



CIVIL ENGINEERING SOCIETY

Department of Civil Engineering
Birla Institute of Technology, Mesra, Patna Campus
P.O.: B.V. College, Patna-800014, Bihar



IIC ACTIVITY REPORT

- | | |
|--|-----------------|
| 1. Program Theme: | Industrial Tour |
| 2. Duration of the Activity: | 15 Hours |
| 3. Number of Students Participated: | 21 |
| 4. Number of Faculty Participated: | 1 |
| 5. Number of External Participants (if any): | None |
| 6. Expenditure Amount (if any): | ₹28000 |
| 7. Mode of Session Delivery: | Offline |
| 8. Objective (100–150 words) | |

The industrial tour to Son Barrage, located in Bihar, was a valuable opportunity for us to observe and understand how large-scale water management and irrigation infrastructure function in real life. The primary goal of the visit was to connect our theoretical knowledge with practical applications, such as water level regulation, sluice gate operations, and flood control mechanisms. Seeing the engineering behind the barrage, including its gates, crest level, and discharge system, helped us appreciate the technical complexities and responsibilities of civil engineers. The tour also provided us with the opportunity to interact with on-site professionals, ask questions, and learn about the challenges in dam maintenance and water resource management. Beyond academics, the trip helped us build teamwork, communication, and professional awareness. It was not only an educational experience but also an inspiring one, reminding us of the real-world impact of our field and motivating us to contribute meaningfully to society through engineering.

9. Benefits in Terms of Learning / Skill / Knowledge Obtained (approx. 150 words)

- Practical Exposure** – Gained real-time understanding of the functioning of Son Barrage and its components like sluice gates, crest levels, and discharge systems.
- Application of Theory** – Observed how classroom concepts in hydraulics and fluid mechanics are applied in actual field conditions.
- Technical Knowledge** – Understood water regulation techniques, flood control measures, and reservoir management processes.



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- d) **Interaction with Experts** – Learned from engineers and professionals about challenges, maintenance, and operations involved in managing large-scale infrastructure.
- e) **Teamwork & Communication** – Enhanced collaborative and communication skills through group activities, discussions, and Q&A sessions.
- f) **Professional Awareness** – Developed a sense of discipline, workplace ethics, and the importance of safety measures.
- g) **Career Insight** – Gained motivation and clarity regarding future career paths in civil and water resource engineering.

10. Photograph: Event Drive Link : <https://photos.app.goo.gl/ezHtL6rQuTRPPqnx5>

11. Overall Report of the Activity: Annexure-II

12. Promotion in Social Media:

Promotions done on any one social media platform.

Social Media	URL
Email	civilenggsocietybitp@gmail.com
Facebook	https://www.facebook.com/cesbitp/
Instagram	https://instagram.com/cesbitp
YouTube	https://www.youtube.com/channel/UCg6N_QJ9ePWUh4aTM_C3ovg



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ANNEXURE-II

Industrial Tour Report

Organised by the Department of Civil Engineering, BIT Patna

Event Overview

- **Event Name:** Industrial Tour
- **Organising Body:** Department of Civil Engineering, BIT Patna
- **Dates:** 26th March 2025
- **Venue:** Indrapuri, Bihar
- **In charge:** Dr. Anis Sir

Introduction

The Department of Civil Engineering, BIT Mesra – Patna Campus, organised an industrial tour to Son Barrage, located at Indrapuri, Dehri (Rohtas District), Bihar, under the Water Resources Department of Bihar. This tour aimed to offer practical exposure to students and bridge the gap between academic concepts and real-world engineering practices.

Objective of the Visit

- To understand the working and structural features of a major irrigation infrastructure.
- To study water discharge mechanisms, sluice gate operations, and reservoir control systems.
- To observe the real-life application of hydraulics and fluid mechanics in dam and barrage construction.
- To gain insights into civil infrastructure maintenance and government-run irrigation projects.

About the Sone Barrage

- Length – 4613 feet
- Reservoir Level – 35500 RL
- Max Water Level – 363.90 RL
- Max Discharge Capacity – 14.30 lac cusec
- No. of Outflow Gates – 60



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- Height of Outflow Gates – 14'6"
- No. of Inflow Gates (A.R.) – 09
- Height of Inflow Gates – 16'6"
- Crest Level – 341 RL
- Lower Sill Level – 339 RL
- Piers Cap Level – 367 RL
- Average Reservoir Depth – 16'6"

RIDF Project Details (Observed On-Site):

- Project Name: Restoration & Lining Works of Some Western Link Canal
- Location: Indrapuri to Dehri (Rohtas District)
- Implemented by: Water Resources Department
- Project Code: XXII / I
- Total Cost: ₹25512.24 Lakh
- Loan (NABARD): ₹22169.27 Lakh
- Commencement Date: 02-02-2017
- Completion Date: 01-02-2019
- Contractor: BLL-C&C (JV), B32, Jagat Apartment, Baily Road, Patna

Learning Outcomes & Benefits

- Understood the practical working of a major water regulation infrastructure.
- Applied theoretical knowledge of hydraulics and structural engineering on-site.
- Gained exposure to real-time dam and irrigation project management.
- Learned about large-scale civil project execution under government supervision.
- Enhanced technical observation, documentation, and professional communication skills.
- Became familiar with terms like crest level, sill level, discharge capacity, and more.

Conclusion

The industrial tour to Son Barrage at Indrapuri, Dehri, was an insightful and enriching experience for civil engineering students. It provided a closer look into water resource management and infrastructure, strengthened our understanding of core subjects, and



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motivated us to explore such large-scale civil engineering projects in the future. The department expresses sincere gratitude to the Water Resources Department, Bihar, for their cooperation.

