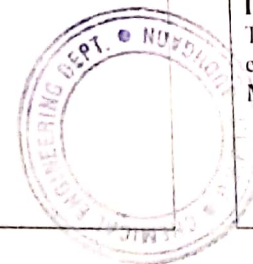
For Registration Contact:

Prof. Abhijeet D. Patil
(M.) 7588171424, 9511786987
Email: pvpitchemical@gmail.com

Prof. Miss. A.P.Patil
(M) 9028711267
Email: pvpitchemical@gmail.com

Important Dates:

The duly filled registration form may be sent either as an email attachment to or as a hard copy on or before 15th March 2021.





of Technology Budhgaon (Sangli) 416304.
Department of Chemical Engineering
(U.G Programme NBA Accredited)
TEQIP-III Sponsored One Week Workshop
On

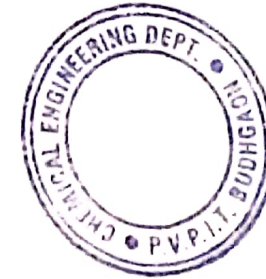
"MODELING AND SIMULATION OF HEAT TRANSFER EQUIPMENTS USING ASPEN PLUS"
(Online Mode)

16th March - 20th March 2021

TEQIP-3
Technical Education Quality Improvement Programme

List of Students as Participants

Sr. No.	Name	Email ID	Designation	College / Industry Name	Mobile no
1	Ninad Mahendra Patil	ninadp54@gmail.com	Final Year B.Tech Student	Pvpit, Budhgaon	
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4	Aditya Kemse	adityakemse28@gmail.com	Final Year B.Tech Student	Pvpit, Budhgaon	
5	Kishansinh Barad	krunalbarad444@gmail.com	Final Year B.Tech Student	Pvpit, Budhgaon	
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7	Rushikesh Bapusaheb Pawar	rushikeshpawar4225@gmail.com	Final Year B.Tech Student	Pvpit, Budhgaon	
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11	Nikhil Avdhut Shinde	nikashinde663@gmail.com	Final Year B.Tech Student	Pvpit, Budhgaon	
12	Saloni Dhumal	salonidhumal0@gmail.com	Final Year B.Tech Student	Pvpit, Budhgaon	




HOD and Co-ordinator





Department of Chemical Engineering
Technology Budhagaon (Sangli) 431004.

Department of Chemical Engineering

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TEQIP-III Sponsored One Week Workshop

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“MODELING AND SIMULATION OF HEAT TRANSFER EQUIPMENTS USING ASPEN PLUS”
(Online Mode)

TEQIP-3
Technical Education Quality Improvement Programme

16th March - 20th March 2021

List of Participants

Sr. No.	Name	Email ID	Designation	College / Industry Name	Mobile no
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3	Mrs Rawoot Lubna Yunus.	lubnarawoot55@gmail.com	Assistant Professor	DBATU Lonere	9028834660
4	Mr Pradip Nande	pradipnande2@gmail.com	Assistant Professor	DBATU Lonere	8398039065
5	Miss Reshma Devale	reshmadevale1992@gmail.com	Assistant Professor	DBATU Lonere	8149565604
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25	Dr Sunil Baran Kuila	sunilbarankuila@gmail.com	Professor	HIT, Haldia	8972960394
26	Mr Subhash Kadlag	subhash.kadlag@famt.ac.in	Assistant Professor	FAMT, Ratnagiri	9422472882
27	Mr Prashant Dehankar	pbdehankar@tkietwarana.ac.in	Assistant Professor	TKIET, Warananagar	9657657804
28	Dr Tapas Kumar Manna	tapaskmanna54@gmail.com	Professor	HIT, Haldia	9434453183
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54	Dr Abhijit Chavan	archavan@dbatu.ac.in	Associate Professor	DBATU, Lonere	9987891080
55	Dr Rahul Patil	rahulpatil11@gmail.com	Associate Professor	DYPCET, Kolhapur	9823167767
56	Mrs Sneha Patnawar	snehakagale1@gmail.com	Assistant Professor	KIT, Kolhapur	8971105231
57	Mr Annasaheb Warade	arwarade@gmail.com	Associate Professor	PREC, Loni	7588605565
58	Mr Mayurkumar Patil	mppatil@mitaoe.ac.in	Assistant Professor	MIT, Alandi	9764143441
59	Mrs Ujwala Shinde	Ushinde32@gmail.com	Industrialist	ISSM, Pune	8530225453
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Co-ordinator



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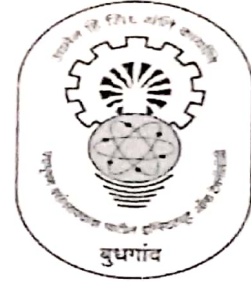
One Week Workshop

On

“Modeling and Simulation of Heat Transfer Equipments Using ASPEN
PLUS”

(online mode)

(16th – 20th March, 2021)



Organized by

Dr. V.P.S.S.M.'s

*Padmabhooshan Vasanttraodada Patil Institute of Technology, Budhgaon,
Sangli (MH)*

(Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere)

Department of Chemical Engineering

(NBA accredited)

Coordinator

Prof. U. S. Patil

HOD, Department of Chemical Engineering,

Padmabhooshan Vasanttraodada Patil Institute of Technology, Budhgaon, Sangli

Venue

Chemical Engineering Department,

Padmabhooshan Vasanttraodada Patil Institute of Technology Budhgaon Sangli-MH

Contents

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2	Introduction to Simulation and Computer Aided Process Design (Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur)	
3	ASPEN Hands-On (Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur)	
4	Estimation of Physical Properties (Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur)	
5	Heat Exchangers and Pressure Change Equipments (Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur)	
6	Heat Exchangers and Pressure Change Equipments (Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur)	
7	Modeling and simulation heat exchanger using ASPEN Plus software (Mr. Sunil Patil, Director- solution consulting, Aspen Technology Inc.)	
8	Heat Transfer Equipments in ASPEN PLUS (Mr. Amit Kataria, Director, Amusavi MTC Private Limited, Pune)	

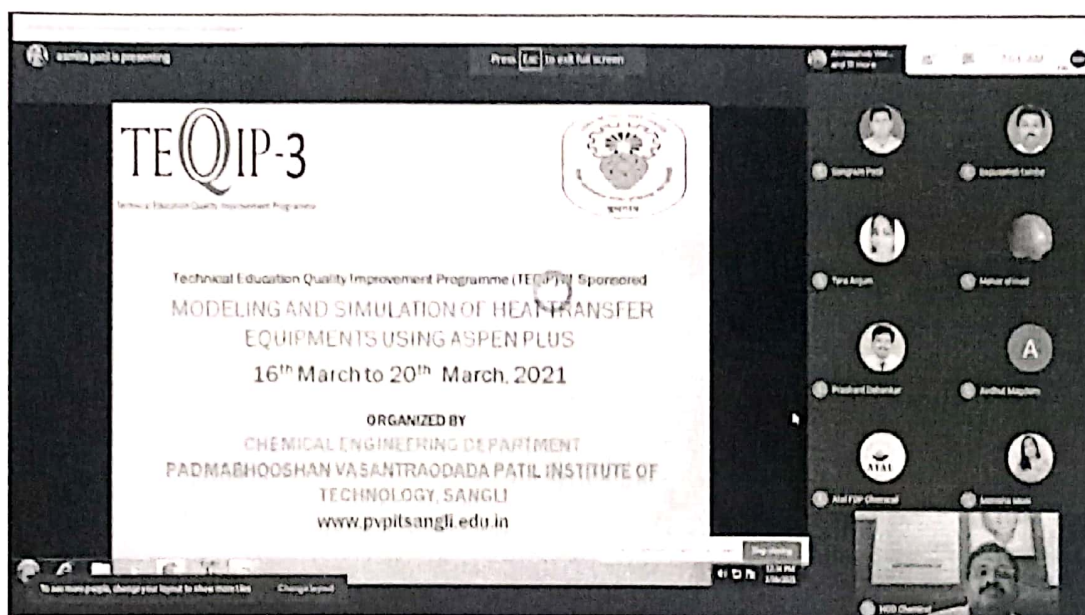
9	Modeling and Simulation: Unmixed Combustion (UMC) Process Equipment for Heat Transfer (Dr. Amol Deshpande, Assistant Professor, Department of chemical Engineering, BITS, Pilani-KK Birla Goa Campus)	
	Valedictory Function	

Sessions Conducted

Day 1: 16/03/2021

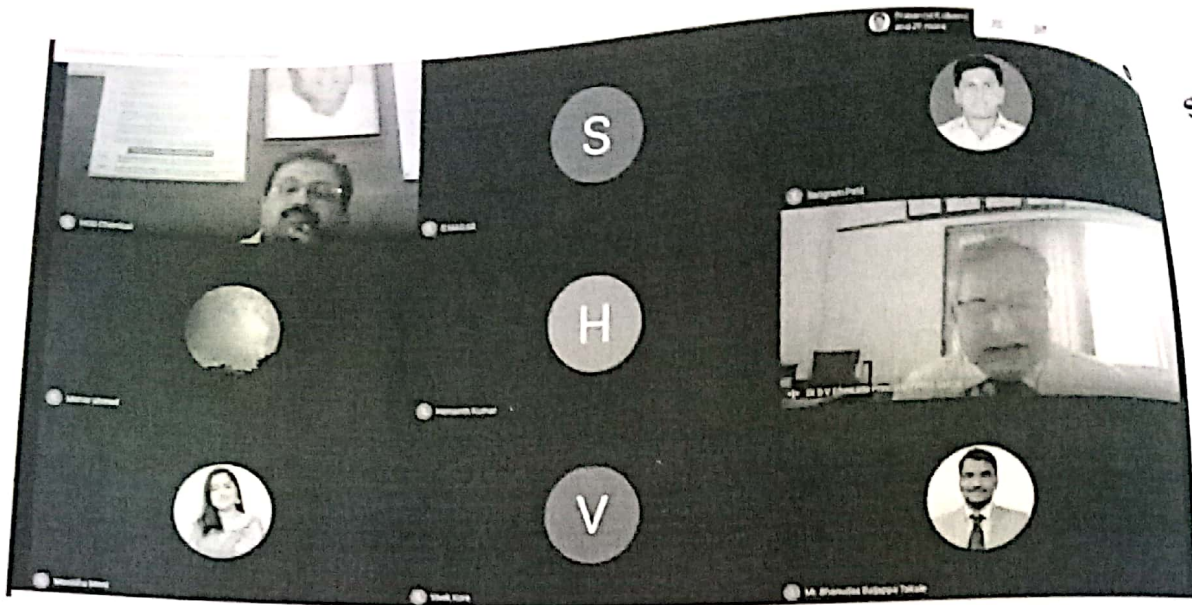
Inauguration Function

The inauguration ceremony of workshop “Modeling and Simulation of Heat Transfer Equipments Using ASPEN PLUS” was held on the first day of workshop in the afternoon. Dr. D. V. Ghewade, Principal PVPIT Sangli, Prof. U. S. Patil, Coordinator of workshop of Chemical Engineering department, PVPIT Sangli was present along for the inauguration function. In this ceremony, Prof. U. S. Patil did welcomes to the resource person and participant of this workshop and has given brief introduction about the workshop on “Modeling and Simulation of Heat Transfer Equipments Using ASPEN PLUS”. Dr. D.V.Ghewade said about chemical engineering department and thanked to the TEQIP-III for one week workshop. He highlighted the importance of ASPEN PLUS, innovations from chemical engineering, process intensification.




Session -1
Day: 16-03-2021
Speaker: Prof. S
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Topic: Fr
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TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP) III
SPONSORED
MODELING AND SIMULATION OF HEAT TRANSFER EQUIPMENTS
USING ASPEN PLUS



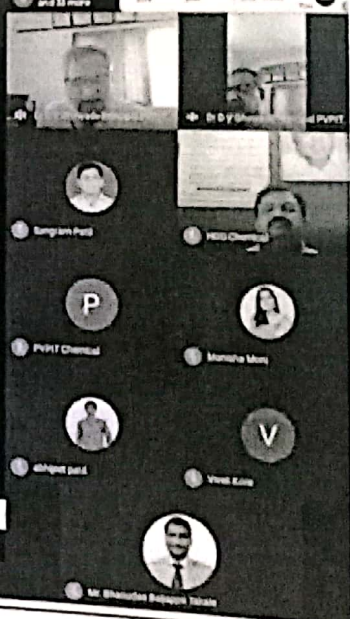
Academic Background

- Ph.D. in Pune University

Research Interests

- Thermal Engineering

Dr. D.V. Ghewade
Principal,
PVPIT, Budangan



Session -I

Day: 16-03-2021

Time: 02:00 pm – 04:00 pm

Speaker: Prof. Saroj Sundar Baral, Associate Professor and Head, Department of Chemical Engineering, BITS, Pilani- KK Birla Goa Campus

Topic: Fire and Explosion

In this session, Prof. Saroj Baral focused on safety in chemical engineering. He explained about fire and explosive properties material, the nature of the fire and explosion, prevention of fire and explosion. He also explained about the engineering ethics, consequence models, fire triangles, different definitions about fire and explosion, and composition about the different components available in that, flammability relationship, flammability limits, estimating flammability. He also explained about the flammability diagram in detail with composition, how to avoid to go in flammable region, unconfined explosions, inerting and purging.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Introduction to Safety" with the following text:

- The chemical industry – more complex processes, high pressure, more reactive and exotic chemistry
- More complex process requires complex safety technology which leads to chemical engineers need a more detailed and fundamental understanding of safety.
- Safety is equal in important to production and has developed into a scientific discipline

The meeting controls at the bottom include "Meeting details", "Raise hand", "Turn on captions", and "Saroj S. Baral is presenting". The participant list on the right includes:

- Saroj S. Baral
- kulriya heena
- abhiject patil
- Sunilbaran Ku...
- Ujala Shinde
- mitul prajapati
- PVPIT Cheml...
- Vijay thosale
- Sanjay Gheji

REC Saroj S. Baral is presenting

Lipika Das and 32 more

Consequence Models

```

    graph TD
      A[Selection of Release Incident] --> B[Selection of Source Model to describe Release Incident]
      B --> C[Selection of Dispersion Model]
      C --> D{Flammable and/or Toxic?}
      D -- Flammable --> E[Selection of Fire and Explosion Model]
      D -- Toxic --> F[Selection of Effect Model]
      F --> G[Mitigation Factors]
      G --> H[Consequence Model]
  
```

Meeting details

Raise hand Turn on captions Saroj S. Baral is presenting

REC Saroj S. Baral is presenting

LIBNA RAWOOT and 32 more

Fires and Explosion

The diagram is a ternary phase diagram with vertices labeled OXYGEN (top), METHANE (bottom right), and NITROGEN (bottom left). The axes are scaled from 0 to 100. Key features include:

- Upper limit in pure oxygen:** A point on the Oxygen-Methane axis.
- Lower limit in pure oxygen:** A point on the Oxygen-Methane axis.
- Stoichiometric line:** A line connecting the upper limit in pure oxygen to the Methane vertex.
- LOC (Lower Oxygen Concentration):** A point on the Oxygen-Methane axis.
- LFL (Lower Flammability Limit):** A point on the Methane-Nitrogen axis.
- UFL (Upper Flammability Limit):** A point on the Methane-Nitrogen axis.
- Flammability zone:** The region bounded by the LOC, LFL, and UFL lines.

Meeting details

Raise hand Turn on captions Saroj S. Baral is presenting

This screenshot shows a software interface with a dark theme. On the left, there is a vertical video feed. The main area displays a flowchart with several rectangular boxes and a central diamond-shaped decision node. On the right, there is a control panel with a grid of nine circular buttons, each with a different icon. Below the main area, there are several navigation icons, including a play button and a stop button.

This screenshot shows a software interface titled "Fires and Explosion". The main area contains a complex diagram with various nodes and connecting lines, possibly representing a process flow or a hazard analysis. On the right, there is a control panel with a grid of nine circular buttons, each with a different icon. Below the main area, there are several navigation icons, including a play button and a stop button.

Session -I

Day: 17-03-2021

Time: 12:30 pm – 2:30 pm

Speaker: Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, I.I.T. Nagpur

Topic: Introduction to Simulation and computer aided process engineering

In this lecture Dr. Bharat Bhanvase focused on process engineering. He explained about process synthesis design, modeling, control, simulation, optimization, intensification, identification. He told about what is simulation, when simulation is not appropriate, advantages of simulation, systems environment, different kinds of simulation, different steps in simulation study, different simulation software, process and simulation flow sheets, uses of mathematical models. He also explained about different models and its principle, types of equations, type of problems, errors, numerical solutions, regression analysis, and flow sheet simulation. He well explained about case study.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Process Synthesis and Design". The slide content includes a flowchart for "Process Synthesis" and a vertical list of components labeled "Process Integration".

Process Synthesis Flowchart:

- Input data
- Req. products
- Input-Output
- Reactor & Recycle
- Separation system
- Energy Integration
- Alternatives
- Control system
- Heating Environment
- Flowchart

Process Integration:

- Reactor & Recycle
- Separation system
- Energy Integration
- Alternatives
- Control system
- Heating Environment
- Flowchart

The Zoom interface also shows a participant list on the right side:

- Bharat Bhanvase
- Akhilash Khupre
- HOD Chemical
- RAVINDRA NIRE
- mild prajapat
- Prasad Ashok Adade
- Mahesh N Jethva
- Prof. C.G. Harge

At the bottom of the Zoom window, there are icons for "Meeting details", "Mute", "Unmute", "Video Off", "Video On", "Screen Share", and "More".

meet.google.com/... Dharat Bhanvase is presenting 12:56

Discrete and Continuous Systems

- Discrete systems: State variables change only at a discrete set of points in time
 - Example: bank: the number of customers change when a customer enters or leaves the system
- Continuous system: State variables change continuously over time
 - Example: water in the dam

Meeting details

Video call participants:

- Dharat Bhanvase
- HDD Chemical
- RAVINDRA NISE
- Ilish Parthar
- m
- mital prapal
- Sudhir Gadhvi
- Mahesh H. Jadhav
- Prof. C.G. Harge

meet.google.com/... Dharat Bhanvase is presenting 13:38

Input/output structure of a flowsheet

Meeting details

Video call participants:

- Dharat Bhanvase
- Prof. C.G. Harge
- RAVINDRA NISE
- Ilish Parthar
- m
- mital prapal
- Sudhir Gadhvi
- Tushar Bhande
- Rushabh Pooval

Session -I

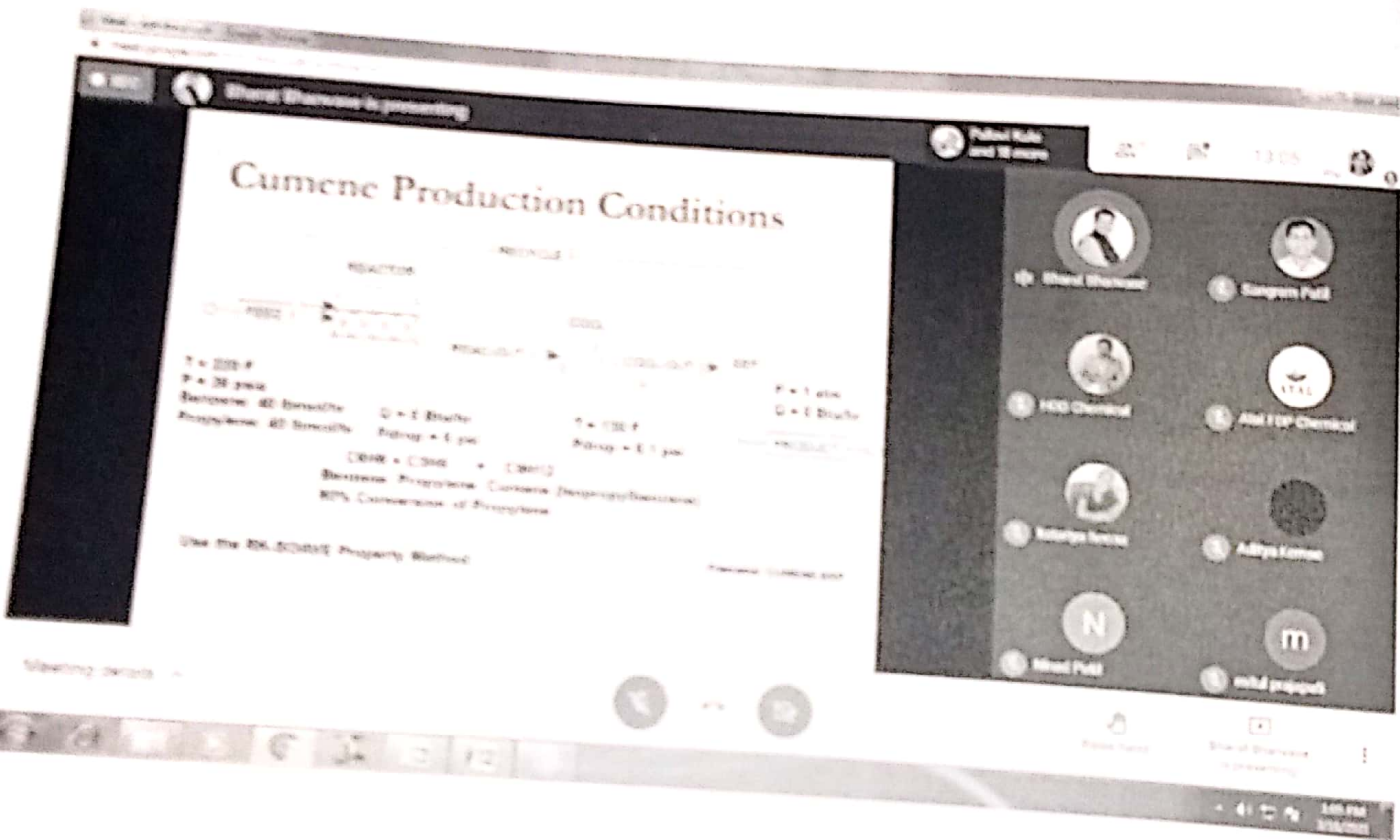
Day: 18-03-2021

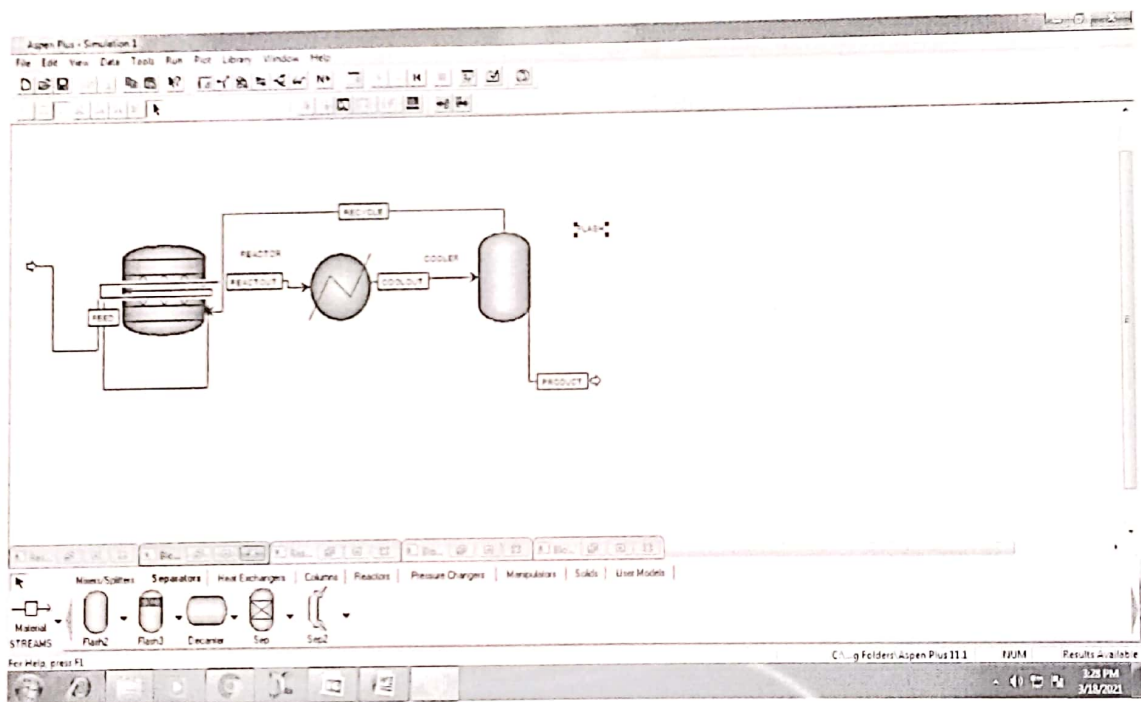
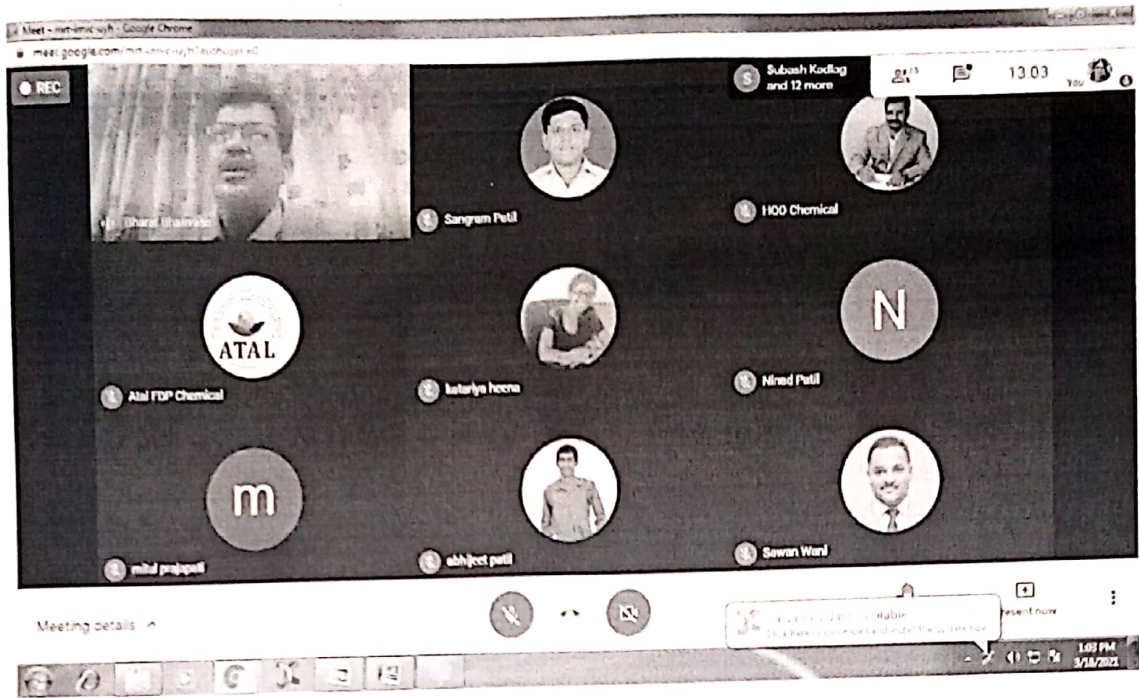
Time: 12:30 pm – 2:30 pm

Speaker: Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur

Topic: Aspen Hands -on

In this lecture Dr. Bharat Bhanvase focused on Cumene Production Process. He started with the introduction of ASPEN Plus software, how to start new file, how to add components, different models information with material stream. He also explained simulation with cumene production with condition. He well resolved participant's errors while simulation and also he explained about results with varying process condition. That was well hands-on session.





Session -II

Day: 18-03-2021

Time: 03:00 pm – 05:00 pm

Speaker: Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur

Topic: Estimation of Physical Properties

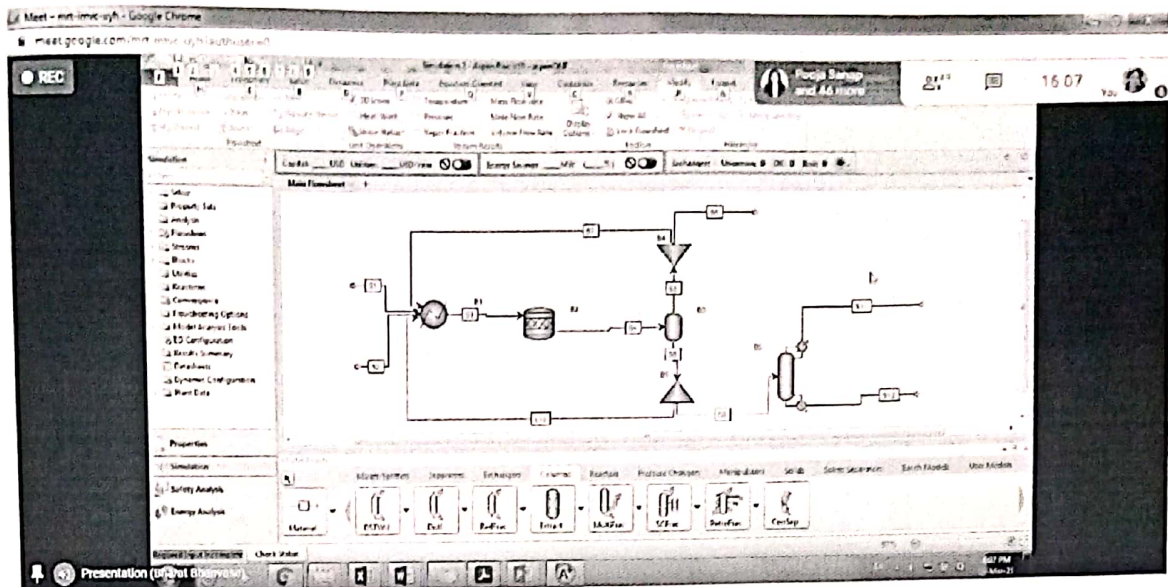
In this lecture Dr. Bharat Bhanvase explained about induced property methods, physical property parameters, choice of a property method, and property analysis for reporting physical properties. He covered this point with case study of acetone recovery. He explained about ideal vs non ideal behavior, EOS, activity models, choosing a property method with example, property package, equation of states, activity coefficient methods. He explained through the cyclohexane production process with simulation by using ASPEN PLUS.

Case Study – Acetone Recovery

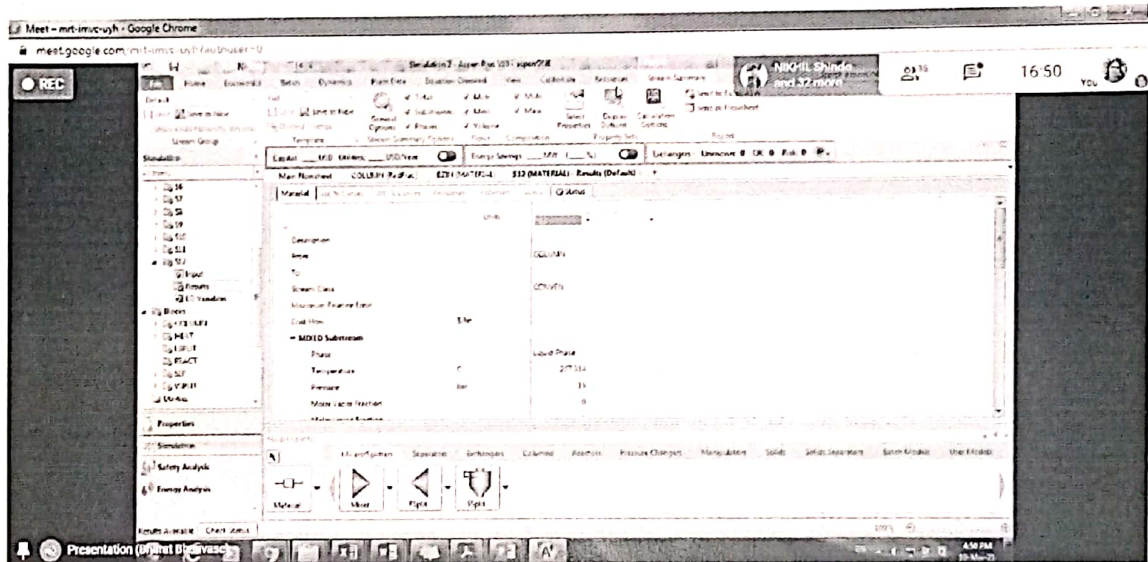
- Correct choice of physical property models and accurate physical property parameters are essential for obtaining accurate simulation results.

Specification: 99.5 mole % acetone recovery

Predicted number of stages required	11	7	42
Approximate cost (\$)	520,000	390,000	680,000



Meeting details ^



Meeting details ^



Session -I

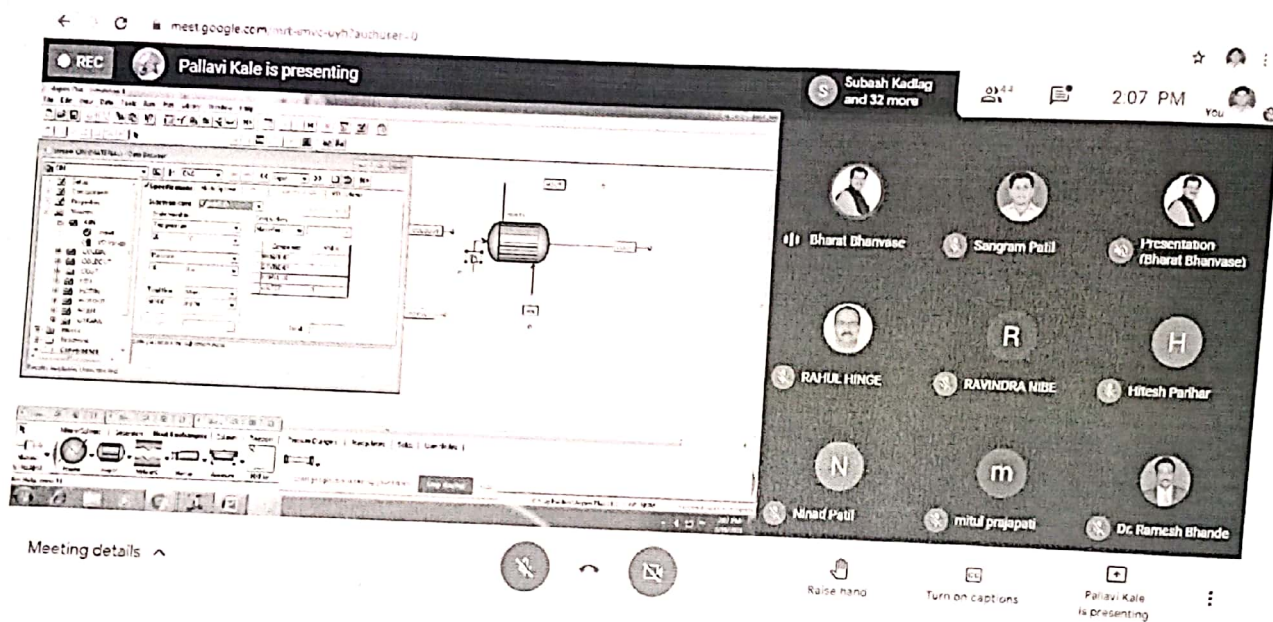
Day: 19-03-2021

Time: 12:30 pm – 2:30 pm

Speaker: Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur

Topic: Heat Exchangers and Pressure Change Equipments

In this lecture Dr. Bharat Bhanvase focused on unit operation models used for heat exchangers and heaters. He explained about different heat exchanger blocks, working with the heater model, heater input specifications, heat streams, heat curve plot. He explained through simulation by using ASPEN PLUS. In that he told that how to add models in flow sheet, how to add streams, components, input data, composition and how to simulate and check results.



meet.google.com/... Bharat Bhanvase is presenting 12:53 PM

HeatX Workshop

- Objective: Compare the simulation of a heat exchanger that uses water to cool a hydrocarbon mixture using three methods: a shortcut HeatX, a rigorous HeatX and two Heaters connected with a Heat stream.
- Hydrocarbon stream
 - Temperature: 200 C
 - Pressure: 4 bar
 - Flowrate: 10000 kg/hr
 - Composition: 50 wt% benzene, 20% styrene, 20% ethylbenzene and 10% water
- Cooling water
 - Temperature: 20 C
 - Pressure: 10 bar
 - Flow rate: 60000 kg/hr
 - Composition: 100% water

Meeting details | Raise hand | Turn on captions | Bharat Bhanvase is presenting

Presant Grl and 40 more 1:08 PM

HeatX Workshop (Continued)

When finished, save as filename: HEATX.BKP

- Use the NRTL-RK Property Method for the hydrocarbon streams.
- Specify that the valid phases for the hydrocarbon stream is Vapor-Liquid-Liquid.
- Specify that the Steam Tables are used to calculate the properties for the cooling water streams on the Block BlockOptions Properties sheet.
- Start with the General with Metric Units Template.

Meeting details | Raise hand | Turn on captions | Bharat Bhanvase is presenting

Session -II

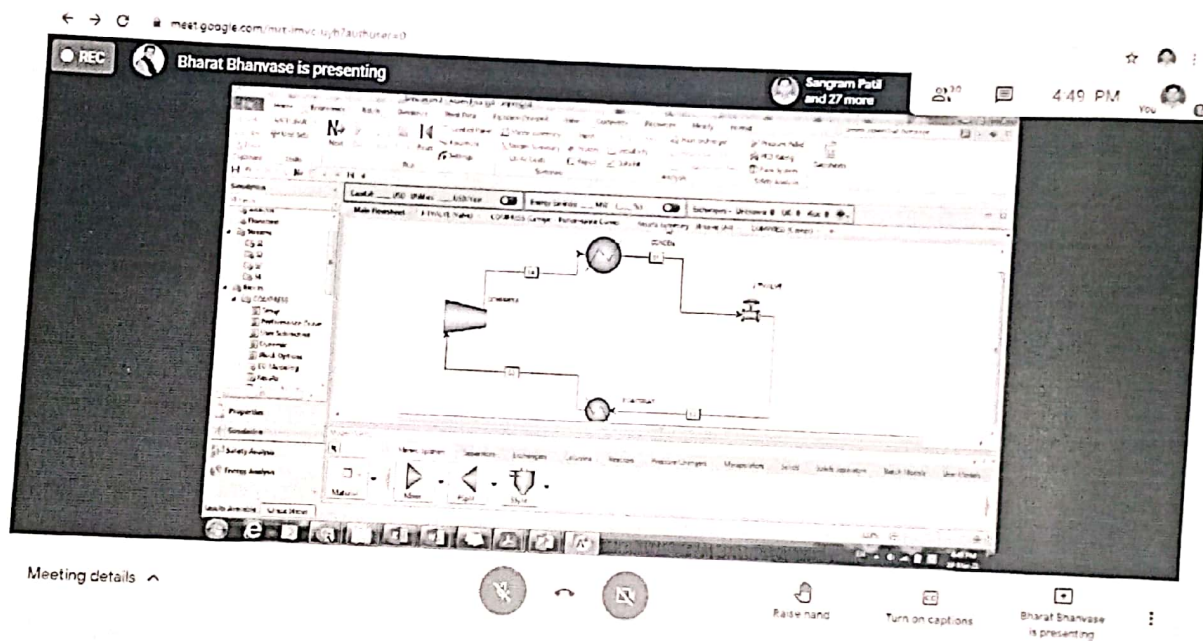
Day: 19-03-2021

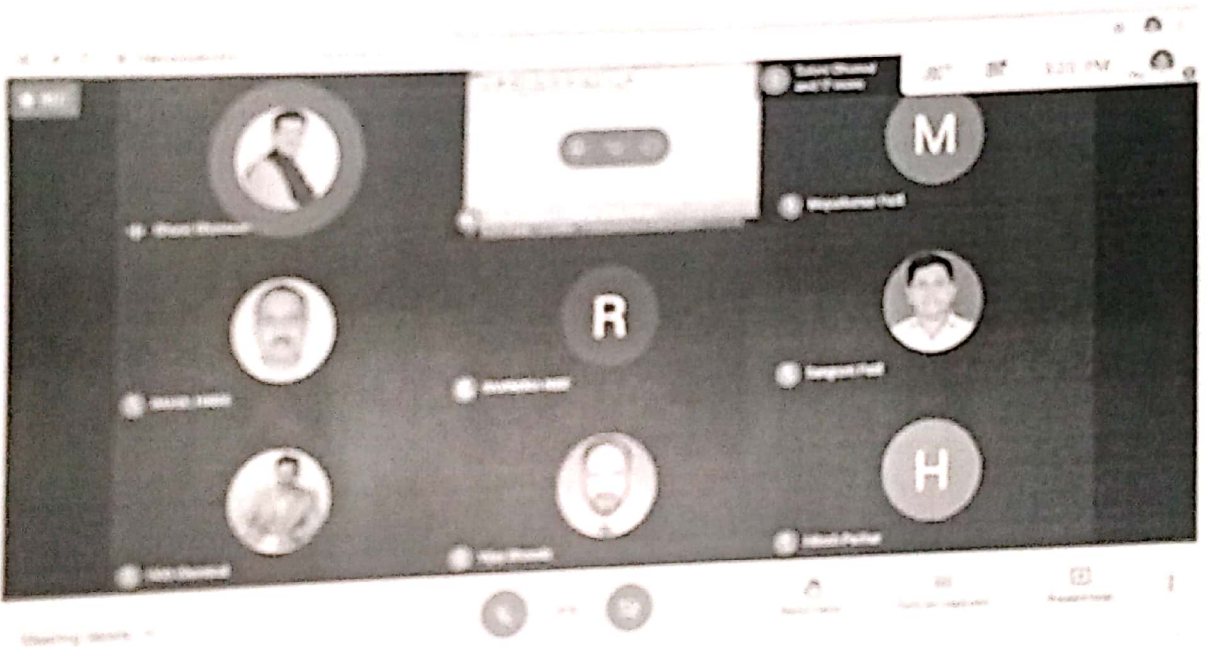
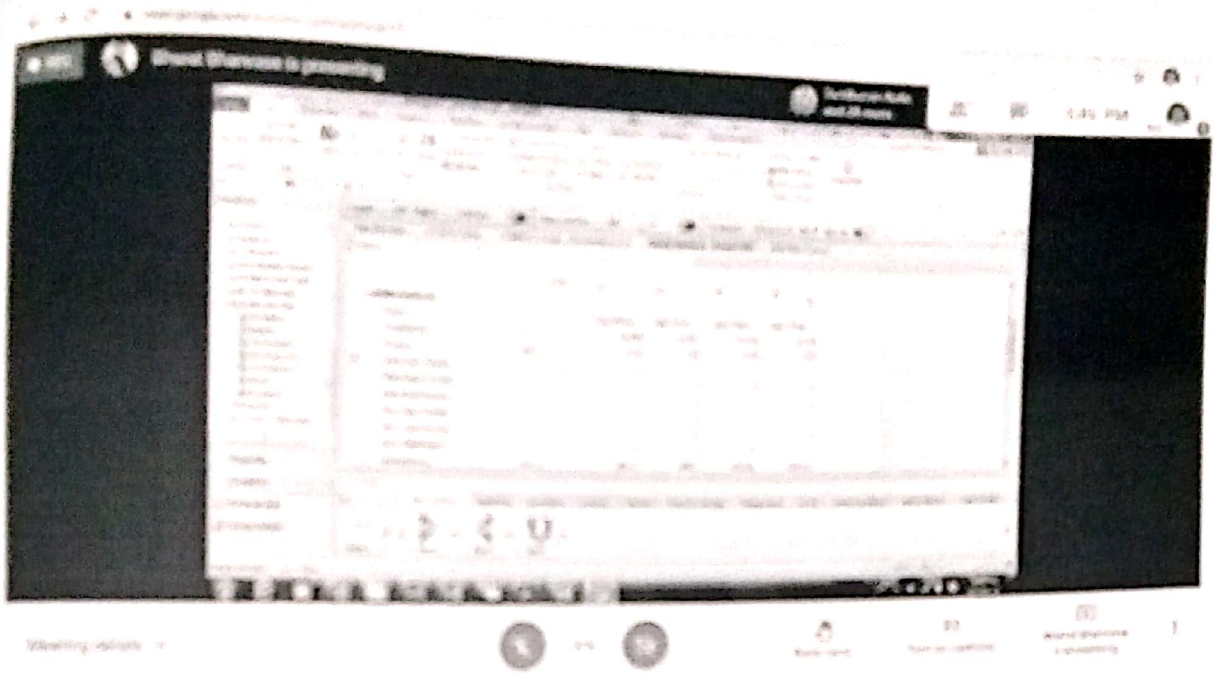
Time: 03:00 pm – 05:00 pm

Speaker: Dr. Bharat Bhanvase, Professor and Head, Department of Chemical Engineering, LIT, Nagpur

Topic: Heat Exchangers and Pressure Change Equipments

In this lecture Dr. Bharat Bhanvase focused on ASPEN PLUS simulation by using pure component evaporation system. He explained how to add pure component, different models, thermodynamic model, how to check properties, how to run, how to check result in software.





Session -I

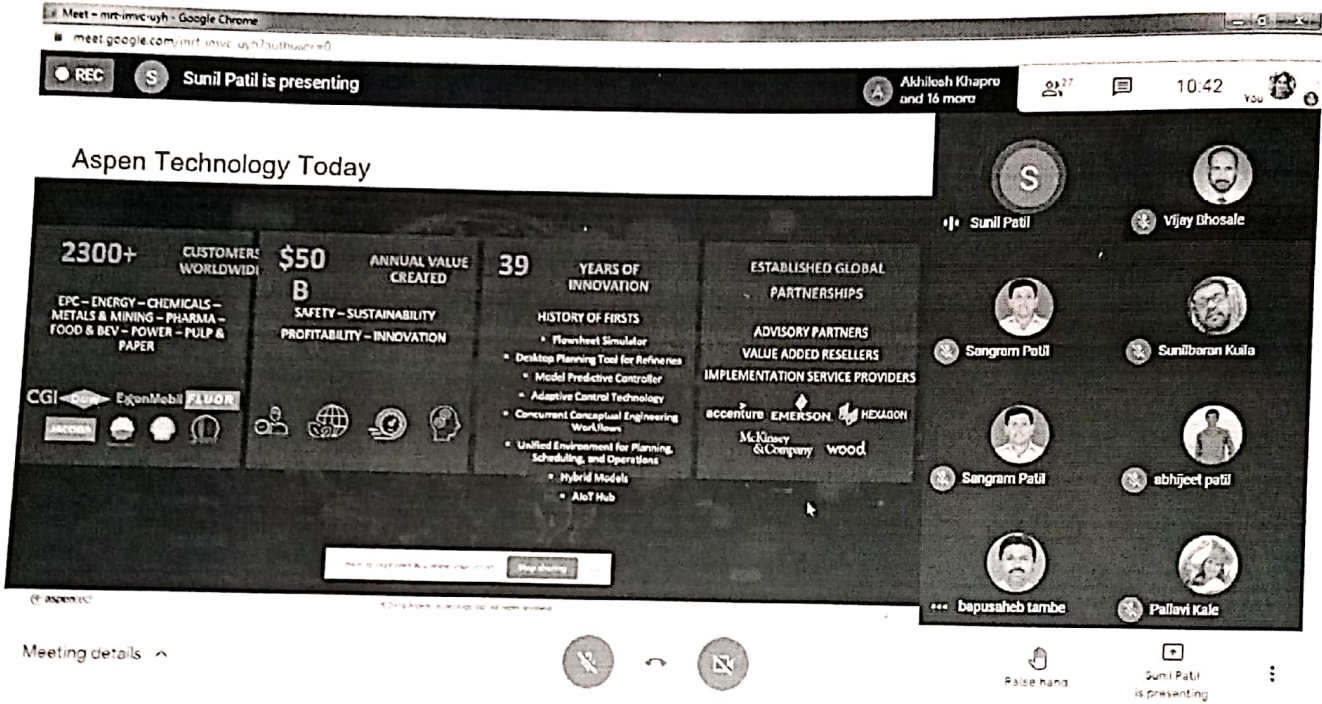
Day: 20-03-2021

Time: 11:00 am – 01:00 pm

Speaker: Mr. Sunil Patil, Director- Solution consulting, Aspen Technology Inc.

Topic: Modeling and simulation heat exchanger using ASPEN Plus software

In this lecture Mr. Sunil Patil focused on heat exchanger design. He explained about AspenTech introduction, EDR, types of heat exchanger design, design and rating, shell and tube, rate an existing heat exchanger, additional resources, plate exchanger, fin exchanger, fired heater, advantages of aspen. Also he explained about general workflow, shell and tube optimization guide, analysis result with simulation in Aspen plus software.



Meet - mt-imvcsyh - Google Chrome
meet.google.com/mt-imvcsyh-authenticated

REC Sunil Patil is presenting

Advantage #3: The Aspen Physical Properties Advantage

- ✓ Aspen Properties® - Chemicals
- ✓ COMThermo® - Oil & Gas Processing
- ✓ B-JAC – General Industrial

> 24,000 components
> 35+ VLE methods
Comprehensive mixing rules for immiscible fluids and electrolytes

Pooja Ganap and 29 more 11:31

Sunil Patil, Aditya Kemas, Sangram Patil, Sunilbaran Kulkarni, Sangram Patil, abhijeet patil, Depusahab tambe, Pallavi Kale

Meeting details

Meet - mt-imvcsyh - Google Chrome
meet.google.com/mt-imvcsyh-authenticated

REC Sunil Patil is presenting

Prasanna Kulkarni and 27 more 12:08

Component	Unit	CP	CP	CP	CP	CP
Water	kg	18.015	18.015	18.015	18.015	18.015
...

Sunil Patil, Sangram Patil, Sangram Patil, Pallavi Kale, Vivek Kore, Depusahab tambe, abhijeet patil, Aditya Kemas

Meeting details

Session -II

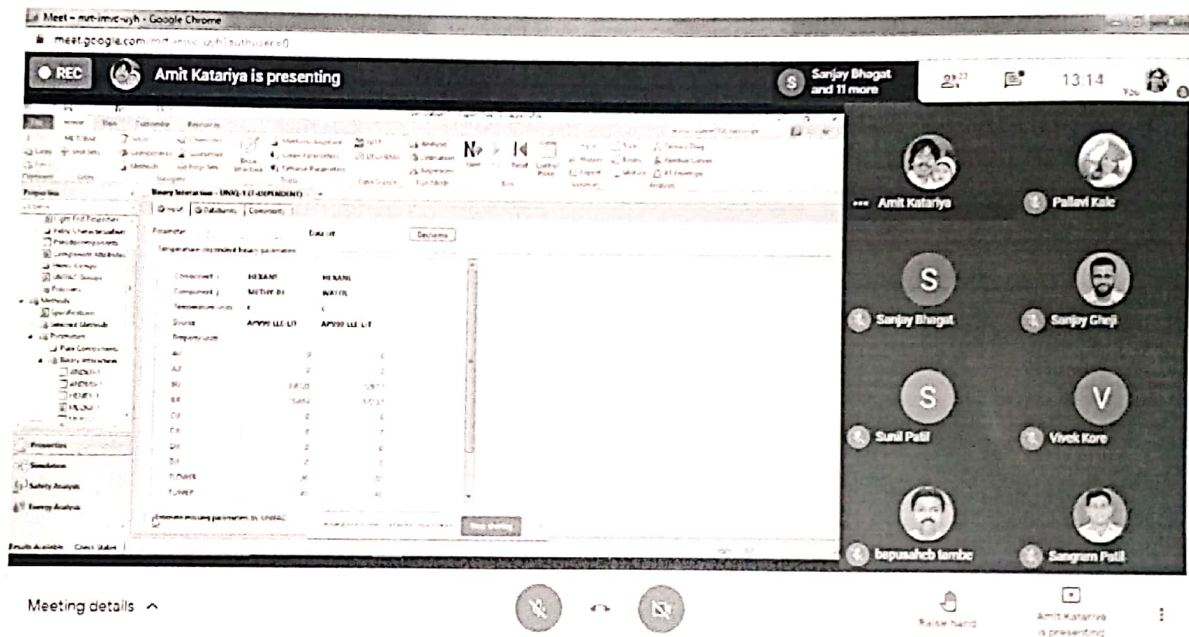
Day: 20-03-2021

Time: 01:00 pm – 02:30 pm

Speaker: Mr. Amit Kataria, Director, Amusavi MTC Private Limited, Pune

Topic: Heat Transfer Equipments in ASPEN PLUS

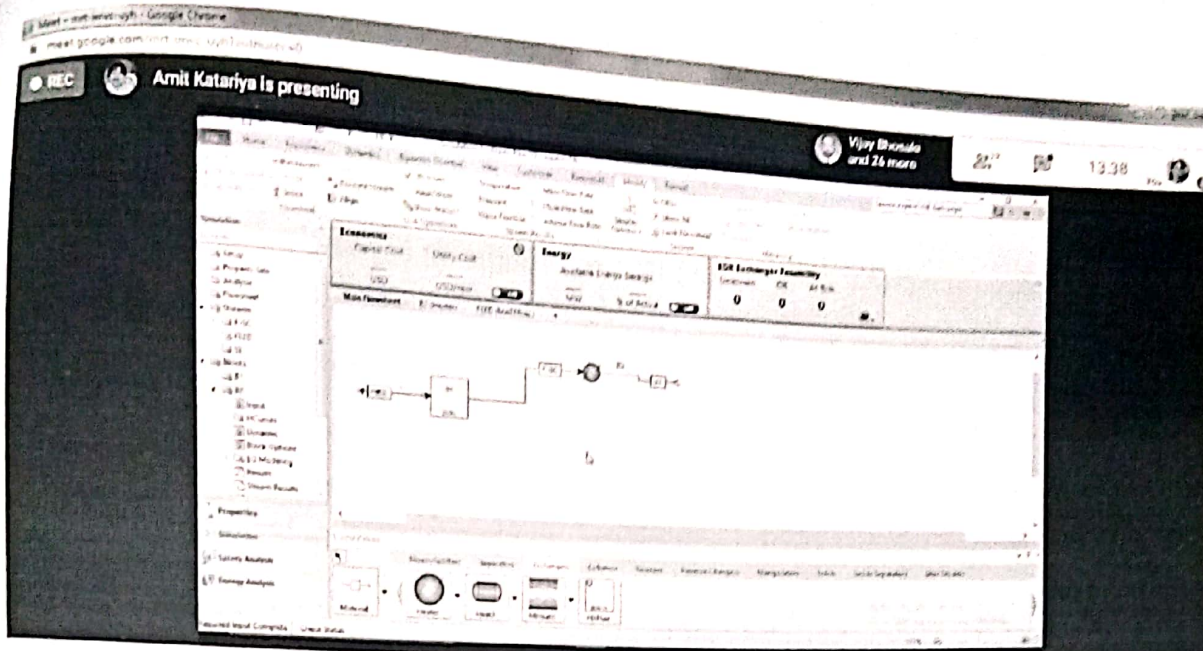
In this lecture Mr. Amit Kataria focused on energy required for heat transfer, heat exchanger design and simulation. He explained temperature achieved for each system during the heat transfer operation, area required, and utility requirement. He well explained all these factors with example by using different models from Aspen plus like that heat exchanger, distillation column, with result analysis.



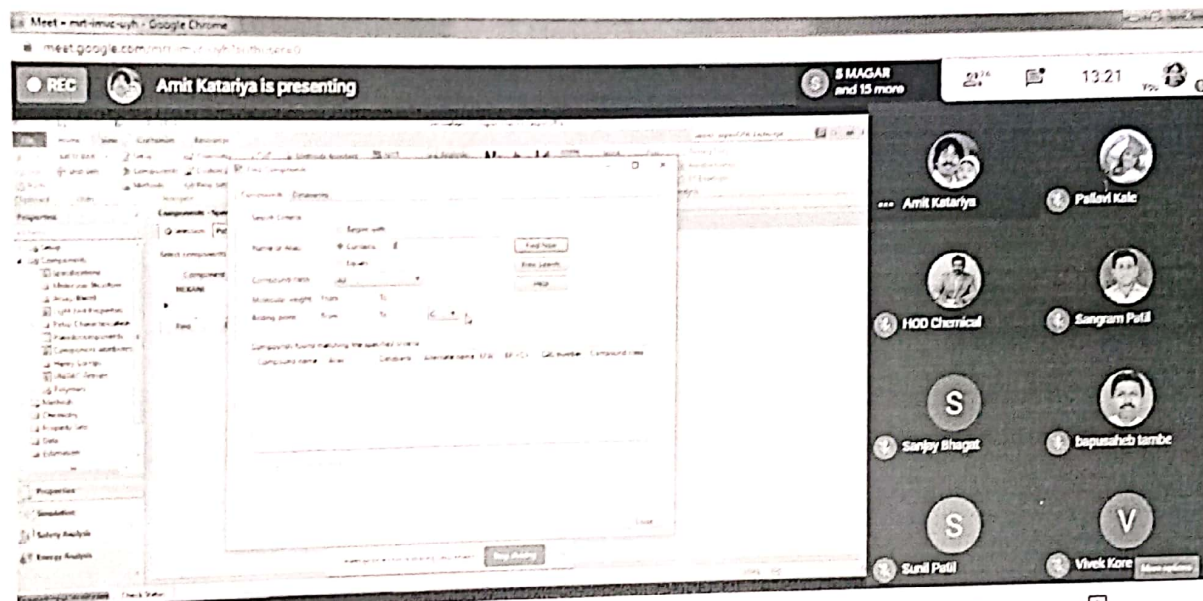
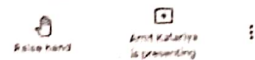
The screenshot shows a Google Meet interface with a presentation window displaying Aspen Plus simulation results. The presentation window shows a table of results for a heat exchanger simulation. The table has columns for 'Component 1', 'Component 2', 'Temperature (K)', and 'Area (m²)'. The data is as follows:

Component 1	Component 2	Temperature (K)	Area (m²)
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0
H2O(V)	H2O(L)	300.15	1.0

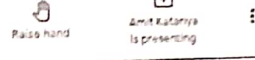
The meeting interface shows the presenter's name as 'Amit Kataria is presenting' and a list of participants including Pawan Kulkarni, Sanjay Bhogat, Sanjay Ghosh, Sandeep Patil, Vivek Kore, Deepanshu Jambhe, and Saugandh Patil. The meeting time is 13:14.



Meeting details ^



Meeting details ^



Session -III

Day: 20-03-2021

Time: 03:00 pm – 04:30 pm

Speaker: Dr. Amol Deshpande, Assistant Professor, Department of chemical Engineering, BITS, Pilani-KK Birla Goa Campus

Topic: Modeling and Simulation: Unmixed Combustion (UMC) Process Equipment for Heat Transfer

In this lecture Dr. Amol Deshpande focused on unmixed combustion process. He also explained about UMC process for heat transfer to air with experimental details, premixed combustion, prevalent issues, potential OSRM's, test rig, data reduction heat transfer calculations, external power supply variation, effect of different parameters like that flow rate; temperature. Also he explained UMC with experimental results, modeling equations.

The screenshot shows a Google Meet interface with a presentation slide. The slide title is "Literature survey - OSRM". Below the title, there is a bullet point: "Literature related to CLC and UMC - suggested potential OSRMs". The slide features a central box labeled "Potential OSRMs" containing four elements:

- Fe**: (Multiple reduction states during reduction)
- Ni**: (Shows tendency to form coke during reduction)
- Mn**: (Oxides decompose to different oxidation states at lower temp)
- Cu**: (Low melting point 1358 K)

Below the box, the text reads: "Cu/CuO system extensively investigated till date and adopted in the present study". The slide footer includes "20th Mar 2021", "12", and "BITS Pilani - K. K. Birla Goa Campus". The Meet interface shows "Amol Deshpande is presenting" and a list of participants: Amol Deshpande, Pallavi Kale, Sanjay Bhagat, Sangram Patil, abhijeet patil, HOD Chemical, Vivek Kore, and Sanjay Ghosh.

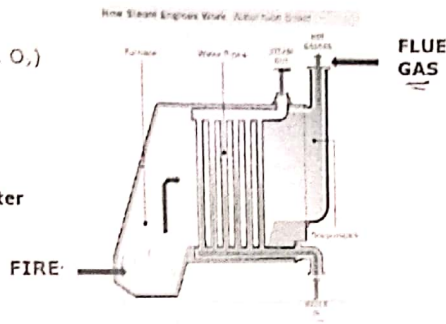
Premixed combustion

HOT COMBUSTION

Fuel + Excess Air (N₂, O₂)
→ Flue gas

Energy transfer

Fuel → Flue gas → Water



20th Mar 2021

BITS India, K.K. Bera, Goa Campus

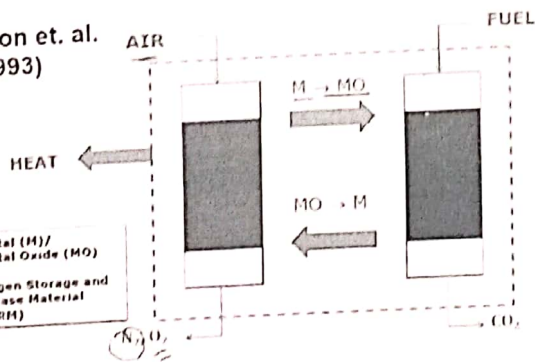
Meeting details



Raise hand
Amol Deshpande is presenting

Unmixed Combustion (UMC)

Lyon et. al. (1993)



20th Mar 2021

BITS India, K.K. Bera, Goa Campus

Meeting details



Raise hand
Amol Deshpande is presenting

(Valedictory Function)

In the valedictory session, Dr. S. L. Bhagat, Professor, PVPIT Budhgaon sangli has given the concluding speech on "one week workshop" and he thanked to TEQIP and all resource persons who involved in one week workshop. Prof. S. S. Patil, Assistant professor, Chemical Engineering, PVPIT Budhgaon, Sangli, has given vote of thanks and concluded the workshop. The test on workshop was conducted for all the participants on online mode. Feedback was collected from all participants from Google form.

