



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
(Accredited by NBA-AICTE, New Delhi, Accredited by NAAC with "A" Grade)
Madagadipet, Puducherry - 605 107



DEPARTMENT OF CIVIL ENGINEERING

***BUREAU OF INDIAN STANDARDS
ANNUAL REPORT***

(Academic Year: 2023 to 2024)



Submitted by
Department of Civil Engineering



Preface

The Bureau of Indian Standards (BIS) is the national standards organization of India responsible for the development and implementation of quality standards across a wide range of industries. Established to ensure the standardization, marking, and certification of goods, BIS plays a vital role in maintaining product quality, safety, and reliability in the country.


As the backbone of quality assurance in India, BIS works towards the harmonious development of standardization, certification, and testing activities. It formulates Indian Standards that guide manufacturers, engineers, and consumers in achieving consistency and excellence in products and services. These standards are crucial in sectors such as construction, manufacturing, electronics, and consumer goods.

Recognizing the importance of quality in national development, BIS also operates product certification schemes, including the well-known ISI mark, which assures consumers of product conformity to established standards. It provides a platform for stakeholders from industry, academia, and government to collaborate in the formulation and revision of standards, ensuring they remain relevant and up to date.

The organization conducts training programs, awareness campaigns, and technical activities to promote a culture of quality and standardization. Additionally, BIS publishes standards, manuals, and guidelines that serve as essential references for professionals and organizations striving to meet national and international quality benchmarks.



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ABOUT THE INSTITUTE

Sri Manakula Vinayaga Educational Trust was founded to provide quality and affordable education to the weaker sections of society. The trust established Sri Manakula Vinayagar Engineering College (SMVEC) in 1999. SMVEC is an autonomous institution affiliated to Pondicherry University. It offers 13 undergraduate, 8 postgraduate and 11 Research programs in engineering. SMVEC has been accredited by NAAC with “A” grade and NBA. The institution is also accredited by TATA consultancy services. The college has a good placement record with students getting job offers from top companies in India and abroad. SMVEC students have won many awards and accolades for their academic achievements. To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.

Vision

- To nurture the cornerstone of excellence in engineering education and drive innovation by seamlessly integrating the fundamentals of Science and Humanities

Mission

M1: Quality Education : To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.

M2: Research and Innovation : To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.

M3: Employability and Entrepreneurship : To inculcate the employability and entrepreneurial skills through value and skill based training.

M4: Ethical Values : To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.



ABOUT THE DEPARTMENT

The Department of Civil Engineering is a premier department that offers high-quality UG and Ph.D. programs. The UG program B.Tech – Civil Engineering is accredited by the National Accreditation Board, AICTE–New Delhi, and has a strong placement record with graduates widely recognized by leading construction, infrastructure, and consultancy firms. The department’s alumni are highly sought-after by employers in the civil engineering and infrastructure sector. Our department contributes significantly to achieving national development goals through a strong commitment to sustainable infrastructure, innovative construction practices, and responsible engineering solutions, meeting the demands of a rapidly developing and urbanizing world.

Vision

We envision a world where the civil engineering department will be a home to an intellectual community with good quality education embedded with practical knowledge by inculcating research, strong social commitment and ethical values from its students, staffs and alumni.

Mission

Quality Education: To fulfill the requirements of construction industry, Civil Engineering profession and rural community through dissemination of technical services.

Practical Knowledge: To impart quality and real-time education to the students with the knowledge & skills needed for Civil Engineering practice

Work Efficiency: To encourage research, development and consultancy through sustained interaction with industry & research organization.

Societal issues: To develop graduates to compete at the global level to deal with modern issues.

Moral & Ethical: To insist ethical values and professionalism among the students.

Programmes offered

- B.Tech - Civil Engineering
- Ph.D - Civil Engineering



“Shaping a stronger world through structures, sustainability, and smart infrastructure.”

ABOUT BIS

The Bureau of Indian Standards (BIS) is the national standards organization of India dedicated to the development and implementation of standards to ensure quality, safety, and reliability of products and services. Established with the objective of promoting standardization and quality assurance, BIS serves as a link between industry, government, and consumers.

BIS aims to enhance the quality of goods and services by formulating Indian Standards and promoting their adoption across various sectors. It encourages consistency, innovation, and best practices in manufacturing and construction, while also safeguarding consumer interests. The organization provides a platform for experts, professionals, and stakeholders to contribute to the development and revision of standards in line with technological advancements.

The Bureau undertakes various activities such as standard formulation, product certification, testing services, and quality assurance programs. It also conducts training sessions, workshops, and awareness programs at national and regional levels to promote the importance of standardization.

Objectives of BIS

The primary goal of BIS are as follows:

- To formulate and implement Indian Standards that ensure consistency, quality, and reliability across various sectors.
- To operate certification schemes (like the ISI mark) that guarantee products meet prescribed safety and quality standards.
- To safeguard the interests of consumers by ensuring that goods and services are safe, reliable, and of good quality.
- To support industries by providing standards that enhance product competitiveness in both domestic and international markets.
- To establish and maintain testing laboratories for quality verification and to promote research in standardization and quality control.



LIST OF EVENTS

S. No	Title of the Events
01	Guest lecture on A practical approach in design of buildings using STAAD Pro
02	Online webinar on Evolution of Mined Tunnel
03	Guest lecture on Overview of steel structures

Guest lecture on A practical approach in design of buildings using STAAD Pro

A guest lecture on “A Practical Approach in Design of Buildings using STAAD Pro” was organized to provide students with hands-on knowledge of structural design using software tools. The session focused on the application of STAAD Pro in analyzing and designing building structures efficiently and accurately.

The speaker explained the step-by-step process of modeling structures, applying loads, analyzing results, and designing structural elements using the software. Emphasis was given to real-time applications, helping students understand how theoretical concepts are implemented in practical design scenarios.

The lecture enhanced students’ technical skills and introduced them to industry-relevant software widely used in structural engineering, thereby improving their readiness for professional practice.

- Total Number of Participants : 60
- Resource Person: Er.Thirumalai, M/S Usha Builders, Puducherry
- Date : 22.11.2023

Objective of the Activity

- To introduce STAAD Pro software for structural analysis and design.
- To understand the process of modeling and load application.
- To explain analysis and design of structural components using software.
- To provide practical exposure to real-world design problems.

Outcome of the Activity

- Students gained knowledge of STAAD Pro software.
- They understood the practical aspects of structural design.
- Awareness of software-based analysis improved.
- Students developed skills in modeling and load analysis.

PHOTO GALLERY



Chief Guest Address by Shri. Padma Jaiswal, IAS

Online webinar on Evolution of Mined Tunnel

An online webinar on “Evolution of Mined Tunnel” was organized to provide students with knowledge about the development and advancements in tunneling techniques. The session focused on the historical evolution of mined tunnels and the transition from conventional methods to modern, technology-driven approaches.

The speaker discussed various tunneling methods, including traditional excavation techniques and advanced methods such as the New Austrian Tunneling Method (NATM). Emphasis was given to ground behavior, support systems, and safety measures adopted in tunnel construction. Real-world examples were also presented to illustrate the practical challenges and solutions in tunneling projects.

The webinar helped students understand the importance of innovation and engineering expertise in underground construction and infrastructure development.

- Total Number of Participants : 80
- Resource Person: Er. Mohiadeen
- Date : 12.12.2023

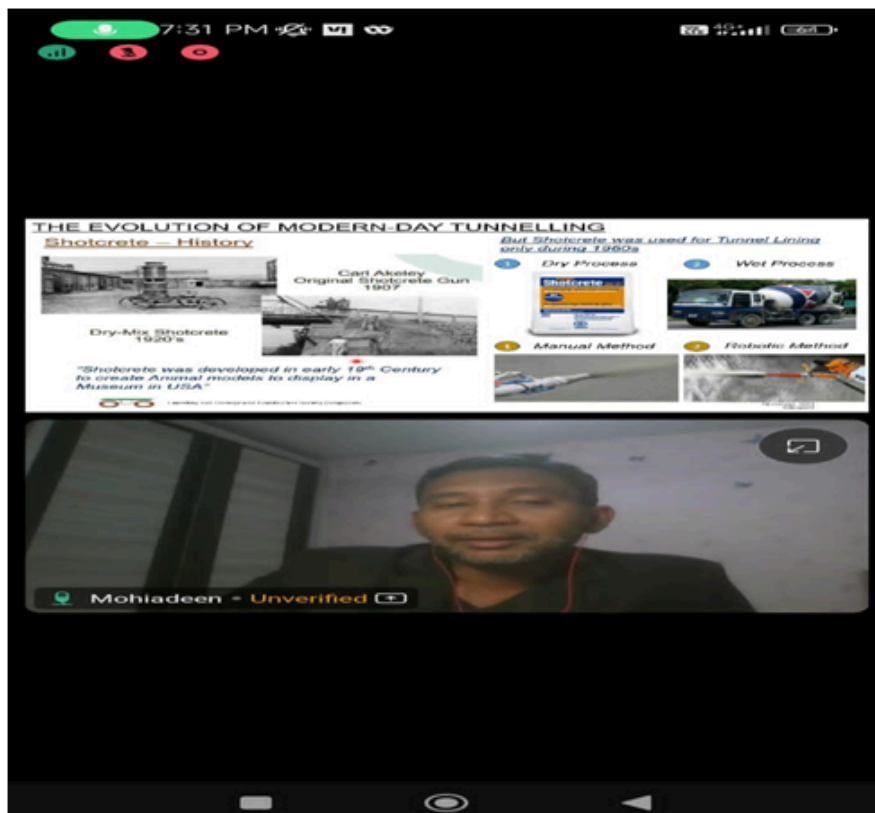
Objective of the Activity

- To introduce the concept and evolution of mined tunnels.
- To understand different tunneling methods and techniques.
- To explain modern approaches such as NATM.
- To highlight safety measures and ground support systems.

Outcome of the Activity

- Students gained knowledge about tunneling techniques and evolution.
- They understood modern methods like NATM.
- Awareness of safety practices and ground support improved.
- Students learned about real-world challenges in tunneling projects.

PHOTO GALLERY



Er. B. Mohaideen addressing the session

Guest lecture on Overview of steel structures

A guest lecture on “Overview of Steel Structures” was organized to provide students with fundamental knowledge of steel as a structural material and its applications in construction. The session focused on the properties, behavior, and advantages of steel structures in modern engineering.

The speaker discussed key aspects such as types of steel sections, structural components, design considerations, and connections used in steel construction. Emphasis was given to the benefits of steel structures, including high strength-to-weight ratio, durability, flexibility in design, and faster construction.

The lecture also highlighted practical applications in buildings, bridges, and industrial structures, along with basic design concepts and safety considerations.

- Total Number of Participants: 60
- Resource Person: Er.VeeraVignesh, BGR Energy Systems Pvt. Ltd.
- Date: 15.02.2024

Objective of the Activity

- To introduce the fundamentals of steel structures.
- To understand the properties and behavior of steel.
- To explain different structural components and connections.
- To highlight advantages of steel in construction.

Outcome of the Activity

- Students gained knowledge about steel as a structural material.
- They understood different components and design aspects.
- Awareness of advantages and applications of steel structures improved.
- Students learned basic concepts of steel design and safety.

PHOTO GALLERY



Honoring the Chief Guest Er.VeeraVignesh, BGR Energy Systems Pvt. Ltd. by Mrs.A.Kalyani, Assistant Professor

OVERALL SUMMARY OF AY 2023-24

During the academic year 2023–2024, a series of technical sessions including a webinar on mined tunnels, a guest lecture on STAAD Pro, and a lecture on steel structures were conducted to enhance students' knowledge in structural and construction engineering.

These events provided insights into modern engineering practices such as tunnel construction techniques, software-based structural design using STAAD Pro, and the fundamentals of steel structures. Students were exposed to both theoretical concepts and practical applications, improving their understanding of design, analysis, and construction methodologies.

Overall, the activities strengthened students' technical competence, introduced them to industry-relevant tools and techniques, and enhanced their readiness for real-world engineering challenges.

