



## Report on Industrial Visit to Cosmo Ferrites Lab Jabli

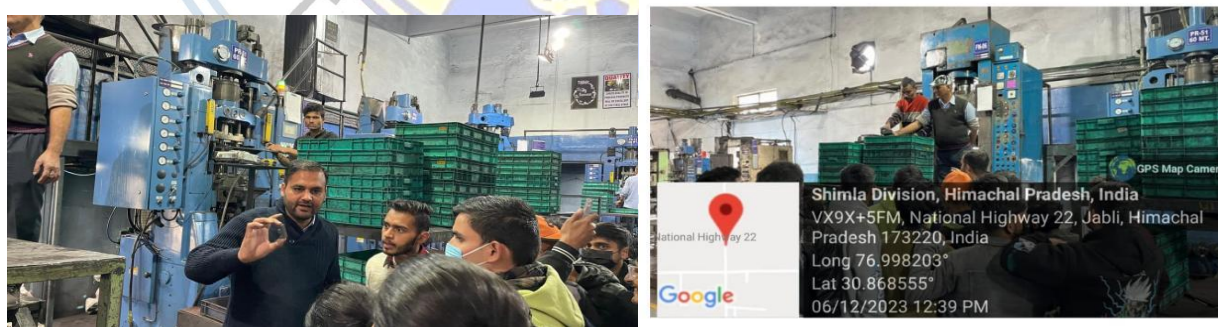
Department of Physics organized an industrial visit to Cosmo Ferrites Lab, Jabli H.P. in collaboration with the department of chemistry under DBT Star College Scheme on 06 Dec 2023. A total 24 students from department of physics participated in gaining practical knowledge about crafting ferrite core, the sintering process, creating ferrite powder, and assessing ore inductance. The experience was insightful, showcasing cutting-edge research and advancements in physics.

### ❖ 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.

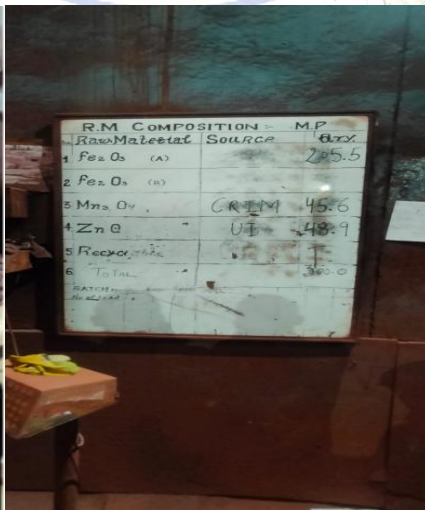
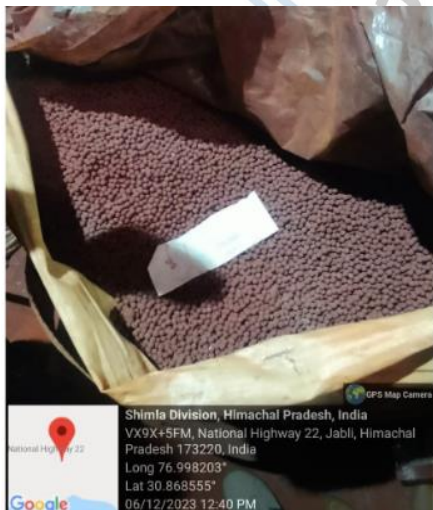
❖ Sintering process





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.

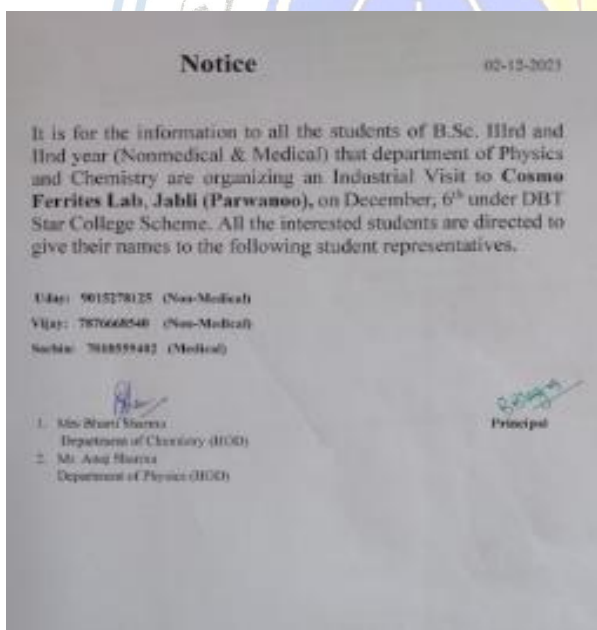
❖ **Creation of Ferrite Powder**



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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.



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