



KARNATAK LAW SOCIETY'S

SHRI VASANTRAO POTDAR POLYTECHNIC

KLS CAMPUS, TILAKWADI, BELAGAVI – 590 006

(Recognized by Govt. of Karnataka & Approved by AICTE, New Delhi)



DEPARTMENT OF CIVIL ENGINEERING

E-NEWS LETTER -2022-23

Institute Vision

To Make Vasantryao Potdar Polytechnic, Belagavi Stand Out as an Institution of Excellence in Building Technical Skills and to Create Individuals of Outstanding Character, Caliber and Entrepreneurial Skills.

Institute Mission

To Train Students of Vasantryao Potdar Polytechnic, Belagavi to Become Creative and Innovative Engineers while Imbibing in them Engineering Ethics and Professionalism, thus Empowering them to serve Human Kind.

Civil Dept. Vision:

The Department of Civil Engineering shall stand out to impart knowledge and excellence in civil engineering and technology with a global perspective so as to make the students ethically strong engineers to build the nation.

Civil Dept. Mission:

- To train the students of department of Civil Engineering to have high caliber technical skills.
- To encourage the students with high ethical values.
- To prepare the students to face the challenges of the future.

Message from Chairman

At VPP our quest for excellence continues through various initiatives that will help our students place themselves on a career path, that does justice to their capacities and motivation. I look forward for your suggestions and ideas for raising the bar.

-Shri. U.N.Kalkundrikar

Message from Principal

To impart quality education and bridge the industry-institution gap, VPP has established a Centre of Excellence which runs programmes to cater the needs of the students. Memorandum of understanding with the industries is established which helps the students in persuading internship programmes.

To help students get admitted in reputed Engineering colleges, VPP conducts NATA and DCET classes for the students of final year. Your suggestions are most welcome.

-Ms. Shridevi S. Malaj

Editorial Board Members

Staff Coordinators:

- 1) Mrs. Laxmi Angadi (HOD/CE)
- 2) Mr. Pradeep Kulkarni(Lect/CE)

Student Coordinators:

- 1) Tejas Patil
- 2) Vidyasagar Pammar

- **TRAFFIC SURVEY:** Students of V Sem Conducted Traffic Survey on KLS Gogte College road from morning 9.30 am to 12.00 noon on 28th Oct 2022 Mr. Pradeep Kulkarni accompanied the students.



- **EXTENSIVE SURVEY CAMP:** Students were taken to Extensive Survey camp to Sahyadri Nagar site from 5th Dec 2022 to 7th Dec 2022 staff accompanied Mr. Pradeep Kulkarni, (Lect/CE) Ms. Swaroopa Aptekar



- **TECHNICAL TALKS:**
- Technical Talk was arranged on 29th Oct 2022 on materials of concrete, Basic test as per IS on site and also in laboratory, concrete mix design. Resource Person: Mr. SachinJayi (Relationship Engineer) JK cement Pvt. Ltd. Belagavi zone.





- Technical Talk was arranged for the final Year students On 10th Dec 2022 .The Resource person was Mrs. Pooja Patil Joshi Asst. Transport Planner from 'Civil Trans' Bangalore during the session students were enlightened regarding the ongoing case study of replanning the existing railway station and also were provided with the information of different aspects of Transportation Engg

WORKSHOPS:

- Mr. Pratik Lohar conducted a workshop from 31st Jan 2023 to 4th Feb 2023 (one week) on Vastu Shastra in construction for the students of civil Engineering and Architecture department.



Technical Site Visit:

- Students of 2nd 4th and 6th semester Civil Engg. Dept visited Balaji RMC Plant and Hidkal Dam on 2nd June 2023 along with staff members Ms. Laxmi Angadi, Mr. Pradeep Kulkarni, Mr. Pratik Lohar and Ms. Swaroopa Aptekar.



- Students of IV semester visited a Building construction site on 22nd May 2023 and gained knowledge of job layout, steel fabrication and structural drawing and detailing under the guidance of Mr. Pratik Lohar.(Lect./CE)



STUDENT ACHIEVEMENT:

- Students of Department of Civil Engineering 6th semester from KLS Shri Vasant Rao Potdar Polytechnic, Belagavi Master Tejas Patil and Master Sangangouda Patil secured 1st prize in Tricky Surveying Event at National Level Tech Fest 'Vishwasangam 2k23' organized by KLE Technological University's Dr. M.S. Sheshgiri College of Engineering and Technology. Students are awarded with cash prize of ₹ 3000/



- Final Year students of Civil Engg Participated in Quiz and drafting competition organized by 'Gharkul Exhibition 2022' at CPED Ground Belgaum. From 25th to 30th Nov. Master Tejas Patil and Master Sangangouda Patil secured 3rd place in quiz competition.




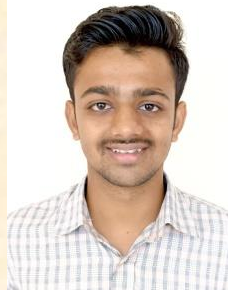

Staff Achievements:

- Mr. Pratik Lohar & Mr. Pradeep Kulkarni Participated in 5 days “National Level workshop on “Natural Disaster Management-Issues & Challenges” at S G Balekundri Institute of Technology, Belagavi. From 21st to 25th Sept 2022
- Mr. Pratik Lohar attended Faculty Development Program on New Age Institution on 18th Sept 2022 at KLS Vdit Haliyal by Dr. Arvind Chinchure CEO, Deshpande Startups
- Ms Laxmi Angadi attended Faculty development programme from 30th Jan 2023 to 4th Feb 2023(5 day) on Universal Human Values conducted by AICTE and got certification
- Mr. Pradeep Kulkarni attended Faculty development programme from 6th Feb 2023 to 10th Feb 2023(5 day) on Universal Human Values conducted by AICTE and got certification
- Ms. Laxmi Angadi and Mr. Pradeep Kulkarni attended one Day ISTE convention (25th state level) on NEP,NAAC and NBA on 26th April 2023




KLS SHRI VASANTRAO POTDAR POLYTECHNIC, BELAGAVI

DEPARTMENT OF CIVIL ENGG




FINAL YEAR TOPPER 2022-2023

Toppers	Name	Photo	Total Final Year
I	SANKET MUTTUR		766/800 95.75
II	TEJAS PATIL		764/800 95.50
III	VIDYASAGAR PAMMAR		760/800 95.00

SECOND YEAR TOPPER 2022-2023

Toppers	Name	Photo	Total
I	Omkar Dhume		787/850 =92.58
II	Gaurav Malgaonkar		762/850 =89.64
III	Harish Hangirgekar		732/850 =86.11

FIRST YEAR TOPPER 2022-2023

Toppers	Name	Photo	Total
I	Atharv Mutkekar		824/950 =86.83
II	Sourabh Mane		783/950 =82.42
III	Aman Kadam		770/950 =81.05

ARTICLE BY STAFF

Smart Construction Materials –Applications in Civil Engineering

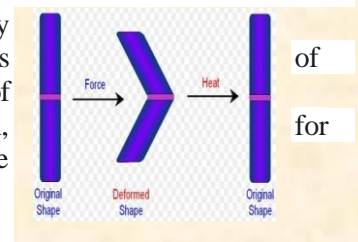
Ms.SeemaSheelavantar
B.E (Civil),Faculty

Smart construction materials, which are also known as intelligent materials, active materials and, adoptive materials, and these have the capability to respond to change in their condition or the environment to which they are exposed, in a useful and controlled manner. The input that causes the change in smart material properties may be in the form of mechanical stress / strain, electrical / magnetic field or changes in temperature, moisture, pH, and light. Their unique properties make them a crucial material in many fields of engineering and science. They are used in civil engineering projects and contribute in increasing performance, comfortability, and energy efficiency of structure.

Types of Smart Materials

1. Shape Memory Alloys (SMAs)

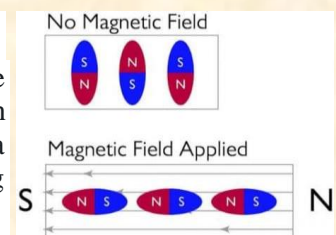
Shape memory alloys possess the ability to regain to some previously defined shape or size when subjected to appropriate thermal changes. Applications of shape memory alloys in civil engineering specifically are seismic protection of buildings and repeated absorption of strain energy without permanent deformation, obtaining wide range of cyclic behavior, to resist fatigue resistance under large strain cycles, and due to their great durability and reliability in the long run.



Smart Alloy Materials Working Principle

2. Magnetostrictive Materials

Magnetostrictive materials undergo mechanical deformation in proportion to the square of the electric field, which refers to the material quality of changing size in response to either an electric or magnetic field, and conversely, producing a voltage when stretched. These materials show promise in applications ranging from pumps and valves, to aerospace wind tunnel.



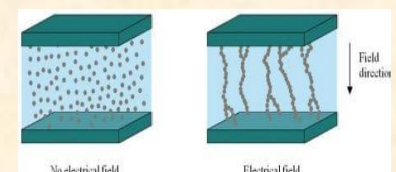
3. Piezoelectric Materials

Piezoelectric materials possess the capability to produce voltage when surface strain is introduced. Conversely, the materials undergo deformation (stress) when an electric field is applied across it. When integrated into a structural member, a piezoelectric material generates an electric field in response to mechanical forces.



4. Electrorheological Fluids

Electrorheological fluids are the colloidal suspensions that undergo changes in viscosity when subjected to an electric field. Such fluids are highly sensitive and respond instantaneously to any change in the applied electric field. These fluids have application in shock absorbers.





Applications of Smart Materials in Construction

- Smart concrete (a composite of carbon fibres and concrete) used in smart structures is capable of sensing minute structural cracks / flaws. Unlike conventional concrete, the smart concrete has higher potential and enhanced strength.
- Smart materials have applications in the design of smart buildings. Smart materials are used for vibration control, noise mitigation, safety and performance.
- In construction of smart buildings, for environmental control, structural health monitoring.
- In smart building, smart materials are used to transform efficiency, comfort, and safety for people and assets.
- Smart materials reduce the effects of earthquakes.
- Hence, the structure required less maintenance and the response of the structure can be monitored.
- Smart materials are used to monitor the civil engineering structures to evaluate their durability.