

A Report

On

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

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

On 15th 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. Anil Rathod (Asst. Prof. Mechanical Engg. Dept.)
 3. Mr. Hemang Dhameliya (Asst. Prof. Mechanical Engg. Dept.)
 4. Mr. Vishal Vyas (Asst. Prof. Mechanical Engg. Dept.)
 5. Mr. Vandan Vyas (Asst. Prof. Mechanical Engg. Dept.)
 6. Mr. Jay Chauhan (Teaching Assistant Mechanical Engg. Dept.)
 7. 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 31st 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 14th 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 7th 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



L. J. INSTITUTE OF ENGINEERING AND TECHNOLOGY – AHMEDABAD.
MECHANICAL ENGINEERING DEPARTMENT



Banas Dairy: Sanadar, Diodar

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

देश के सबसे ज्यादा मिल्क स्टोरेज क्षमता वाले साइलो 2,50,000 लीटर दूध प्रति साइलो

देश का सबसे बड़ा मिल्क पाश्चरिजेशन प्लांट प्रोसेस क्षमता 1 घंटे में 60,000 लीटर

को-ऑपरेटिव पोटेटो प्रोसेसिंग प्लांट विश्व का पहला प्लांट है। उत्पादन क्षमता प्रतिदिन 50 मीट्रिक टन

भारत का सबसे कम समय में निर्मित डेयरी प्लांट सिर्फ 18 महीनों में बन कर तैयार हुआ

भारत में एक साथ निर्मित सबसे बड़ा डेयरी प्लांट प्रतिदिन 50,00,000 लीटर दूध उत्पादन की क्षमता

भारत का पहला रेफ्रिजरेशन प्लांट एक बार में 3,550 TR रेफ्रिजरेशन करने की क्षमता

बटर प्लांट की उत्पादन क्षमता प्रतिदिन 80 मीट्रिक टन

आइस्क्रीम प्लांट की उत्पादन क्षमता प्रतिदिन 1,00,000 लीटर

ऑटोमेटेड चोया प्लांट की उत्पादन क्षमता प्रतिदिन 20 मीट्रिक टन

देश की सबसे बड़ी वायु वैल्वी (Valve Battery- 154 Valves)

भारत का पहला और सबसे बड़ा टैंकर सी.आई.पी. वै
एक साथ आधे घंटे में 10 टैंकर क्लीन

अत्याधुनिक मिल्क की क्वालिटी और क्वांटिटी टेस्टिंग
PH meter, conductivity meter, density meter, Turbidity meter





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. Prexa Parikh– 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.

