

REPORT ON INDUSTRIAL VISIT

RAIL SPRING, KARKHANA, Sithouli, Gwalior



1. **General:** Industrial visits for students of Mechanical & Civil Engineering were organized on 29 January 2025. The students were taken RAIL SPRING KARKHANA, Sithouli, Gwalior.

2. **Participation:** Following faculty members and students visited the plant

- (a) Mr. Vinod Rathore, Assistant Professor Mechanical Department, Mr. Nitin Yadav, Assistant Professor Civil Department Mr. Aman Kushwah, Lab Technician Civil Department.
- (b) Number of students of Mechanical Engineering = 15
- (c) Number of students of Civil Engineering = 26

3. Visit was arranged by Mr. Sanjeev chaba Manager-HR.

4. **Objective of the visit:** An industrial visit to the Rail Spring Karkhana in Gwalior would likely have several key objectives, all aimed at providing a valuable learning experience for visitors. Here are some of the most important objectives:

- (a) **To bridge the gap between theory and practice:** Industrial visits offer a unique opportunity to see how theoretical concepts learned in classrooms are applied in real-world industrial settings.
- (b) **To familiarize visitors with the industrial environment:** Many people, especially students, may have limited exposure to actual industrial workplaces. Visiting a factory like the Rail Spring Karkhana allows them to experience the atmosphere, scale of operations, and safety considerations of a heavy manufacturing environment.
- (c) **To provide firsthand insight into the spring manufacturing process:** Observing the step-by-step process of how railway springs are made, from raw material to finished product, is a core objective. This includes understanding the various stages like forging, heat treatment, coiling, and testing.
- (d) **To understand the importance of quality control and testing:** In a critical application like railway springs, quality is paramount. The visit would aim to show the rigorous quality checks and testing procedures employed to ensure the springs meet stringent standards.
- (e) **To learn about the materials and technology used:** Understanding the specific

types of steel used, the heat treatment processes, and the machinery involved in spring manufacturing are important objectives. This could also include learning about automation and other advanced technologies used in the facility.

5. Learning Outcomes:

- (a) **Manufacturing Processes:** Understanding the complete process of spring manufacturing, from raw material to finished product, including: Forging, Heating and coiling, Heat treatment (quenching and tempering), Shot peening, Testing and quality control.
- (b) **Materials Science:** Learning about the properties of steel used in springs and how different alloying elements affect those properties.
- (c) **Engineering Concepts:** Applying theoretical engineering concepts to real-world manufacturing processes.
- (d) **Industrial Environment:** Gaining familiarity with the operation and safety measures of an industrial environment.
- (e) **Quality Control:** Understanding the importance of quality control in manufacturing and the various methods used to ensure product quality.

6. Feedback from students:

Students gave positive feedback to words practical exposé of RAIL SPRING KARKHANA, Sithouli, Gwalior. (Manufacturing of coil spring)

Date: 29th January 2025

Mr. Vinod Rathore
Assistant Professor
Mechanical
Engineering



List of present students during Industrial visit-

S.no.	NAME	branch	semester
01.	Krishna Baghel	ME	IV SEM
02.	Sparsh Jain	ME	IV SEM
03.	Utkaesh Patil	ME	IV SEM
04.	Kunal George	ME	IV SEM
05.	Johnson Jeremah	ME	IV SEM
06	Abishek Singh Tomar	ME	IV SEM
07	Om Patel	ME	IV SEM
08	Abhay Singh Gurjar	ME	II SEM
09	Mohit Rathore	ME	II SEM
10	Sahil Pal	ME	II SEM
11	Sanskar Tyagi	ME	II SEM
12	Yuvraj Singh Kaurav	ME	II SEM
13	Chinmay Chauhan	ME	II SEM
14	Vikram Singh	ME	II SEM
15	Jagan Mahor	ME	II SEM