A Report on the Expert Lecture: "Process Safety and Industrial Safety"

Organized by

Chemical Engineering Department, L.D. College of Engineering, Ahmedabad

Date and Time: 16 July 2025, 11:30 AM to 12:30 PM

Venue: Room No. 721, Chemical Engineering Department, L.D. College of Engineering, Ahmedabad

Coordinators:

- Dr. Ronak Patel
- Prof.. Pratik Patel

Target Audience:

Undergraduate Semester-V Students of the Chemical Engineering Department, L.D.C.E.

About the Expert

The expert lecture was delivered by Mr. Simit Deliwala, a Chemical Engineer with 15 years of extensive experience in process engineering, process safety, and business sustainability within the chemical industry. Mr. Deliwala has a proven ability to lead and implement process safety programs, drive continuous improvement initiatives, and ensure regulatory compliance. He is passionate about fostering a culture of safety and sustainability while contributing to operational excellence. He holds a NEBOSH HSE Certificate in Process Safety Management and is a certified Lead Auditor for ISO 45001:2018.

Introduction to the Session

The session began with a welcome of Mr. Simit Deliwala by Dr. Ronak Patel and Prof. Pratik Patel, followed by a brief introduction by Mr. Deliwala about his educational and professional career, including his graduation from L.D. College of Engineering in 2010. He then discussed the emerging trends in chemical engineering, highlighting the importance of process safety in the field. The lecture was designed to provide students with a comprehensive overview of process safety and industrial safety, emphasizing their significance in the chemical industry.

Key Highlights of the Lecture

- **Distinction between Process Safety and Personal Safety:** The lecture clarified the difference between process safety, which focuses on preventing major incidents involving

hazardous materials, and personal or occupational safety, which deals with individual workplace hazards.

- **Case Studies of Major Incidents:** Mr. Deliwala presented several case studies of major process safety incidents from the past, such as the Flixborough disaster, to illustrate the devastating consequences of process safety failures. He explained the root causes of these incidents, which often involved failures in hazard/design review and a lack of understanding of the associated hazards.

- **Process Safety Management (PSM):** A significant portion of the lecture was dedicated to Process Safety Management (PSM). Mr. Deliwala introduced the 14 elements of the OSHA PSM standard, including Employee Participation, Process Safety Information (PSI), Process Hazard Analysis (PHA), and Management of Change (MOC).

Technical Insights from the Session

The lecture provided valuable technical insights into various aspects of process safety. Mr. Deliwala elaborated on the key elements of Process Safety Information (PSI), which includes understanding the physical, toxicological, and thermal properties of materials, as well as the thermodynamic properties of the process. He also discussed various instruments used to measure thermal stability, such as Differential Scanning Calorimetry (DSC) and Accelerating Rate Calorimetry (ARC).

Process Hazard Analysis (PHA)

The importance of Process Hazard Analysis (PHA) was highlighted, with a focus on methodologies like HAZOP (Hazard and Operability Study). The session also touched upon other risk analysis techniques such as LOPA (Layer of Protection Analysis), QRA (Quantitative Risk Assessment), and FMEA (Failure Modes and Effects Analysis).

Management of Change (MOC)

Mr. Deliwala emphasized the critical role of Management of Change (MOC) in preventing accidents, stating that a significant percentage of incidents in the process industries are linked to changes that were not properly managed.

Incident Investigation

The lecture also covered the process of incident investigation, stressing that the aim should be to identify systemic faults rather than blaming individuals. Methodologies like the "5 Whys" analysis and the Ishikawa (fishbone) diagram were mentioned as effective tools for root cause

analysis.

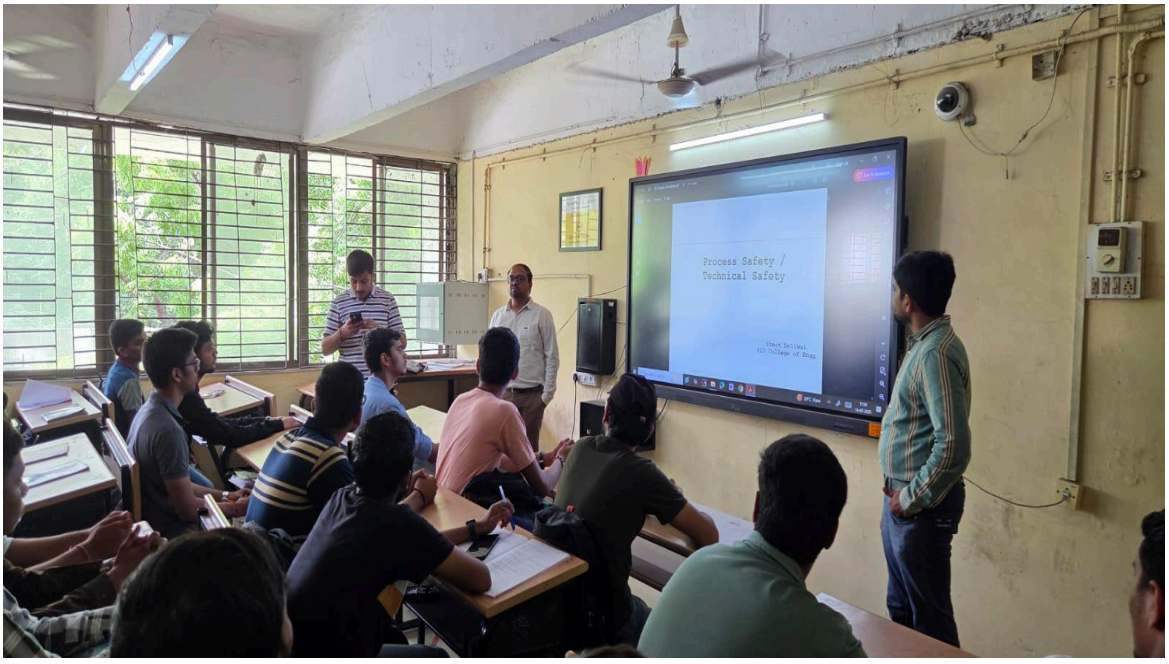
Role of Chemical Engineers

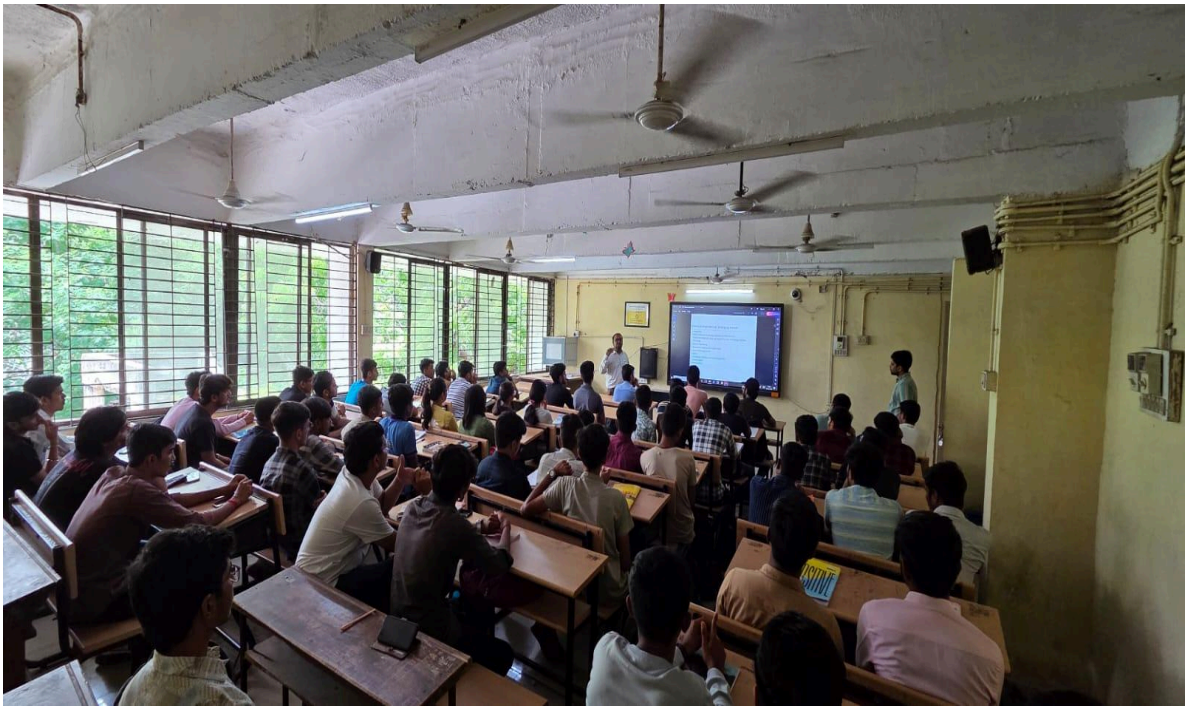
The session concluded with a discussion on the crucial role of chemical engineers in ensuring process safety. This includes their involvement in maintaining Process Safety Information (PSI), participating in Process Hazard Analysis (PHA), managing changes through MOC, and contributing to incident investigations.

Conclusion and Key Takeaways

The expert lecture on "Process Safety and Industrial Safety" was highly informative and beneficial for the students. It provided them with a clear understanding of the fundamental principles of process safety and their practical application in the chemical industry. The key takeaway for the students was the understanding that safety is a core value and an integral part of their future professional responsibility as chemical engineers. The session successfully bridged the gap between theoretical knowledge and real-world industrial practices, equipping the students with the necessary awareness to contribute to a safer working environment in their future careers.

Photographs of the Session





L.D. College of Engineering, Ahmedabad

Chemical Engineering Department

Expert Lecture

Date:	16/07/2025
Venue:	727
Speaker	Ms. Smit Delicoala
Title	Process Safety/Technical Safety

Attenance Sheet

Sr. No.	Name of Student	Enrollment No.	Signature
1.	Ayaz. L. Malek	240283105006	A.L. Malek
2.	Yash. H. Bharadiya	240283105001	Y.H.Bharadiya
3	Viraj Matravi	230280105034	
4	prince Bharadava	230280105006	Prince
5.	Ranu Lakshy P.	230280105062	Ranu LP.
6.	chauhan ved R.	230280105007	
7.	Patel Arjun N.	280280105043	Arjun
8	Patel Dev P.	230280105044	Dev. Patel
9	Bhagat Smit S.	230280105004	Smit
10.	Pipaliya Naitik	220280105052	
11.	Timbadiya Devang	240283105009	
12.	Solanki Darshit	240283105008	S. Darshit
13	Kandaliya Dhaval	240283105003	
14	Hadiya dipesh	220280105027	Dipesh
15	Dharmik Vaghela	240283105011	
16	Dabhi Nitin K.	230280105013	
17	parmar mitesh m.	230280105040	
18	Panth J. Kaneliya	240283105004	
19.	Parmar Keval V.	240283105007	Keval
20	Patel Het J.	230280105046	
21	Gohel Dhaval	230280105019	
22	Rathod Nishil	230280105063	
23	Devaliya Rahul	230280105015	
24	Kadavla Keval R.	230280105026	Keval
25	Prajapati yash M.	230280105058	
26	Nakum chirag K.	230280105037	
27	chotaliya kishan m.	230280105011	kishan
28	Kashyap Khoriya M.	240283105005	
29.	Shivram Bhanushali	230280105068	Shivram
30	milun suvani	230280105071	
31.	Vivek Jain D.	230280105023	Vivek
32	Patidar Nikhil S	230280105054	Nikhil
33	Ayush Ruchandani	230280105003	Ayush
34	Dhruvin Maniya	230280105033	
35	Rathod Shreedhar	230280105064	
36	Patel Ruchi	230280105050	Ruchi
37	Gupta Ankita	230280105022	Ankita
38	Kyada Dipsa	230280105031	Dipsa Kyada
39	Anu choudhary	230280105002	Anu

Sr. No.	Name of Student	Enrollment No.	Signature
40	Jatin Vasava	230280105075	
41	Rahul Parmar	230280105041	
42	Kansagara Parth	230280105077	
43	Dabhi chirag K.	230280105012	
44	Jivani Het A.	230280105024	
45	Rana Bhumitsinh M.	230280105061	B.M. Rana
46	Chavda Dev	230280105009	
47	Vasava Tilak N.	230280105077	
48	Pandor sanjay. R	230280105039	
49	Akshay Vaghela	240283105010	
50	Adil S. Shaikh	230280105067	
51	Chavda Kanishal	230280105005	
52	Ravindra R. Vagajivani	230280105072	
53	Ramavat Deep N.	230280105060	
54.	Ramani Neel D	230280105059	
55.	Patel Jigar B.	230280105047	
56.	Patel Abhi I.	230280105042	A.I. Patel
57	Panchal Poonjun. V	230280105055	