

MET Bhujbal Knowledge City

Institute of Engineering

Ref.: MET/BKC/IOE/Ph.D./Mech/2026/864

Date: 08/01/2026

To,
The Deputy Registrar (Academic Section),
Savitribai Phule Pune University,
Ganeshkhind,
Pune - 411 007.

Subject: Regarding submission of six monthly Progress Report from Research Centre of
Mechanical Engineering

Dear Sir,
Greetings from MET's Institute of Engineering, Bhujbal Knowledge City, Nashik.

With reference to the above mentioned subject, please find the attachment regarding Progress Report of Research Centre during the period **July-2025 to Dec.-2025** from the Research Centre of Mechanical Engineering, MET's Institute of Engineering, Bhujbal Knowledge City, Nashik.

This is for your kind information.

Sincerely,

Dr. V. P. Wani

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Principal
Principal

**MET's Institute of Engineering,
Bhujbal Knowledge City
At Adgaon, Tal. & Dist. Nashik**



Encl.:

1. Progress Report

शैक्षणिक विभाग (संलग्नता कक्ष)

सावित्रीबाई फुले पुणे विद्यापीठ,

(पूर्वीचे पुणे विद्यापीठ)

दिनांक 23/01/2026.

स्वाक्षरी.

Mumbai Educational Trust, Bhujbal Knowledge City
Adgaon, Panchavati, Nashik - 422003

Tel: (0253) 232515 | www.metbhujbalknowledgecity.in



Institute of Engineering

Name of Research Centre :	MET's Institute of Engineering, Bhujbal Knowledge City, Nashik
Year of Establishment :	2014
Subject :	Mechanical Engineering
No. of Associated Supervisors :	11
No. of registered Candidates :	24
Candidates awarded Ph.D. :	05
	1. 28/08/2019- Harshal A. Chavan (Supervisor: Dr. V. P. Wani)
	2. 28/08/2019- Shubham R. Suryawanshi (Supervisor: Dr. J. T. Pattiwar)
	3. 28/04/2023- Tushar Y. Badgajar (Supervisor: Dr. V. P. Wani)
	4. 22/08/2023- Raghavendra R. Barshikar (Supervisor: Dr. P. R. Baviskar)
	5. 20/02/2025- Sharad K. Nirgude (Supervisor: Dr. S. D. Kalpande)
Progress Report Period	July-2025 to Dec.-2025

Progress Report/RRC/Synopsis/Viva-voce Presentations:

1. 12/07/2025: Following Progress Presentations held with Research Advisory Committee-
 - Mr. Panchve Dinesh P. (Supervisors: Dr. S. R. Suryawanshi & Dr. M. P. Ray)
 - Mr. Pawar Rajendra J. (Supervisors: Dr. S. R. Suryawanshi & Dr. M. P. Ray)
 - Mr. Ahire Nitin Bapurao (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Kothawade Vaibhav Eknath (Supervisors: Dr. V. P. Wani & Dr. H. A. Chavan)
 - Mr. Varandal Amol B. (Supervisor: Dr. S. R. Suryawanshi)
 - Mr. Dhore Vishal J. (Supervisor: Dr. S. R. Suryawanshi)
2. 26/07/2025: Following Progress Presentations held with Research Advisory Committee-
 - Mr. Panchve Dinesh P. (Supervisors: Dr. S. R. Suryawanshi & Dr. M. P. Ray)
 - Mr. Pawar Rajendra J. (Supervisors: Dr. S. R. Suryawanshi & Dr. M. P. Ray)
 - Mr. Ahire Nitin Bapurao (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Kothawade Vaibhav Eknath (Supervisors: Dr. V. P. Wani & Dr. H. A. Chavan)
 - Mr. Varandal Amol B. (Supervisor: Dr. S. R. Suryawanshi)
 - Mr. Pagar Ganesh Jagannath (Supervisor: Dr. G. N. Shelke)
 - Mr. Chaudhari Vishal Pramod (Supervisor: Dr. S. D. Kalpande)
 - Mr. Patil Ashwin Diliprao (Supervisor: Dr. S. D. Kalpande)
 - Mr. Dhore Vishal J. (Supervisor: Dr. S. R. Suryawanshi)

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- Mr. Palve Vishwas Mahadeo (Supervisor: Dr. G. N. Shelke)
 - Mr. Vadaje Yuvraj Rajaram (Supervisor: Dr. H. A. Chavan)
 - Mr. Shekokar Santosh Rama (Supervisor: Dr. H. A. Chavan)
 - Mr. Gaikwad Nilesh Sitaram (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Patil Manoj Subhash (Supervisor: Dr. H. A. Chavan)
 - Mr. Ghogare Ravindra Mahadeo (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Thakare Rahul Sunil (Supervisor: Dr. A. B. Kakade)
 - Mr. Kulkarni Darshan (Supervisor: Dr. A. B. Kakade)
3. 15/10/2025: Following Pre-Synopsis Presentations held with Research Advisory Committee-
- Mr. Panchve Dinesh P. (Supervisors: Dr. S. R. Suryawanshi & Dr. M. P. Ray)
 - Mr. Ahire Nitin Bapurao (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Kothawade Vaibhav Eknath (Supervisors: Dr. V. P. Wani & Dr. H. A. Chavan)

Publications:

1. Pawar, R. J., Ray, M. P., & Suryawanshi, S. R. (2025). Bio-inspired shark skin riblets for centrifugal pump impellers: CFD and experimental analysis, *Nigerian Journal of Technological Development*, 22(5), pp. 305-310. <https://doi.org/10.63746/njtd.v22i5.3814>.
2. Pawar, R. J., Ray, M. P., Suryawanshi, S. R. & Dond, D. K. (2025). Analysis of bionic riblet structures' influence on centrifugal pump performance, *International Journal of Applied Mechanics and Engineering*, 30(4), pp. 125–136. <https://doi.org/10.59441/ijame/208784>.
3. Vishal J Dhore, Shubham R Suryawanshi, A Comprehensive Study of Defect Analysis and Reduction in Gravity Die Casting, *Indian Journal of Technical Education*, 48, Special Issue, No. 2, pp. 260-266, 2025.
4. D. P. Panchve, M. P. Ray, D. K. Dond, S. R. Suryawanshi, Effect of Titanium Dioxide Nanoparticles on Vapor Compression Refrigeration System Performance using R-410A Refrigerant and Polyolester Oil, *Journal of Research and Applications in Mechanical Engineering*, Vol. 13, Issue. 3, 2025.
5. Patil Manoj Subhash, Chavan Harshal Ashok, "Optimization of brake disc for improved thermal and structural behavior using thermo-mechanical analysis", *Advanced Engineering Letters*, Vol 4, no. 4, pp. 198-205, 2025.
6. Shekokar Santosh, Chavan Harshal Ashok, Recent advancements in the machining and surface integrity of nickel based alloys, *Indian Journal of Technical Education*, 48, Special Issue, No. 2, 190-194, 2025.

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7. Nitin Ahire, Dhiraj Deshmukh, Nanoparticle-enhanced Lubrication: CFD Insights into Cavitation in Three-lobe Journal Bearings Using TiO₂ Nanofluids, *Journal of Environmental Nanotechnology*, Vol. 14, No 3 pp. 604-611, 2025.
8. Nitin Ahire, Dhiraj Deshmukh, MOGA-Based Optimization and Performance Comparison of Plain and Multi-Lobe Hydrodynamic Journal Bearings, *International Journal of Applied Mechanics and Engineering*, Vol. 30, No. 4, pp. 1-17, 2025.


Workshop/Training/FDP:

1. Ghogare Ravindra M. FDP on Computational fluid dynamics & its application using ANSYS from 17th Nov to 21st Nov 2025
2. Varandal Amol V. STTP on Overview of Rastriya Chemicals and fertilizers Limited with plant visits, Trombay, Mumbai from 13/11/2025 to 14/11/2025
3. Chaudhari Vishal P. AICTE ATAL FDP on Advanced Manufacturing for Industry 4.0: Integrating Additive Technologies and Sustainable Practices at United College of Engineering & Research from 15/11/2025 to 22/11/2025
4. Patil Ashwin D. AICTE ATAL FDP on Advanced Manufacturing for Industry 4.0: Integrating Additive Technologies and Sustainable Practices at United College of Engineering & Research from 15/11/2025 to 22/11/2025
5. Choudhari Dipak Janardan Making Learning Engaging through Interactive Games

NPTEL Courses:

1. Pagar Ganesh J. Welding Application Technology
2. Choudhari Dipak Janardan Research Methodology
3. Shekokar Santosh R.
 - Basic Instructional Teaching Method
 - Advanced Instructional Teaching Method


Dr. S. R. Suryawanshi
Ph.D. Co-ordinator


Dr. S. D. Kalpande
H.O.D.


Dr. V. P. Wani

Principal
Principal
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