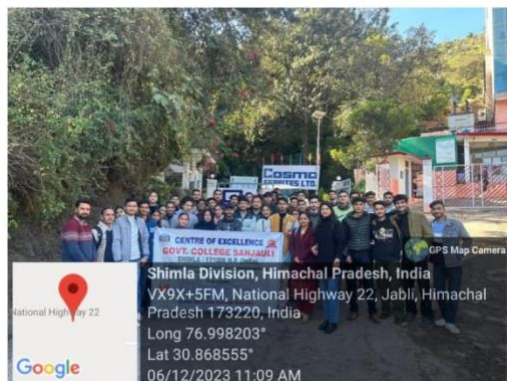


# REPORT OF INDUSTRIAL VISIT TO COSMO FERRITES LAB JABLI

## UNDER DBT STAR COLLEGE SCHEME

Department of Chemistry organized an industrial visit to Cosmo Ferrites Lab, Jabli H.P. under DBT Star College Scheme on 06 Dec 2023. A total 24 students from Chemistry department accompanied by Mrs. Shalu Chauhan and Mr. Yogesh Sood visited the Cosmo Ferrite lab. Students gained practical knowledge in crafting ferrite core, the sintering process, creating ferrite powder, and assessing ore inductance. The experience was insightful, showcasing cutting-edge research and advancements in Chemistry.

### ❖ Venue Overview



Cosmo Ferrites Lab in Jabli offers a state-of-the-art venue for exploring the fascinating world of ferrites. The lab's infrastructure reflects a commitment to excellence, with specialized areas dedicated to different stages of ferrite production.

### ❖ Press Section



Firstly, the students delved into the intricacies of crafting a green core of ferrite. The practical knowledge of machinery allowed them to understand the crucial initial step in the production process. Students come to know about three type of press machine

- i. Rotatory Press -- In rotatory press ferrite powder is pressed by rotational lever exerting the pressure of 10 - 25 ton
- ii. Hydrolic press -- In Hydrolic press pressure is exerted by hydrolic fuel. The shape of ore is large in this process. The U type ore formed in this are used in transformer.
- iii. Dorst press -- In Dorst press pressure is exerted by air pressure which is more then 25 ton . Size of ores are little bigger then rotatory press.

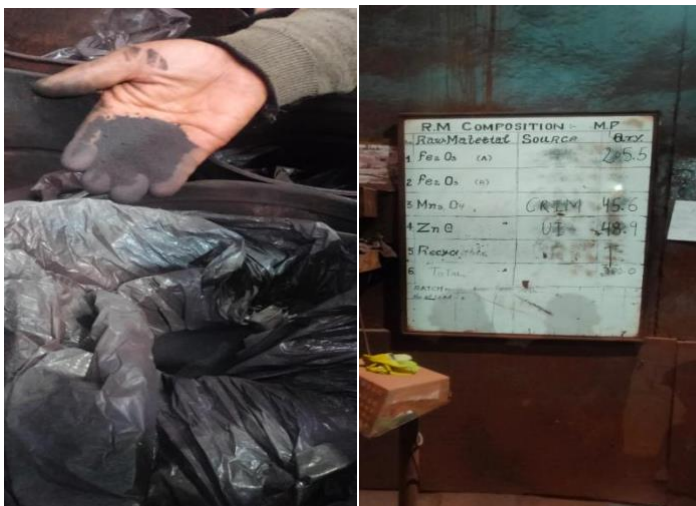
In these presses approx 200 types of shapes can be manufactured.

#### ❖ Sintering process



Next up was the sintering process, a fundamental stage in ferrite manufacturing. The students learned the art of transforming the green core into a solid, functional through controlled heating and cooling.

#### ❖ Creation of Ferrite Powder



Moving on, the participants engaged in the creation of ferrite powder, gaining insights into the precise mixture and processing required for optimal results. This step highlighted the significance of raw materials and their impact on the final product.

#### ❖ Checking Inductance

A critical aspect of the visit involved checking the inductance of the obtained ferrite ore. The practical application allowed the students to correlate theoretical knowledge with real-world measurements, enhancing their understanding of ferrite properties.

In conclusion, the visit to Cosmo Ferrites Lab was not just an excursion but a comprehensive learning experience. The students gained practical skills in ferrite production, reinforcing their academic knowledge and fostering a deeper appreciation for the intricacies of materials science.

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