B/ 203 YAGNIK RESIDENCY • NEAR SBI BANK • L. P. SAVANI ROAD • ADAJAN • SURAT – 395009 • GUJARAT • MOBILE 94271 28828 • E-MAIL saurabhdikshit@outlook.in

DR.SAURABHKUMAR B. DIKSHIT

| DATE OF BIRTH | | | | |
|---------------|---|--------------------|--|------------|
| | 14 March, 1983 | | | |
| NATIONALITY | | | | |
| | Indian | | | |
| GENDER | | | | |
| | Male | | | |
| MARITAL STATU | JS | | | |
| | Married | | | |
| EDUCATION | EDUCATION | | | |
| | M.Tech. Turbo Machines from S. V. National Institute of Technology, Surat. (Deemed University) B.E. Mechanical from Hemchandracharya North Gujarat University, Patan | | | |
| SUMMART OF QU | Qualification | Year of Passing | University | Percentage |
| | B.E. Mechanical | 2004 | Hemchandra - charya North Gujarat University | 60.09 % |
| | M.Tech. Mechanical (Turbo Machines) | 2008 | S.V. National Inst. of Tech., Surat. Deemed University | CGPA 8.03 |
| | Ph. D. | 2019 | CHARUSAT University, Changa | |

| ELECTIVE SUBJECTS | | |
|--|--|--|
| | • Design of Thermal Turbo Machines during M. Tech. Turbo | |
| | Machines Internal Combustion Engine during B. F. Mechanical | |
| | Automobile Engineering during B. E. Mechanical | |
| SEMINAR | | |
| | Internal Flow Through Pressure Swirl Atomizer during M. Tech. Turbo Machines | |
| PROJECT DURI | NG GRADUATION | |
| | Solar Flat Plate Collector | |
| | The study of solar flat plate collector was carried out and simple design of solar flat plate collector was presented from the literature during the course of the work. | |
| DISSERTATION | DURING POST GRADUATION | |
| | Theoretical and Experimental Investigations on Performance Parameters of Pressure Swirl Atomizer for Kerosene Type Fuel. | |
| | The pressure swirl atomizers for gas turbine applications were investigated. The performance parameters like penetration length, spray cone angle and drop diameters were calculated theoretically and measured experimentally. The experimental setup was developed for the same. The parameters measured during the experiments were used to design the basic dimensions of the gas turbine combustion chamber. | |
| RESEARCH WOI | RK CARRIED OUT DURING DOCTORAL DEGREE | |
| | Spray Characterization of Liquid Fuel for Small Scale Gas Turbine Combustion Chamber | |
| | The spray characterization of ethanol as fuel is conducted to study the feasibility of ethanol as fuel in gas turbine application in small scale. The design of pressure swirl atomizer for ethanol fuel is carried out and it is validated numerically and experimentally. | |
| COMPUTER KNOWLEDGE | | |
| | Operating Systems | |
| | • Auto-CAD | |
| | • ANSYS | |
| WORKSHOPS/SEMINARS/SUMMER SCHOOLS ATTENDED | | |
| | Total: 16 | |
| | Attended National Workshop on Different Aspects of Electron Microscopy held at Mechanical Engineering Department of S. V. National Institute of Technology, Surat during March 29 – 31, 2006. | |

| Attended An International Workshop on Advanced Analytical Techniques for Material Characterization held at Mechanical Engineering Department of S. V. National Institute of Technology, Surat during June 8 – 10, 2006 |
|--|
| Attended Short Term Training Program on "Sprays and Combustion" held at IIT, Kanpur during December 2 – 6, 2007. |
| Attended Lecture Series on "Generalized Laws of Mass, Momentum and Energy Conservation" held at Mechanical Engineering Department of S. V. National Institute of Technology, Surat during February 6 – 8, 2008. |
| Attended Short Term Training Program on "Wind Engineering" held at Mechanical Engineering Department of S. V. National Institute of Technology, Surat during January 19 – 23, 2009. |
| Attended Short Term Training Program on "Steam Engineering" held at Anchor Institute Cell of S. V. National Institute of Technology, Surat during June 28 – July 2, 2010. |
| Attended Induction Training Program Phase I at NITTTR, Bhopal Extension Centre – Ahmedabad, during August 19 – August 31, 2013. |
| Attended Training Program on "Special Program for Commissioner Technical Education" held at Secretariat Training Centre, SPIPA, Gandhinagar during June 9 – 13, 2014. |
| • Attended Faculty Development Program on "Entrepreneurship Development" held at Centre for Entrepreneurship Development, Gandhinagar during January 25 – February 6 2016. |
| Attended Induction Training Program Phase II at NITTTR, Bhopal during March 7 – 18, 2016. |
| • Attended Short Term Training Program on "Essentials for NX Designers" held at Centre of Excellence of Dr. S. & S. S. Ghandhy Government Engineering College, Surat during May 30 – June 4, 2016. |
| Attended QIP Short Term Training Program on "Advances in Theory and Design of Turbomachines" held at Mechanical Engineering Department of S. V. National Institute of Technology, Surat during, November 7 – 12, 2016. |
| • Attended Short Term Training Program on "Development of Teaching Learning Resources Using Digital Media" at NITTTR, Bhopal during November 21 - December 2, 2016. |
| • Attended Short Term Training Program on "Industrial Safety and Disaster Management" at NITTTR, Bhopal during October 30 November 3, 2017. |

| | • Attended Online Course on "Applied Thermodynamics for Engineer" on Swayam Portal, during July – October 2019 (12 week). | |
|---------------------|--|--|
| | • Attended Short Term Training Program on "Recent Trends in Automotive Technology" at NITTTR, Bhopal during August 26 - August 30, 2019. | |
| TEACHING EXP | ERIENCE | |
| | Total Experience : 13 Years and 01 Month | |
| | Teaching Assistant in Mechanical Engineering Department at S. V. National Institute of Technology, Surat (Deemed University) from 24th January 2005 to 30th June, 2005. | |
| | Teaching Assistant in Mechanical Engineering Department at S. V. National Institute of Technology, Surat (Deemed University) from 18th July, 2005 to 30th June, 2006. | |
| | Lecturer/Assistant Professor in Mechanical Engineering Department of C. K. Pithawala College of Engineering and Technology, Surat since 1st December, 2008 to 9th May, 2011. | |
| | Assistant Professor in Mechanical Engineering Department of Dr. S. & S. S. Ghandhy Government Engineering College, Surat since 10th May, 2011 to 4th December, 2019. | |
| | Presently working as Assistant Professor in Mechanical Engineering Department of Government Engineering College, Dahod since 5th December, 2019. | |
| ACADEMIC ACTIVITIES | | |
| | Total Activities: 13 | |
| | Member of Printing Committee at One Day Seminar on Importance and Relevance of Ph. D. in Technical Education, Organized by ISTE SVNIT CHAPTER, Surat held on 3rd December, 2005. | |
| | Member of Publication Committee at One Day Seminar on Importance and Relevance of Ph. D. in Technical Education, Organized by ISTE SVNIT CHAPTER, Surat held on 3rd December, 2005. | |
| | Member of Reception Committee at National Workshop on Different Aspects of Electron Microscopy, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during March 29 – 31, 2006. | |
| | • Member of Finance Committee at National Workshop on Different Aspects of Electron Microscopy, Organized by Mechanical Engineering Department of S. V. National Institute of | |

| | Technology Surat during March 29 – 31, 2006. | |
|-----------------|---|--|
| | Member of Stage Committee at Three Day Workshop on Introduction to Computational Fluid Dynamics, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during May 10 – 12, 2006. | |
| | Member of Accommodation Committee at Three Day Workshop on Introduction to Computational Fluid Dynamics, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during May 10 – 12, 2006. | |
| | Member of Stage Committee An International Workshop on Advanced Analytical Techniques for Material Characterization, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during June 8 – 10, 2006. | |
| | Member of Accommodation Committee An International Workshop on Advanced Analytical Techniques for Material Characterization, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during June 8 – 10, 2006. | |
| | Member of Reception Committee An International Workshop on Advanced Analytical Techniques for Material Characterization, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during June 8 – 10, 2006. | |
| | Member of Organizing Committee An International Workshop on Advanced Analytical Techniques for Material Characterization, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during June 8 – 10, 2006. | |
| | Member of Finance Committee An International Workshop on Advanced Analytical Techniques for Material Characterization, Organized by Mechanical Engineering Department of S. V. National Institute of Technology Surat during June 8 – 10, 2006. | |
| | Mentor of a Student's Team for Regional Round at Smart Gujarat for New India Hackathon 2019 – 20 Organized by Student Startup and Innovation Policy and Gujarat Knowledge Society at Sarvajanik College of Engineering and Technology, Surat during February 24 – 25, 2020. | |
| | Jury for Regional Round at Smart Gujarat for New India Hackathon 2019 – 20 Organized by Student Startup and Innovation Policy and Gujarat Knowledge Society at Sarvajanik College of Engineering and Technology, Surat during February 24 – 25, 2020. | |
| RESEARCH PAPERS | | |
| | International Journal: 08 | |
| | | |

| | Digvijay Kulshreshtha, Dr. S. A. Channiwala, Mr. Kamlesh Chaudhari & Mr. Saurabh Dikshit, "Experimental Investigations on Axial Temperature Profiles, Liner Wall Temperature Distribution and Exit Gas Temperature Distribution at Different Equivalence Ratios of A Tubular Type Gas Turbine Combustors", International Journal of Applied Engineering Research, Vol. 4, No. 3, pp. 421 – 434, 2009. ISSN No: 0973 – 4562 Digvijay Kulshreshtha, Dr. S. A. Channiwala & Mr. Saurabh Dikshit, "Design, Numerical Simulation and Experimental Investigations on Can-Annular Type Combustion Chamber for 20 kW Gas Turbine Engine" International Journal of Dynamics of |
|---|--|
| | Fluids, Vol. 4, No.2, pp. 175 – 189, 2008. Dr. Digvijay Kulshreshtha, Dr. S. A. Channiwala & Mr. Saurabh Dikshit, "Design Methodology and Development of Pressure Swirl Atomizer for Micro Gas Turbine Combustion Chamber", International Journal of Applied Engineering Research, Vol. 4. |
| | No. 10, pp. 1921 – 1929, 2009. ISSN No: 0973 – 4562 Dr. Digvijay Kulshreshtha, Saurabh Dikshit & Dr. S. A. Channiwala, "Variations of Spray Cone Angle and Penetration Length of Pressure Swirl Atomizer Designed for Micro Gas Turbine Engine" International Journal of Dynamics of Fluids, Vol. 5, No.2, pp. 165 – 172, 2009. ISSN No: 0973 - 1784 |
| | Dr. Digvijay Kulshreshtha, Dr. S. A. Channiwala & Mr. Saurabh Dikshit, "Exergy Analysis of a Coal Based Thermal Power Plant", International Journal of Applied Engineering Research, Vol. 5, No. 13, pp. 2241 – 2252, 2010. ISSN: 0973 – 4562 |
| | Dr. Digvijay Kulshreshtha, Dr. S. A. Channiwala & Mr. Saurabh Dikshit, "Uncertainties in Temperature Measurement using Thermocouple in Gas Turbine Combustion Chamber", International Journal of Applied Engineering Research, Vol. 5, No. 16, pp. 2747 – 2754, 2010. ISSN: 0973 – 4562 |
| | • Mr. J. J. Bhavsar, Mr. Saurabh Dikshit & Mr. V. K. Matawala, " Performance Analysis of Spiral Tube Heat Exchanger", International Journal of Engineering and Advance Technology, Bhopal 2013 , ISSN: 2249: 8958 |
| | Mr. Saurabh Dikshit, Dr. Digvijay Kulshreshtha & Dr. S. A. Channiwala, "Numerical Analysis and Empirical Correlations to predict SMD of Pressure Swirl Atomizer for Small Scale Gas Turbine Combustion Chamber", International Journal of Applied Engineering Research, Vol. 5, No. 13, pp. 2241 – 2252, 2018. ISSN: 0973 – 4562 |
| Ν | ational Journal: 05 |
| | • Dr. Digvijay Kulshreshtha, Saurabh Dikshit & Dr. S. A. Channiwala, "Design Methodology of Pressure Swirl Atomizer, Spray Characterization and Drop Diameter Evaluation using Scanning Electron Microscope for Micro Gas Turbine Engine", |

| | Institute of Engineers Journal of Mechanical Engineering. TE-152 | |
|---------|---|--|
| • | Mr. Saurabh Dikshit, Dr. Digvijay Kulshreshtha & Dr. S. A. Channiwala, "Numerical Predictions of Internal Flow through Pressure Swirl Atomizer", Indian Journal of Science and Technology. Vol. 4, No. 2, pp. 72 - 75, 2011. ISSN: 0974 – 6846 | |
| • | Dr. Digvijay Kulshreshtha, Mr. Saurabh Dikshit & Dr. S. A. Channiwala, "Experimental Investigations of Air Assisted Pressure Swirl Atomizer", Indian Journal of Science and Technology. Vol. 4, No. 2, pp. 126 - 130, 2011. ISSN: 0974 - 6846 | |
| • | Dr. Digvijay Kulshreshtha, Mr. Saurabh Dikshit & Dr. S. A. Channiwala, "Flow Simulations Through Micro Annular Combustion Chamber: Iso-Thermal Swirling Flows" ISST Journal of Mechanical Engineering, Paper Submitted | |
| • | Mr. Saurabh Dikshit, Dr. Digvijay Kulshreshtha & Dr. S. A. Channiwala, "Factors Affecting Spray Cone Angle of Pressure Swirl Atomizer for Gas Turbine Combustion Chamber: Theoretical and Experimental Analysis", Indian Journal of Science and Technology. Vol. 11, No. 8, pp. 72 - 75, 2018. ISSN: 0974 - 6846 | |
| Interna | International Conference: 08 | |
| • | Digvijay Kulshreshtha, Dr. S. A. Channiwala, Jitendra Chaudhary, Hitesh Solanki, Zoeb Lakdawala & Saurabh Dikshit, "Effect of Divergence Angle on Flow Through Diffuser of A Gas Turbine Combustor: A CFD Approach" Proceedings of 2 nd ASME Joint US – European Fluid Engineering Summer Meeting Collocated with 14 th International Conference in Nuclear Engineering: 6 th Symposium on Applications in Computational Fluid Dynamics, FEDSM2006-98068, Vol. 1, Part A, pp. 185 – 192, ISBN: 0 – 7918 – 4750 – 0, Miami Florida, US. | |
| • | Digvijay Kulshreshtha, Dr. S. A. Channiwala & Mr. Saurabh Dikshit, "Numerical Simulation of Tubular Type Gas Turbine Combustion Chamber: A CFD Approach", <i>Proceedings of ASME</i> <i>International Mechanical Engineering Congress and Exposition: Power, Fuels</i> <i>and Combustion</i> , IMECE2006 – 13185, pp. 189 – 195, ISBN: 0 – 7918 – 4783 – 7 , November 5 – 10, 2006, Chicago, Illinois, US. | |
| • | Digvijay Kulshreshtha, Dr. S. A. Channiwala, and Mr. Saurabh Dikshit, "Numerical Simulation To Study The Effect Of Divergence Angles On Performance Of Inlet Diffuser Section Of A Gas Turbine Combustor", <i>Proceedings of 2nd International Congress on</i> <i>Computational Mechanics and Simulation</i> , December 8 – 10, 2006, IIT Guwahati, India. | |
| • | Digvijay Kulshreshtha, Dr. S. A. Channiwala & Saurabh Dikshit, "Failure Analysis of Gas Turbine Combustion Chamber Using Computational Fluid Dynamics", <i>Proceedings of Eighth International</i> <i>Congress of Fluid Dynamics and Propulsion</i> , ICFDP8-EG-174 , | |

| | December 14 – 17, 2006, Sharm-El-Shiekh, Sinai, Egypt. |
|----|--|
| | Saurabh Dikshit, Dr. S. A. Channiwala, Digvijay Kulshreshtha & Kamlesh Chaudhari, "Experimental Investigations of Performance Parameters of Pressure Swirl Atomizer for Kerosene Type Fuel", <i>Proceedings of ASME Turbo-expo, 2009: Power for Land, Sea and Air,</i> GT2009 – 59084, July 8 – 12, 2009, Orlando, Florida, ISBN 978-0-7918-3849-5 Dr. Digvijay Kulshreshtha, Dr. S. A. Channiwala & Mr. Saurabh Dikshit, "Numerical Simulation as Design Optimization Tool for Gas Turbine Combustion Chambers", <i>ASME Turbo-expo, 2010: Power for Land, Sea and Air,</i> GT2010-22889, June 14 – 18, 2010, Classow, Soctland, ISBN 978-0.7018-3872-3. |
| | Mr. J. J. Bhavsar, Mr. Saurabh Dikshit & Mr. V. K. Matawala, "Design and Experimental Analysis of Spiral Tube Heat Exchanger", International Conference on Mechanical and Production Engineering, 2013, Pune, ISBN 2320 – 2092 |
| | Saurabh Dikshit, Digvijay Kulshreshtha & Dr. S. A. Channiwala, "Numerical Simulation of Pressure Swirl Atomizer for Small Scale Gas Turbine Combustion Chamber", <i>International Conference on Heat</i> <i>Transfer, Fluid Mechanics and Thermodynamics</i>, July 7 – 9, 2017. Portoroz, Solvenia. |
| Na | tional Conference: 06 |
| | Digvijay B. Kulshreshtha, Dr. S. A. Channiwala and Saurabh Dikshit, "CFD Analysis and Experimental Investigations for Optimization of Primary Zone Equivalence Ratio of Tubular Type Combustion Chamber for Small Gas Turbine Engine" National Conference on CFD and Power, BHEL, Hyderabad. |
| | Saurabh Dikshit and Digvijay B. Kulshreshtha, "Experimental Test on Air Blast Atomizer", Proceedings of the 22nd National Conference on IC Engines and Combustion, NIT-Calicut, Kerala, India: 10-13 December, 2011: Paper No: 2-018. |
| | Saurabh Dikshit and Digvijay B. Kulshreshtha, "Effects of Swirling Air on Performance of Air Blast Atomizer", Proceedings of TFMS 2012, National Conference on Thermal, Fluid and Manufacturing Science, January 20 – 21, 2012 Surat, Gujarat, India: Paper No. TFMS2012 – 0701. |
| | Saurabh Dikshit and Digvijay B. Kulshreshtha, "Design and Experiments on Hydrogen Pre - Mix Nozzle", Proceedings of TFMS 2012, National Conference on Thermal, Fluid and Manufacturing Science, January 20 – 21, 2012 Surat, Gujarat, India: Paper No. TFMS2012 – 0702. |
| | Saurabh Dikshit, Digvijay B. Kulshreshtha, S. A. Channiwala, "Characteristics Curves of Penetration Length Using Dimensional Analysis", Proceedings of TFMS 2014, 2nd National Conference on Thermal, Fluid and Manufacturing Science, January 24 – |

| | 25, 2014 Surat, Gujarat, India: Paper No. 2014TFMS – 0403. |
|--------------|---|
| | Saurabh Dikshit and Digvijay B. Kulshreshtha, "Numerical and Theoretical Prediction of SMD For Pressure Swirl Atomizer", Proceedings of TFMS 2022, 3rd National Conference on Thermal, Fluid and Manufacturing Science, April 18 – 19, 2022 Surat, Gujarat, India |
| ACHIEVEMENTS | 8 |
| | DESIGN – 01 |
| | AIR ASSISTED PRESSURE SWIRL ATOMIZER |
| | Co-inventors: Dr. Digvijay B. Kulshreshtha & Dr. S. A. Channiwala |
| | PATENTS - 01 (Published and Examination Awaited) |
| | • AIR ASSISTED PRESSURE SWIRL ATOMIZER FOR GAS TURBINE APPLICATION |
| | Co-inventors: Dr. Digvijay B. Kulshreshtha & Dr. S. A. Channiwala |
| | AWARD – 01 |
| | • The N K Iyengar Memorial Prize Best Paper Award for Year 2011, Paper Entitled "Design Methodology of Pressure Swirl Atomizer, Spray Characterization and Drop Diameter Evaluation using Scanning Electron Microscope for Micro Gas Turbine Engine", Published in Institute of Engineers Journal of Mechanical Engineering. |
| REFERENCES | |
| | 1. Dr. S. A. Channiwala |
| | Professor, |
| | Mechanical Engineering Department, |
| | S. V. National Institute of Technology, |
| | Surat – 395 007. India |
| | Email: sac@med.svnit.ac.in |
| | 2. Dr. Digvijay B. Kulshreshtha |
| | Associate Professor |
| | Mechanical Engineering Department, |
| | C. K. Pithawalla College of Engineering and Technology, |
| | Surat – 395 009. India |
| | Email: <u>casanovicdigs@hotmail.com</u> |

Date:

Place: Surat

Saurabh B. Dikshit