



L. J. Institute of Engineering & Technology

LJ Campus, Near Sanand Sarkhej Circle, S.G.Highway

Ahmedabad

Industrial Visit Report

Department of Chemical Engineering

Date of Visit:

23/03/2018

Place:

Rangtex Industries, Plot. No.200/201,
phase-2, GIDC estate, Nr. Muthia bus stop Naroda,
Ahmedabad-380233.

Duration of Visit: 2 hrs

BE Semester IV

Chemical Branch

No. of Students Participated in Visit: 40

Name of Faculty members:

Prof. Bharti Limbad (9104142117)

Prof. Rushikesh Prajapati (9428657485)



Figure 1 Group Photograph of Industrial Visit

Information about Place/Company Profile:

- Rangtex Industries was established in 2000 .
- Owner of the company is Mr. Jayesh Dudhat and Mr. Hanshraj Dudhat.
- They are manufacturing dyes for the fabric material and cotton material.
- They have business expanded in India and they are also exporters of dyes .
- They are manufacturing chemical dyes, reactive dyes, reactive yellow dyes, reactive black dye, reactive direct orange dye and reactive sun orange dye.

Observations during the visit:

- Rangtex industries used stainless steel type of reactor with rubber coating ,base of the reactor made up of bricks.
- They are using online pH meter for pH measurement to reduce the time in analysis.
- For filtration centrifuge filter and filter press used.

- Waste water is send to RO system and purified water used in further process.
- Excess waste water neutralized and then coagulated to form lump of dyes and other substances. After settling lumps are settled down and removed. Waste water is send to Naroda waste water treatment plant for further purification.
- They are using tray type dryer to remove moisture from dyes and then milled in ball mill.
- Powdered dye is packed 5 kg, 10 kg, and 20 kg packing bags for selling.

Subject/s or topic related to visit:

Chemical Process Industries for Dye manufacturing

Outcomes/Understanding from the visit:

- Students learnt how to actually do the process for dyes in industries.
- They also learnt about type of reactor used for manufacturing of dyes.
- We show them how the analysis of Dyes is done in lab.
- Chemist also explains process for test of color contrast on cloth for manufactured dye to meet specification.
- They also described whole process of reaction and how much amount of raw material used, pH adjustment, temperature control, filtration of dyes, drying and milling.
- Students also learn about wastewater treatment from dyes industries.

Feedback of Students:

1. Nipun Prajapati(160320105046): This industrial visit is beneficial for the subject Chemical process industries to understand.
2. Niral Patel (160320105040): In this visit I learn about the how Unit process and Unit operation done in actual dyes industries.
3. Thakar Harshil Ashokkumar (160320105058): In this industries I learn about dyes process, how to work in industries and where to utilize chemical engineering.

4. Desai Kaushal Ronak (160320105008): From this visit I can better understand the subject Chemical Process Industries. And actually it's work in plant.
5. Panchal Nikhil Nareshkumar (160320105025): Rangtex industries manufacturing reactive dyes. I show have seen the process for reactive yellow dyes. And where it is applied.
6. Shukla Vikas Virendra (160320105055): I so the actual process of reactive dyes and which type of equipment are going to use in industries.
7. Parekh Dev (160320105027): It is fruitful visit to digest the subject like chemical process industries and all unit operations and process.

Name of H.O.D.:

Prof. Dinesh Mehbubani

Chemical Engineering,

LJIET,Ahmedabad

Prepared By:

Prof. Bharti Limbad

Chemical Engineering,

LJIET , Ahmedabad

Department Of Chemical Engineering							
Sr. no.	Date of visit	Semester	Name of Company/Industry	Address	No. of students participated	No of faculty participated	Remarks
1	23/03/2018	IV	Rangtex Industries	Plot. No.200/201, phase-2, GIDC estate, Nr. Muthia bus stop Naroda, Ahmedabad-380233.	40	02	This visit for the subject Chemical Process Industries-II to understand Dyes manufacturing process.