

A Report

On

**“Industrial Visit – 1. Banas Dairy, Palanpur &  
2. Banas Dairy, Sanadar, Diyodar.”**

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

On 15<sup>th</sup> oct 2022 (Saturday)

- **Objective:** “Training and Exposure on the various aspects of manufacturing of dairy products, production of PVC pipes and pump assembly”
- **Venue:** “Banas Dairy”, Palanpur & “Banas Dairy”, Sanadar.
- **Number of Students:** 127 (V semester, Mechanical Engineering)
- **Faculty Coordinator’s:**
  1. Mr. Tushar Thakar (Asst. Prof. Mechanical Engg. Dept.)
  2. Mr. Pratik Vataliya (Asst. Prof. Mechanical Engg. Dept.)
  3. Mr. Anil Rathod (Asst. Prof. Mechanical Engg. Dept.)
  4. Mr. Hemang Dhameliya (Asst. Prof. Mechanical Engg. Dept.)
  5. Mr. Vishal Vyas (Asst. Prof. Mechanical Engg. Dept.)
  6. Mr. Vandan Vyas (Asst. Prof. Mechanical Engg. Dept.)
  7. Mr. Jay Chauhan (Asst. Prof. Mechanical Engg. Dept.)
  8. Mrs. Bandana Swain (Asst. Prof. Mechanical Engg. Dept.)

## Itinerary of Visit:

<u>5:00 AM</u>	<u>Commencement of Journey from LJ</u>
<u>9:30 AM</u>	<u>Arrival at Banas Dairy, Palanpur</u>
<u>3:30 PM</u>	<u>Arrival at Banas Dairy, Sanadar</u>
<u>12:00 AM</u>	<u>Arrival at LJ Campus</u>

## Industry 1-Banas Dairy

### 1.1 OVERVIEW:

Late Galbabbhai Patel, founder chairman and the selfless sage cocooned a dream to uplift Socio-economical status of village farmers which is fulfilled through the creation of a Co-operative milk union for Banaskantha district, on the foot print of “Amul Dairy” of Kaira district, the ideal model of a co-operative. Consequently, eight village level co-operative milk societies in Vadgam and Palanpur taluka of district were registered and started collecting and pouring milk at DudhSagar Dairy, Mehsana from 3 October,1966.

The milk union got registered under the Co-operative Act on 31<sup>st</sup> January,1969 as Banaskantha District Co-operative milk producers’ Union Limited, Palanpur, popularly known as “BANAS DAIRY”.

The foundation stone was laid down by late Galbabbhai Patel on 14<sup>th</sup> January.1971 at 122 acres land acquired near Jagana village in order to set up dairy plant under the Operation Flood programme launched by National Dairy Development Board. On 7<sup>th</sup> may,1971 the dairy started functioning at the same place with handling capacity of 1.5 lac liters of milk that was expanded later on with processing capacity of 4lac liters milk per day.

## **1.2 Inside the Plant:**

A small step, organizing some societies and collecting few hundred liters of milk in the year 1966 has turned in to a quantum leap, when the ambitious and ultra modern automated dairy plant of Asia continent has been shaped adjoining to first plant (Banas II dairy) with cost of Rs.110 Crore to meet not only present but also future need to handle 10.5 lac liters milk per day.

Altogether Banas-I(Old Dairy) and Banas-II Dairy plant (10.5 llpd processing capacity) along with new venture Banas-III(805 LLPD processing capacity) and 4 milk Chilling Centers Khiman, Dhanera, Tharad and Radhanpur, Banas Dairy is able to process 22 lacs liters of milk per day.

In addition, it also presently Dairy whitener, Amul Spray powder Amul Whole milk Powder, Sagar\Amul Skimmed milk powder infants milk powder, Cheese (1 MT per day), Paneer (2 MT per day) Amul table Butter Amul Desi (white) Butter, Sagar\Amul Ghee, pasteurized milk (Full cream, Standardized, Toned, Double toned and skimmed milk), Flavored milk Butter milk, Kajukatri, Peda Namkin ,Ice-cream etc.

These products are mainly marketed under world famous brand names “Amul” and “sagar” The dairy has also started exports of ghee and milk powders to middle feather in the cap of Banas Dairy when it got ISO 9002 and HACCP certification.

## **1.3 Plant sections visited:**

- **100 TPD milk powder plant**
- **Tetra pack milk/buttermilk plant**
- **Refrigeration unit**
- **Cheese plant**
- **Automatic Kajukatri and Peda making plant**

- Pasturizing unit
- Ice cream manufacturing plant

## Industry 2-Banas Dairy,Sanadar,Diyodar

### 2.1 OVERVIEW:

The number of students was 127 in total; Mechanical. The visit in the BANAS DAIRY, Palanpur got over at 12:00 pm and they were taken to Lunch in Canteen of Dairy. Then after The students were taken to Banas Dairy ,Sanadar at 4:00 pm

In September 2020, considering the growing demand for potato-based products across the world, Banas Dairy established a Rs 100-crore potato processing unit in Sanadar, Diyodar.

A brief overview of Banas Dairy, Sanadar Plant was given to the students, They were introduced to the technology and processing equipment of potato peeling, drying, frying and packaging, they were also visited and learned about working of biogas production, boiler, condenser.

Plant visit was completed up to 6:15 PM and we reached back to LJIET at 12:00 PM on 15/10/2022.

### 2.2 Plant sections visited:

- Potato chips (French fries) plant.
- Utility plant.
- Refrigeration unit.
- Assembly of Ice-cream Process plant.
- Chocolate plant.

## Photography

Photography was prohibited inside plant premises, so group photo was taken outside the plant.

### Banas Dairy: Palanpur







Banas Dairy: Sanadar, Diodar

**सुस्वागतम्**  
151 बीघा में विकसित अत्याधुनिक स्टेट ऑफ द आर्ट  
"बनास डेयरी संकुल - दियोदर"

**Banas Dairy**

<p>देश के सबसे ज्यादा मिल्क स्टोरेज क्षमता वाले साइलो 2,50,000 लीटर दूध प्रति साइलो</p>	<p>देश का सबसे बड़ा मिल्क पाश्चरिजेशन प्लांट प्रोसेस क्षमता 1 घंटे में 60,000 लीटर</p>	<p>को-ऑपरेटिव पोटेबो प्रोसेसिंग प्लांट विश्व का पहला प्लांट है। उत्पादन क्षमता प्रतिदिन 50 मीट्रिक टन</p>	<p>भारत का सबसे कम समय में निर्मित डेयरी प्लांट सिर्फ 18 महीनों में बन कर तैयार हुआ</p>	<p>भारत में एक साथ निर्मित सबसे बड़ा डेयरी प्लांट प्रतिदिन 50,00,000 लीटर दूध उत्पादन की क्षमता</p>	<p>भारत का पहला रेफ्रिजरेशन प्लांट एक बार में 3,550 TR रेफ्रिजरेशन करने की क्षमता</p>
<p>बटर प्लांट की उत्पादन क्षमता प्रतिदिन 80 मीट्रिक टन</p>	<p>आइस्क्रीम प्लांट की उत्पादन क्षमता प्रतिदिन 1,00,000 लीटर</p>	<p>ऑटोमेटेड चोया प्लांट की उत्पादन क्षमता प्रतिदिन 20 मीट्रिक टन</p>	<p>देश की सबसे बड़ी वायु वैल्वी (Valve Battery- 154 Valves)</p>	<p>भारत का पहला और सबसे बड़ा टैंकर सी.आई.पी. वै</p>	<p>अत्याधुनिक मिल्क की क्वालिटी और क्वांटिटी टेस्टिंग PH meter, conductivity meter density meter, Turbidity meter</p>







### **SUMMARY AND OUTCOME OF THE VISIT**

The visit has helped them to understand the subject Computer Aided Manufacturing, Refrigeration and Air conditioning and Oil Hydraulics and Pneumatics.

Below are listed feedbacks of few of the students

1. Practical exposure to student.
2. Nice and Interesting Experience
3. Excellent! Explanation was awesome.
4. 100 TPD milk powder (Banas Dairy, Palanpur) and Potato Chips (Banas Dairy Sanadar) making Process was really a life time experience.



### 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 – Mr Tushar Thakar, who has played a major role by being there at the time of need. Last but not the least; the students did a wonderful job and the coordinators are proud of each of their students.

