

ACADEMIC PROFILE

Name	DR. MANDAR V. TENDOLKAR	
Date of Birth	16/11/1979	
Date of Joining	27/12/2010	
Designation at the time of Joining	ASSISTANT PROFESSOR	
Current designation	ASSISTANT PROFESSOR (SR. SCALE)	
Personal Homepage		
Phone (Office)	+91-22-2419 8203	
Mobile	9969 405 750, 7045 039 601	
Email	mvtendolkar@me.vjti.ac.in	
Academic Qualifications		
<ul style="list-style-type: none"> • Ph.D. (Mechanical, specialisation in Cryogenic Engineering), VJTI/Mumbai University, 2013. • M.E. (Mechanical, Specialisation in Heat & Power Engineering), University of Pune, 2004. • B.E. (Mechanical), University of Pune, 2001. 		
Career History		
<ul style="list-style-type: none"> • Assistant Professor in Mechanical Engg. Dept, VJTI Mumbai, Dec. 2010 – till date. • Sr. research Fellow, Mechanical Engg. Dept, IIT Bombay, Sept. 2006 – Nov.2010. 		
Areas of Academic Interest		
<ul style="list-style-type: none"> • Cryogenic Engineering • Refrigeration & Air Conditioning • Thermodynamics • Heat Transfer • Fluid Mechanics. 		
Membership in Academic Bodies / Board of Studies / Editorial Board (Journals)		
<ul style="list-style-type: none"> • Member, Society of Automotive Engineers (SAE) • Associate Member, Aeronautical Society of India (AeSI) • Alumni Member, Industrial Advisory and Alumni Board (IAAB), P.V.G.'s C.O.E.T., Pune. • Registered as External Examiner for M.Tech. with IIT Bombay • Registered as External Examiner for M.Tech. & Ph.D. with Walchand College of Engineering, Sangli. • Registered as External Examiner for Ph.D. with Sathyabama University, Tamilnadu. 		
Major Academic Publications		
<ul style="list-style-type: none"> • Contributed as Co-Author for Ch. 2 titled "Modified Twisted Tape Inserts: Significance of Geometric Non-dimensional Parameters" in <i>Smart Innovation, Systems and Technologies</i>, Vol. 174, published by Springer Nature Singapore Pte Ltd. 2020, ISBN 978-981-15-2646-6, https://doi.org/10.1007/978-981-15-2647-3. 		
Paper Presentations in National / International Journals (In last 5 years)		
<ul style="list-style-type: none"> • Aishwarya Chaudhari, Mangesh Borkar, Arvind Deshpande, Mandar Tendolkar and Vivek K. Singh, "Numerical Investigation of Cylindrical Heat Pipe Performance", <i>Innovations in Infrastructure, Advances in Intelligent Systems and Computing</i>, Vol. 757, https://doi.org/10.1007/978-981-13-1966-2_26, Springer Nature Singapore Pte Ltd. 2019, pp. 295-306. • Hrishikesh Pingulkar, Mandar Tendolkar, S. V. Prabhu, "Influence of cone angle on the performance of a wafer cone flowmeter", <i>Flow Measurement and Instrumentation</i>, Vol. 57, (2017), pp. 28-45. • K.G. Narayankhedkar, S.L. Bapat., M.D. Atrey, M.M. Lele, V.K. Bhojwani, M.V. Tendolkar and Asif Inamdar, "Opposed Piston Linear Compressor driven Two-Stage Stirling Cryocooler for Cooling of IR Sensors in Space Applications", <i>Cryogenics</i>, Vol. 83, (2017), pp. 71-77. • Tejas Janardan Sarang, Mandar Tendolkar, Sivakumar Balakrishnan and Gurudatta Purandare, "Multivariate Analysis to Assess the Repeatability of Real World Tests", <i>SAE Technical Paper 2016-01-0320</i>, 2016, doi:10.4271/2016-01-0320. • Pushpak Doiphode, Mandar Tendolkar, Patric Ananda Balan, Indraneel Samanta, 		

“Numerical Analysis of Chest Freezer’s Condensing Unit”, *International Journal of Air-Conditioning and Refrigeration*, Vol. 22, No. 4 (2014) 1450028 (9 pages), DOI: 10.1142/S201013251450028X. World Scientific Publishing Company, Imperial College Press, UK.

Paper Presentations in National / International Conferences / Seminars (In last 5 years)

- Nikhil K. Purwant, Jitendra B. Satpute, and Mandar V. Tendolkar, “An Investigation of Air Conditioning System Diagnosis”, *Techno-Societal 2018*, Proceedings of the 2nd International Conference on Advanced Technologies for Societal Applications – Volume 2, https://doi.org/10.1007/978-3-030-16962-6_89, Springer Nature Switzerland AG 2020, pp. 895-904.
- Acharya, K.G., Yewale, G.P., Tendolkar, M.V. and Kulkarni, S.H., “Estimation and Analysis of Cooling Load for Indian Subcontinent by CLD/SCL/CLF Method at Part Load Conditions”, *Journal of Physics: Conference Series*, Volume 1240, Issue 1, 07 August 2019, Article number 012031, 2nd International Conference on New Frontiers in Engineering, Science and Technology, (NFEST-2019), NIT Kurukshetra, Haryana, India, February 18-22, 2019, Code 150584.
- Ganeshan Subramanian, Aimen Sudhir & Mandar Tendolkar, “Techno-Commercial and Feasibility Analysis of Energy Efficient Solar Powered Technologies for Indian Scenarios”, *Proceedings of the International Conference on Industrial Engineering and Operations Management Bangkok, Thailand, March 05-07, 2019*, pp. 1833-1842.
- Raturaj D. Dongare, Mandar V. Tendolkar & Sachin B. Paramane, “Numerical Investigation of Thermal-Hydraulic Characteristics of Radiator of Transformer”, Paper presented at 12th International Conference on Thermal Engineering: Theory and Applications, February 23-26, 2019, at Gandhinagar, India.
- Sumit Bhore, Arvind Deshpande, Mandar Tendolkar & Vivek Singh, “Numerical Investigation of Natural Convection inside a cube at sub-atmospheric pressure”, Paper presented at 12th International Conference on Thermal Engineering: Theory and Applications, February 23-26, 2019, at Gandhinagar, India.
- Aishwarya Chaudhari, Mangesh Borkar, Arvind Deshpande, Mandar Tendolkar and Vivek Kumar Singh, “Parametric Analysis of Cylindrical Heat Pipe Performance Using CFD”, paper presented in the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power (FMFP), during December 10-12, 2018, IIT Bombay, Mumbai, India.
- Parth Mehta, Juneda Sayed, Balkrishna Narkhede and Mandar Tendolkar, “Techno-Commercial and Compatibility Analysis of Energy Efficient Technologies in HVAC for Indian Scenario”, *Proceedings of the International Conference on Industrial Engineering and Operations Management Paris, France, July 26-27, 2018*, pp. 3179-3186, ISBN 978-1-5323-5945-3, ISSN 2169-8767.
- Upadhye, Sameer and Ramesh, Shreekar and Shah, Malay and Tendolkar, Mandar and Mukherjee, Jaya, “Application of Multicore Processing and Volume Parallelization in EBPVD Process Simulated Using DSMC”. *International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017)*, Dec 2017. Available at SSRN : <https://ssrn.com/abstract=3101270> or <http://dx.doi.org/10.2139/ssrn.3101270>.
- Chaudhari, A.S and Borkar, M. D and Deshpande, Arvind and Tendolkar, M. V. and Singh, V. K, “Effect of Wick Microstructures on Heat Pipe Performance – A Review”. *International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017)*, Dec 2017. Available at SSRN: <https://ssrn.com/abstract=3101303> or <http://dx.doi.org/10.2139/ssrn.3101303>.
- Andhale Vilas, Tendolkar Mandar and Srinivasan K.V., “Thermal Analysis and Investigations on Design Aspects of Aluminium alloy based Liquid Helium Dewar”, Paper Presented at the 26th National Symposium on Cryogenics & Superconductivity (NSCS-26), held at Variable Energy Cyclotron Centre, Kolkata (VECC), Kolkata, during February 22-24, 2017.
- Dixit Avadhoot, Kulkarni Swati, Tendolkar Mandar, Srinivasan K.V., “Design & Development of Helium Gas Purifier”, Paper Presented at the 26th National Symposium on Cryogenics & Superconductivity (NSCS-26), held at Variable Energy Cyclotron Centre, Kolkata (VECC), Kolkata, during February 22-24, 2017.
- Pachimare Aniket, Tendolkar Mandar and Srinivasan K.V., “Design & Development of Liquid Nitrogen Subcooler”, Paper Presented at the 26th National Symposium on Cryogenics & Superconductivity (NSCS-26), held at Variable Energy Cyclotron Centre, Kolkata (VECC), Kolkata, during February 22-24, 2017.
- M H Chitalwala, H R Patel, A S Parikh, M V Tendolkar, K V Srinivasan, “Investigations of

<p>Heat Transfer across a Multi-Layer Insulated Liquid Nitrogen Transfer Line”, Paper presented at the 26th International Cryogenic Engineering Conference (ICEC 26), March 07-11, 2016, at Manekshaw Center, New Delhi, India, Poster No. 10-P3-239.</p> <ul style="list-style-type: none"> N.A.Mistry, A.J.Velingkar, B.H.Jain, S.H.Kulkarni, M.V.Tendolkar, D.K.Chandraker & A. Dasgupta, “Development of a Numerical Code for Comparison of Different Theories of Subcooled Flow Boiling CHF in Vertical Round Tubes”, Paper presented at the 10th International Topical Meeting on Nuclear Thermal Hydraulics, Operation and Safety (NUTHOS-10), December 14 – 18, 2014, at Okinawa, Japan. Paper ID 1248.
<p>Attendance in Conferences / Seminars / Workshops (In last 5 years)</p> <ul style="list-style-type: none"> International Conference on Industrial Engineering and Operations Management, at Paris, France, July 26-27, 2018. Invited Guest at Laboratoire Ondes et Milieux Complexes (LOMC) at Université Le Havre, Normandie, France. July 2018. Invited Guest at Cryogenics Lab, Institute of Technical Physics, Karlsruhe Institute of Technology, Germany. July 2018. Invited Guest at Institute for Energy Engineering, Technical University of Berlin, Germany. July 2018. 26th National Symposium on Cryogenics & Superconductivity (NSCS-26), at Variable Energy Cyclotron Centre, Kolkata (VECC), Kolkata, India, during February 22-24, 2017. 26th International Cryogenic Engineering Conference (ICEC 26), at Manekshaw Center, New Delhi, India, during March 07-11, 2016.
<p>Participation in Professional Development Programmes (In last 5 years)</p> <ul style="list-style-type: none"> One week AICTE approved FDP on Design and Development of Electric & Hybrid Electric Vehicle Technology, organised by SAE INDIA Western section & COEP, Pune, at COEP, Pune, Feb 24 – 28, 2020. Two week ISTE STTP on Thermodynamics (BMWME209X), organised by IIT Bombay, at IIT Bombay, July 16 – Dec 21, 2015. One week AICTE approved FDP under QIP on Renewable Energy Source for Sustainable Development : Need, Technologies and Policies, organised by VJTI, Mumbai, at VJTI, Mumbai, Dec 14-18, 2015. One week Short term training Programme on Advanced Pedagogy and Managing Learning Process, Organised by NITTTTR, Bhopal, at VJTI, Mumbai, Nov 31 – Dec 04, 2015. One Week CEP course under (CE&QIP) on Advances in Cryocooler Technology, organised by IIT Bombay, at IIT Bombay, Oct 21 – 25, 2013.
<p>Guidance / Supervision of M.Tech & Ph.D. Dissertations</p> <ul style="list-style-type: none"> 4 Ph. D. students (ongoing) 54 M.Tech. students (completed) + 5 M.Tech. students (ongoing)
<p>Research Projects Undertaken</p> <ul style="list-style-type: none"> Investigations and Performance Improvement of Regenerators of Nitrogen Liquefier using Stirling Cycle, at TIFR – (2019 – till date) Developed a Test Facility for Performance Measurement of a Plate Fin Heat Exchanger using Helium Gas for Cryogenic Applications, at IPR, Gandhinagar – (2018). Numerical Design for Electron Beam Physical Vapour Deposition Coating using Direct Simulation Monte Carlo Method, at B.A.R.C., Mumbai – (2017, 2016 & 2015). Design & Analysis of Aluminium Alloy based Liquid Helium Dewar, at TIFR, Mumbai – (2017). Design & Development of Helium Gas Purifier, at at TIFR, Mumbai – (2017). Design & Development of LN2 Subcooler, at at TIFR, Mumbai – (2017). Investigations on Premature Occurrence of Critical Heat Flux under Oscillatory Flow Conditions, at BARC, Mumbai – (2016). Investigations on Two Phase Flow in an OTEC Heat Exchanger, at BARC, Mumbai – (2016). Experimental Investigations on Film Flow Rate and Post – Dryout Modelling, at BARC, Mumbai – (2016). Heat Transfer and Fluid Flow Analysis of Natural Circulation System in loop, at BARC, Mumbai – (2015). Investigations on CHF in Nuclear Reactors, at BARC, Mumbai – (2014). CFD Analysis of HVAC System in Warship, at Mazgaon Dock, Mumbai – (2014). Cryogenic Heat Transfer Analysis of the Liquid Nitrogen Transfer Line, at TIFR, Mumbai –

(2013).
Revenue generation (Consultancy/Testing assignments Undertaken) (In last 5 years)
<ul style="list-style-type: none"> • Technical Consultancy for SITC for Replacement of 230 TR Chiller, Air Handling Unit and Cooling Tower along with Chilled Water and Condenser Pipeline in AC Plant, Doordarshan Kendra, Mumbai, 2017. INR. 2,00,000/-. • Technical Consultancy for Quality Inspection according to the specifications for Laundry Machines to be procured under the Tender from M/s. Periclave as Vendor under Items 1 to 8, Thane Municipal Corporation, 2017. INR. 10,000/-. • Technical Consultancy for SITC of 230 TR Chiller in AC Plant, Doordarshan Kendra, Mumbai, 2016. INR. 80,000/-.
Organization of Academic Conferences / Workshops / Designing Courses (In last 5 years)
<ul style="list-style-type: none"> • Member of the Organising Committee for 27th National Symposium on Cryogenics and Superconductivity (NSCS-27), held at IIT Bombay, Powai, during January 16 – 18, 2019. • Member of Organising Committee for International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017), held at VJTI, Mumbai, Dec. 2017. • Course Coordinator for One Week Short Term Courses on 'Renewable Energy Source for Sustainable Development: Need, Technologies and Policies', Dec. 2017, Mar. 2017 & Dec. 2015. • Institute Coordinator for IITB Blended MOOC Course on Thermodynamics for Mechanical Engineering (BMWME209x) for S.Y.B.Tech. (Mechanical) students for the Odd Semester of Academic Years 2016-17 and 2015-16.
Invited Lectures / Chairing / Resource Person / Keynote Address (In last 5 years)
<ul style="list-style-type: none"> • Team Member of Resource Persons for Courses on Physics and Thermodynamics, Fluid Mechanics and Fluid Dynamics for Advanced Petroleum Technology & Management Program (APTMP) by Indian Army, at IOCL, Mumbai. (2019, 2018, 2017, 2016 & 2014). • Invited as Resource Person to deliver lecture on Air Conditioning – Introduction, Concepts and Latest Developments, in a 3-Days Workshop on Heating, Ventilation and Air Conditioning (HVAC), at Dr. Babasaheb Ambedkar College of Engineering and Research, Nagpur, during March 01 – 03, 2017. • Invited as Resource Person to deliver lecture on Refrigeration – Introduction, Concepts and Latest Developments, in a 3-Days Workshop on Heating, Ventilation and Air Conditioning (HVAC), at Dr. Babasaheb Ambedkar College of Engineering and Research, Nagpur, during March 01 – 03, 2017. • Invited lecture on "Design and Development of Two-Stage Stirling-Type Pulse Tube Cryocooler With Inline Configuration", at National Conference on Advances in Refrigeration & Cryogenics, at Mahatma Gandhi Mission's College of Engineering and Technology, during June 10-12, 2016.