

Date: 18th October 2024

## **Report on Expert Lecture: "Basics and Case Studies of Pumps"**

Speaker: Mr. Rahul Goel, Lead Process Engineer

Affiliation: Mott MacDonald, India

Venue: S. Ramanujan Hall, L.D. College of Engineering, Ahmedabad

Target Audience: 3rd Semester Students of Chemical Engineering Department

Time: 11 AM to 12:30 PM

Coordinating Faculty: Dr. Ronak Patel

On 18th October 2024, an expert lecture was organized at L.D. College of Engineering for the 3rd semester students of the Chemical Engineering Department. The topic of the lecture was "Basics and Case Studies of Pumps," delivered by Mr. Rahul Goel, an accomplished Lead Process Engineer from Mott MacDonald, India with extensive industry experience in fluid mechanics and pump systems. Total 44 students attended the session and were benefited from the same (attendance sheet is attached herewith).

The objective of the lecture was to familiarize students with the fundamental concepts of pumps and provide practical insights through real-life case studies, enhancing their understanding of the theoretical knowledge acquired in their coursework. Dr. Ronak Patel introduced Mr. Rahul Goel by mentioning his accomplishments and industrial experiences.

The session was divided into two parts:

1. Basics of Pumps
2. Case Studies from Industry

### **Basics of Pumps**

Mr. Rahul Goel began by introducing the fundamental principles behind pumps, explaining their role in various industrial processes. He covered the following topics in detail:

Types of Pumps: Centrifugal, Positive Displacement, and Special-purpose pumps.

Pump Components: Impellers, casings, bearings, and seals.

Performance Curves: Understanding head, flow rate, efficiency, and power consumption.

Cavitation: Causes, effects, and prevention.

NPSH (Net Positive Suction Head): Definition, importance, and calculation.

The speaker also discussed the classification of pumps based on their working principles and applications in different chemical processes. Students were encouraged to relate these concepts to their current curriculum.

#### Case Studies

The second part of the lecture focused on real-world applications of pumps, supported by case studies from Mr. Goel's professional experience.

Through these case studies, the speaker emphasized problem-solving skills and engineering judgment in real-world scenarios, giving students a practical outlook on pump operations and maintenance.

Following the lecture, an interactive Q&A session was held. Students posed questions related to:

- Practical challenges in pump installation.
- Advances in pump technologies.
- How to choose between centrifugal and positive displacement pumps.

Mr. Goel answered all the questions comprehensively, encouraging students to apply theoretical knowledge to solve practical issues.

The lecture was highly informative and received well by the students. It helped bridge the gap between academic learning and industry practices, providing valuable insights into the role of pumps in chemical engineering. The practical case studies offered by Mr. Goel enriched the students' understanding and prepared them to think critically about future challenges in their careers.

At the end, Dr. Ronak Patel expressed gratitude to Mr. Rahul Goel on behalf of Department of Chemical Engineering, L.D.C.E. for sharing his expertise and contributing to the students' professional development.

Following are the glimpses of the session.







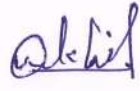

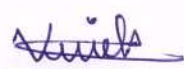

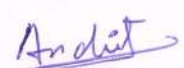


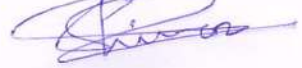

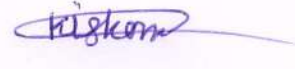

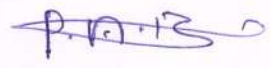
Date:-18/10/2024

## Expert lecture on "Basics & Case studies of pumps"

Speaker :- Mr. Ranvi Goel

Time :- 11:00 AM - 12:00 noon

Venue :- S. Ramanujam Hall

Sl. No.	Name	Enrollment NO.	Signature
1	Patidar Nikhil Shyamsundar	230280105054	
2	Ayush Ruchandelani	230280105003	
3	Vineek .D. Jain	230280105023	
4	Shriv D. Gondaliya	230280105021	
5	Archit A. Gogoiya	230280105020	
6	Vinit P. Modi	230280105035	
7	Kaish I. Patel	230280105035	
8	Shivam Bhamushali	230280105068	
9	milun Surani	230280105071	
10	kishan ma chotaliya	230280105011	
(020) 11	Bhandarkhade yash. H.	240283105001	J.H. Bhandarkhade
(020) 12	malek Ayaz. L.	240283105001	A.L. malek
13	Rana Bhamit M.	230280105061	B.M. Rana
14	Dhwanilkumar D. Patel	230280105045	
15	Bhavadva prince	230280105006	

Date:- 18/10/2024

Expest lecture on "Basics & case studies  
of pumps"

Speaker:- Mr. Rahul Goei

Time:- 11:00 AM - 12:00 noon

Venue:- S. Ramanujan Hall

Sr No.	Name	Enrollment No.	Signature
16	Devuliyu Rahul A.	230280105015	D.R.A
17	Prajapati Yash M.	230280105058	<u>YMP</u>
18	Kadavla Keval R.	230280105026	<u>Keval</u>
19	Koreliya Parth J.	240283105004	<u>PK</u>
20	Mumija Dharmin A.	230280105033	<u>MJS</u>
21	Jatin R. Vasava	230280105075	<u>Jatin</u>
22	Dharmik Vaghela	240283105011	<u>Dharmik</u>
23	Karlya Kashyan	240283105005	<u>K</u>
24	Solanki Darshit	240283105008	<u>S</u>
25	Randoliya Dharal	240283105003	<u>D</u>
26	Timbadiya Derang	220283105009	<u>Derang</u>
27	Anu choudhary	230280105002	<u>Anu</u>
28	Dipsa Kyada	230280105031	<u>Dipsa Kyada</u>
29	Ruchi Patel	230280105050	<u>Ruchi</u>
30	Akshay vaghela	240283105010	<u>Akshay</u>



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Expert lecture on 'Basics & Case Studies of Pumps'

Speaker:- Mr. Rahul Goel

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Venue:- S. Ramamujan Hall

Sr No.	Name	Enrollment NO.	Signature
31	Rathod Nishu J.	230280105063	<del>Nishu</del>
32	Parmar Mitesh M.	230280105040	<del>Mitesh</del>
33	Kansagara Parth B.	230280105027	<del>P Kansagara</del>
34	Jivani Het A.	230280105024	<del>Het</del>
35	Koladiye Dhruvil P.	230280105030	<del>Dhruvil</del>
36	Moghariga Smit B	230280105069	Smit
37	Nakum chitrag K.	230280105037	<del>Nakum</del>
38	Gohel Dhaval S.	230280105019	<del>Dhaval</del>
39	Sandha Akshat	230280105066	<del>Akshat</del>
40	Patel Jigar R	230280105047	<del>Jigar</del>
41	Ramavat Deep N.	230280105060	<del>Deep</del>
42	Ravindra R. Vagajiyan	230280105072	<del>Ravindra</del>
43	Chavada Karushal M.	230280105008	<del>Karushal</del>
44	Patel Het J.	230280105046	<del>Het</del>
45			