

Bio-data (As on Nov 2015)



- 1. Name** **Dr Purnanand V Bhale**
Assistant Professor, SV National Institute of Technology,
Surat (NIT Surat; Under MHRD Govt. of India)
- Areas of Interest** Solar Thermal, Biogas, biodiesel, Alternate fuels for I C
Engines, Energy Conservation and Management, Internal
Combustion Engines, Solar Water Desalination, Engine
Tribology, Fuel Processing Tech, PV/T systems.
- 2. Mailing Address**
- Address** Dr. Purnanand V. Bhale
Mechanical Engineering Department
Sardar Vallabhbhai National Institute of Technology,
Ichchhanath, Dumas Road, Surat-395007, India
- Telephone** : +91-9974751060; +91-0261-1967 (0)
- Fax** +91-0261-2228394
- Email** pvbhale@med.svnit.ac.in, pvbhale@rediffmail.com
- 3. Date of Birth** 25 April 1976

4. Educational Qualification (Starting from Graduation Onwards)

SN	Degree	University/Institute	Year of Passing	Specialization	Grade
1	B E	Amravati University	1997	Mechanical Engineering	First Class
2	M E	M S University of Baroda	2000	Mechanical Engineering	First Class
3	Ph D	V National Institute of Technology, Nagpur	2009	Mechanical Engineering	-

5 Details of Employment (Total Experience 15 Years)

SN	Position	Department	Institution	Period
1	Lecturer	Mechanical Engineering	SSGM College of Engineering, Shegaon (MS)	July 2000- March 2009
2	Assistant Professor	Mechanical Engineering	SV National Institute of Technology, Surat	Mar 2009-till date

6. List of publications (Corresponding author in all publications)

SCI Journal Publications

i) V P Rathod, Jotiprasad Shete, P V Bhale, Experimental Investigation on Biogas Reforming to Hydrogen rich Syngas Production using Solar Energy. **International Journal of Hydrogen Energy** (Accepted for publication) SCI Journal with IF 3.659. Available on line at www.sciencedirect.com

ii) K A Sorate, P V Bhale, Biodiesel properties and automotive system compatibility issues, **Renewable and Sustainable Energy Reviews**, Elsevier Vol 41 (2015) SCI Journal with I F 5.21

iii) K A Sorate, P V Bhale, Impact of biodiesel on fuel system materials durability. **Journal of Scientific and Industrial Research**. Vol 72 (2013) SCI journal with impact factor of 0.587

iv) K A Sorate, P V Bhale, Oxidation Stability of Biodiesel Derived from High Free Fatty Acid Feedstock, **Energy Sources, Part A: Recovery, Utilization, and Environmental Effects**. Taylor and Francis (SCI journal) – Accepted for publication (2013)

v)P V Bhale, N V Deshpande, S B Thombre, Improving the low temperature properties of biodiesel, **Renewable Energy** Elsevier Vol 34 (2009) SCI Journal with I F 3.98. (listed in most downloaded and most cited articles).

Conferences :

i) P V Bhale, M K Rathod, S K Sahoo, Thermal analysis of a solar concentrating system integrated with sensible and latent heat storage, 7th international conference on *Applied Energy* at Abu Dhabi, UAE, April 2015. This paper will be appearing in Energy Procedia by Elsevier

ii) V P Rathod, P V Bhale, Experimental Investigation on Biogas reforming for Syngas, 4th International conference on Energy Research, 10-12 Dec 2014 Organized by IIT Bombay Powai Mumbai. This paper has been published by Energy Procedia by Elsevier, Vol 54

iii)P V Bhale, Paresh Vyas, Experimental Investigation on Energy Efficiency of Electrical Utilities in Process Industries through Standard Energy Conservation Practices. 4th International conference on Energy Research, 10-12 Dec 2014 Organized by IIT Bombay Powai Mumbai. This paper has been published by Energy Procedia by Elsevier, Vol 54

iv)K A Sorate, P V Bhale Experimental Studies on Low Temperature Operability of High FFA Oil Biodiesel 4th International conference on Energy Research, 10-12 Dec 2014 Organized by IIT Bombay Powai Mumbai.

v)K A Sorate, P V Bhale, Combustion characteristics of CI engine fuelled with high free fatty acid oil biodiesel, 23rd National Conference on I C Engines and Combustion. Organized by S V National Institute of Technology, Surat 13-16 Dec 2013

vi)Ashish Patel, P V Bhale, Experimental Investigations on Plant Oil as a fuel for Cooking Stove, International Conference on Thermal Energy and Environment, 24-26 March 2011

vii) P V Bhale, N V Deshpande, S B Thombre, Experimental investigations on the effect of long term biodiesel usage on thermal decomposition of CI engine crankcase oil. Organized by ASME Internal Combustion Engine Division 2009 Fall Technical Conference, Sept 2009

viii) P V Bhale, N V Deshpande, S B Thombre, Experimental Investigations on

Lubricity and Cold Flow Properties of Biodiesel. ASME 2008 Internal Combustion Engine Spring Technical Conference, Chicago, USA

ix)P V Bhale, N V Deshpande, S B Thombre, Simulation of Wear Characteristics of Cylinder liner ring combination with diesel and biodiesel. 6th International Symposium on Fuels and Lubricants Organized by Indian Oil (R & D) Division at New Delhi. This paper has been accepted by SAE India for publication. March 2008

x)P V Bhale, N V Deshpande, Wear Characteristics of Plunger & Barrel of CI Engine Fuel Pump using Diesel and Biodiesel, 2nd International conference on Energy Research, 10-12 Dec 2007 Organized by IIT Bombay Powai Mumbai.

xi)P V Bhale, N V Deshpande, P M Ardhapurkar, Experimental investigations to study the comparative effects of LPG and Gasoline on Performance of Engine. ASME 2005 Internal Combustion Engine Spring Technical Conference, Chicago, USA

7 Sponsored Research Projects Undertaken (Approx 36 Lacs)

Sponsoring Agency	Title of project	Fund Sanctioned	Duration	Remark
GUJCOST Gandhinagar Govt of Gujarat	Towards higher generation of biofuel : Characterization, Material Compatibility, Storage Stability and Engine Performance	4.00 Lakhs	2014-2016	Sanctioned (As a PI)
SVNIT Surat	Performance, emission and system compatibility studies of CI engine using biodiesel obtained from high free fatty acid oil.	10.00 Lakhs	2014-16	Ongoing (As a PI)

SVNIT Surat	Design, Development, Testing and Analysis of Fuel Reforming Reactor for Biogas Upgradation to Syngas	9.90 Lakhs	2014-16	Ongoing (As a Co-PI) Mr Vikram Rathod as PI
KVIC (Khadi Vikas Industries Commission)	Long term acceptability of biodiesel as a fuel for CI Engines	4.00 Lakhs	03 Yrs 2005-2008	Completed. As a Co-investigator P I : Dr N V Deshpande, Professor, VNIT Nagpur
KVIC	Design and Development of Biodiesel Pilot Plant	1.25 Lakhs	2007-08 06 months	Completed (I assisted in this project to PI Dr N V Deshpande
SARMET A Mumbai based NGO	Development and Testing of 09 Sq. Mt. Solar Concentrating System	1.50 Lakhs	03 Yrs (2002-2005)	Completed As a Principal Investigator

Thrust area & Modernization Projects Undertaken

8.

Sponsoring Agency	Title of project	Fund Sanctioned	Duration	Status
MNES, New Delhi	Setting of Renewable Energy Park Under Special Demonstration Scheme	7.29 Lakhs	03 Years 2001-2004	Completed As a Principal Investigator
AICTE, New Delhi (Category RPS)	Center for Advanced Fluid Flow Computing	8.00 Lakhs	2002 2005	Completed As a Co-Investigator

9. Testing & Consultancy Work

<u>Title</u>	<u>Organization</u>	<u>Month & Year of Completion</u>	<u>Amount</u>
(This is with Dr H B Naik) Technical Scrutiny and Technical Inspection of Cold Storage Units for energy efficiency	National Horticultural Board, Gurgaon	Continuous Approx Five Proposals per year	Rs. 176480 (Last two years)
Expert Lectures on Energy Conservation for Mgt Trainees	Essar Energy Services	NOV-Dec 2011	50600
Advisory services for recommendation of 32 seater buses (Associated Faculty : Prof S A Channiwala)	Omnibus Industrial Development Corporation Daman	April 2014	28,000
Advisory services for finalizing specifications/ recommendation of 150 Chauff Cutter/ Milking Set	Tapi Zilha Panchayat Animal Husbandary	April 2015	15000

10 Professional Recognition, Awards, Fellowship Received, Project guidance, admin. Etc

- Faculty Coordinator for the Project (2009-12) on Anchor Institute in Engineering and Auto promoted by Government of Gujarat for imparting training to Industry. Approx Cost of Project Rs 10 Crore (\$1619302)
- On the panel of consultant to National Horticulture Board (Ministry of

Agriculture) for technical inspection of cold storages

- Instructor : Essar Steel and Essar Refinery for Management Trainees in the area of Energy Conservation, Management and Audit (2011-12)
- Certified Energy Auditor by Bureau of Energy Efficiency, Ministry of Power, Govt. Of India.
- Outstanding Reviewer (2015) for the Journal of Renewable and Sustainable Energy Reviews by Elsevier for reviewing highest number of articles in last two years (Top 10 percentile)
- Member of the editorial board committee, Journal of Biofuels and Bioenergy published by National Institute of Renewable Energy, Ministry of New and Renewable Energy Govt of India.
- Reviewer of Journal of Fuel (Intern. Journal by Elsevier/Science Direct)
- Reviewer of Fuels and Energy (International Journal by Ame Chemical Soc)
- Reviewer of Journal of Exergy (Inderscience)
- Reviewer of Renewable and Sustainable Energy Reviews (International Journal by Elsevier/Science Direct)
- Reviewer of Journal of Renewable and Sustainable Energy (American Institute of Physics)
- Reviewer: Books by Tata McGraw Hill
- Reviewer/Examiner : Ph D Theses of Nagpur University (Total 04 theses)
- Reviewer/Examiner : Ph D Theses of Amravati University (Total 02 theses)
- Reviewer/Examiner : Ph D Thesis of BITS Pilani (Total 01 Thesis)
- Member - ASME, SAE, TSI and ISTE

- Member : Editorial team of International Journal of Energy
- Reviewer: Internal Committee: Financial Assistant towards technical paper presentation in India and abroad for SVNIT Students
- Lectures Delivered outside SVNIT at various STTP, Workshops : 52 +
- Reviewer/ Member of the organizing committee of 23rd National Conference on I C Engines and Combustion jointly organised by Combustion Institute India and SVNIT Surat in Dec 2013
- Member of the National Advisory Committee for the International Conference on Recent Advances in Bioenergy Research to be organised by National Institute of Renewable Energy under the Ministry of New and Renewable Energy at Kapurthala Punjab during 25-27 Feb 2016
- On the the panel of reviewer of R & D proposals to the R & D Management Division, Central Power Research Institute Bangalore (Under Ministry of Power, Govt of India)
 - Coordinator – IPR Cell, SVNIT Surat under Industry Institute Interaction Cell (From 2015 onwards)
 - Core Memeber of the Institute level committee for the smooth conduct of student council Election at SVNIT Surat 2015-16
 - Lab Incharge : Internal Combustion Engine Lab
 - Lab Incharge – Alternate Sources of Energy Lab

11 Subjects taught :

- i) Energy Conversion
- ii) Non Conventional Energy Sources (Solar, Wind, Biomass)
- iii) Internal Combustion Engines
- iv) Energy Conservation, Management and Audit
- v) Thermodynamics
- vi) Analysis and Design of I C Engines
- vii) Energy Systems

12 M.Tech. / Ph.D. guided dissertation / thesis

M.Tech. : 25 (Completed)

Ph.D. : 01 completed + 02 (Ongoing)

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