

A Report

On

**“Industrial Visit”**

For the Students of Mechanical Engineering Department. (Semester – IV)

On 3<sup>rd</sup> to 6<sup>th</sup> April 2018.

- **Objective:** “Training and Exposure on the various aspects of Casting and machines and its technology related to the Manufacturing Process-2 subject in Sem IV.”
- **Venue:** “LUFT TECHNOCAST LIMITED, Narol, Ahmedabad.
- **Number of Students:** 169 (IV semester, Mechanical Engineering)
- **Head of the Department:** Ms. Prexa H. Parikh
- **Faculty Coordinator’s:**
  1. Mr. Chintan Patel (Asst. Prof. Mechanical Engg. Dept.)
  2. Mr. Ankitsinh Rajput (Asst. Prof. Mechanical Engg. Dept.)
  3. Mr. Vivek Parikh (Asst. Prof. Mechanical Engg. Dept.)
  4. Mr. Krushnakant Jani (Asst. Prof. Mechanical Engg. Dept.)
  5. Mr. Shailesh Patel (Asst. Prof. Mechanical Engg. Dept.)
  6. Mr. Abhishek Trivedi (Asst. Prof. Mechanical Engg. Dept.)

## **OVERVIEW**

### **1.1 LUFT TECHNOCAST LIMITED**

Luft Technocast Limited was registered at Registrar of Companies Ahmedabad on 13 March, 2009 and is categorised as Company limited by Shares and an Non-govt company.

Luft Technocast Limited's Corporate Identification Number (CIN) is U27100GJ2009PLC056349 and Registration Number is 056349.

On 3<sup>rd</sup> to 6<sup>th</sup> April 2018, the Mechanical Engineering Department (IV-Sem), L.J.I.E.T arranged an **Industrial Visit for the students.**

The main focus of this program was to enable the students to know about the various aspects of the latest production techniques and machineries.

### **ORGANIZATIONAL STRUCTURE OF THE VISIT**

The number of students who attended the visit was 169 accompanied by 6 faculty members. On first the day of visit, 50 students and 2, then on second day of visit, 39 students and 2 faculties, then on third day of visit 38 students and 2 faculties and on fourth day 43 students and 2 faculties have gone for the visit faculties left the college campus at around 10:00 am and reached the venue at 10:45 am. The students as well as faculty travelled by their own vehicle and reach the place accordingly on time. On first day a brief overview was given by Mr. Ankitsinh Rajput to the students, their attendance was taken. Same procedure was followed on remaining days and students were informed about it by Mr. Vivek Parikh, Mr. Chintan Patel and Mr. Abhishek Trivedi respectively..

## **VISIT OUTLINE**

After reaching the venue, Admin person gave a brief overview and arranged three instructors and make team of 20 to 25 students each for visit. Instructors emphasized on the importance of Practical Knowledge in the field of Production of casting.

They Shows activities performed and services offered by company which are:

### **Pattern :**

The pattern is the basic instrument from which any of the castings are prepared. The company is not preparing their own pattern but they create it through other companies or the customer may provide them the pattern.

### **Mould Preparations:**

The mould were prepared by the company with the help of different types of sand naming facing sand, backing sand, core sand and parting sand. All the sand were prepared inside their premises only. The mould was passed with the carbon dioxide gas so that the strength of the mould will become higher and can resist more load on it.





**Sand Preparation:**

The sand was prepared in company only by mixing sand with additives and binder like bentonite and water. The sand was mixed together in a machine called Muller and then it is ready for the mould.



**Melting:**

For melting purpose there was Induction furnace installed in the company which was of capacity 1 ton and 500 kg. The raw material which was used was 60 % new material and 40 % scrap. The alloying elements were also introduced according to the sample preparation. The metal was poured inside the mould with the help of different ladles. Some ladles were also attached to the Crain used for large castings.



**Shot Blasting:**



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**Fettling:**

The last step of the process is fettling. In this step firstly the gating system is removed and will be acting as a scrap. After the removal of it the sample is taken for grinding in which the surface of the material is grinded and made flat surface of the sample. Then at last machining is done on the sample to achieve the accurate dimension of the sample. At last if any cuts or changes are then on the sample then its is done by welding and all.





**Shell Moulding Process:**

The second unit was of shell moulding which is another type of sand moulding practice. The company is having fully automated machine which is not widely used. The machine contains feeding of synthetic sand which is imported by the company between the moulds created by the pattern. The temperature and curing time is feeded automatically so after the appropriate time, the machine opens and the mould is ready for the pouring. The sample is taken out from pattern with the help of ejector pins and by keeping paper on the mould it is kept aside so that no foreign particles get inside it.

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Some glimpses of visit are as under –

**Day 1: 3<sup>rd</sup> April, 2018.**



**Day 2: 4<sup>th</sup> April, 2018.**





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**Day 3: 5<sup>th</sup> April, 2018.**



**Day 4: 6<sup>th</sup> April, 2018.**



## **CONCLUSION**

The visit ended around 1:00 pm. The overall response of the students was positive – below are listed feedbacks of few of the students

1. Interesting Experience seeing live production
2. Kindly arrange a visit in more Industries.

## **ACKNOWLEDGEMENT**

The coordinators are grateful to the College authorities, Management and the Vice President – Dr. Manish Shah (LJK Trust) for supporting them to carry out such a program and for providing the support. Secondly, the coordinators would like to thank Dr. A.C. Suthar – Director (L.J.I.E.T.), who encouraged the coordinators for this program. Also, the coordinators extend their gratitude to the Head of the Department – Ms. Prexa H. Parikh, who has played a major role by being there at the time of need. The Owner of the company **Mr. Mohammad Khan Pathan** without whom the visit was not possible and also the manager **Mr. Alpeshbhai Suthar**. Last but not the least; the students did a wonderful job and the coordinators are proud of each of their students.