

SCIENTIFIC OUTREACH ACTIVITY

PLASMA EXHIBITION-2024

Industrial Visit to Plasma Exhibition at P.B. Siddhartha College

Report

Introduction

On 5th August 2024, students from III B.Sc(MPCS) visited the Plasma Exhibition hosted at P.B. Siddhartha College, Vijayawada. The exhibition focused on the applications of plasma technology in various industries, showcasing innovations and research in this exciting field.

Objectives

1. To gain insights into plasma technology and its industrial applications.
2. To interact with experts and industry professionals.
3. To enhance practical knowledge related to theoretical concepts learned in class.

Overview of the Exhibition

The Plasma Exhibition featured several displays and interactive stations, covering topics such as:

- Basics of Plasma Physics: An introduction to what plasma is and its fundamental properties.
- Industrial Applications: Demonstrations of how plasma technology is used in fields like manufacturing, medicine, and environmental science.
- Research Innovations: Presentations by researchers highlighting the latest advancements and future trends in plasma technology.

Key Highlights

- Interactive Demonstrations: Attendees could engage with various setups that illustrated the behavior of plasma, including plasma balls and discharge tubes.
- Expert Talks: Several industry professionals and academic researchers delivered presentations. Keynote speakers discussed the implications of plasma in sectors such as electronics and waste management.
- Networking Opportunities: Students had the chance to interact with exhibitors, ask questions, and discuss potential career paths related to plasma technology.


Conclusion

The industrial visit to the Plasma Exhibition at P.B. Siddhartha College was an enriching experience. It provided students with valuable insights into plasma technology's role in modern industries and fostered a deeper interest in the field. Such exhibitions are crucial for bridging the gap between academic knowledge and practical application, and we look forward to similar opportunities in the future. 3 Faculty members accompanied 50 students to the visit .

PHOTO GALLERY






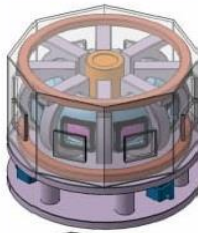
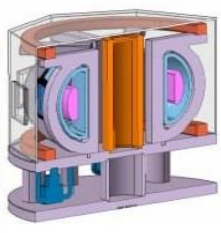
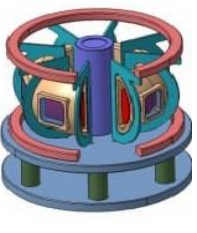


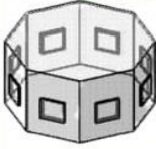
Generic Tokamak

Institute for Plasma Research, Gandhinagar 382 426, Gujarat (India)
www.ipr.res.in




This model depicts the important components of a magnetically confined plasma fusion device (Tokamak)

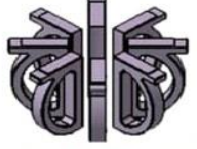







The CRYOSTAT protects all the systems that are kept at very cold temperatures, like a vacuum flask.

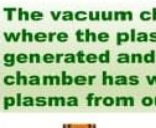


The Toroidal field coils provide the magnetic field needed to confine the hot plasma in the center of the vacuum chamber







The Poloidal field coils ensure that the plasma stays in the center of the vacuum chamber



The vacuum chamber provides a volume where the plasma (pink structure) can be generated and confined. The vacuum chamber has windows to access the plasma from outside





The Central Solenoid is used for plasma startup as well as heating of the plasma. The Support structure offers structural stability against the high magnetic forces and the Vacuum Pump provides a clean environment for generating plasma.

Coil & RF Plasma



