

# **DEPARTMENT OF METALLURGY & MATERIALS SCIENCE**

## **(2015-2016)**

### **❖ INTRODUCTION**

The Metallurgy and Materials Science Department is a unique establishment in and around western Maharashtra in educating students as Materials Engineers. Day by day, the demand of skilled human resource in the industry is rising sharply due to the globalization of Indian economy. The department strives hard in fulfilling these requirements. The active support of eminent members of alumni in India and abroad - ranging from research scientists in developing computer chips to the managing directors - has helped the department in training the students in state of the art technology. There is an intake of 60 students for B.Tech course. Additional twelve students are admitted through Diploma stream. The total intake capacity for M. Tech programme is 36 with specializations in Physical Metallurgy and Process Metallurgy.

### **❖ ACADEMIC PROGRAMS (B. TECH/ M. TECH/ Ph. D)**

The Metallurgy and Materials Science Department currently offers B.Tech. and M.Tech. programmes. The B.Tech. programme offers a comprehensive fundamental education in metallurgical engineering. The Department offers M.Tech. Programme in two specialization, i.e. Physical Metallurgy and Process Metallurgy. The programme consists of course work in the areas of specialization followed by a one year duration dedicated to thesis work.

B. Tech Metallurgy & Materials Science  
M. Tech Physical Metallurgy (New Nomenclature: Materials Engineering)  
M. Tech Process Metallurgy  
Ph.D

### **❖ FACULTY STRENGTH**

<b>Sr. No</b>	<b>Designation</b>	<b>No. of Faculty</b>
1	Professor	03
2	Steel Chair Professor	01
3	Associate Professor	03
4	Assistant Professor	08
5	Adjunct Professor	05
Total		20

## ❖ MAJOR EQUIPMENTS & FACILITIES

Name of the Lab	Facilities
Ceramic Processing Laboratory	Tubular Si-C Furnace, Universal Testing Machine, , BET surface area analyser Jar Mill, Rotap Sieve Shaker Spray dryer, Analytical Weighing balance Laboratory Oven, Si-C Furnace
Surface Engineering Laboratory	Gas Nitriding Furnace, Wire Flame Thermal Spray, Induction Furnace, Drip Carburizing Furnace, Fluidized-bed Nitriding Furnace, Powder Flame Thermal Spray & Grit Blasting Machine, Laser Machine, X-Y Table, Muffle Furnaces (No. 4)
Advanced Materials Laboratory - Eaton Sponsored	Potentiostat, Jasco - UV visible Spectrophotometer, FTIR Spectrophotometer, Adhesion Tester, Mould and Press Assembly, Interface 1000 Potentiostat System, Thickness Gauge,
Powder Metallurgy and Tribology Laboratory	Attritor Mill, Hot Press Compaction Machine, Weighing Balance- Nos, Weighing Balance-Nos, Powder Coating Apparatus, Fatigue Test Machine, Image Analyser, Digital Multimeter, Powder Compacting Machine, Muffle Furnace, Electrolytic Polishing, Pin-On-Disc ( magnum make), Low Speed Diamond Machine, Cryogenic System, MoSi <sub>2</sub> sintering Furnace, Vacuum Sintering Furnace, Low Temperature Muffle Furnace, Sintering Furnace-I.
Polymer and Nano Composites Laboratory	Twin Screw Extruder, Thermogravimetric Analyser, DSC, Vacuum Oven, 7.5 Digit Multimeter (Keithley, Germany), Plastic Injection Moulding, 2 Ton UTM - Polymer testing, Digital Source Meter (Tektronix Inc, USA), Electrometer/ High Resistance Meter (Keithley, Germany), Dilatometer (V.B. Ceramics, Indra), 4 Points Probe Conducting Meter (Lucas Signatone, USA), Precision Impedance Analyser (Wayne - Kerr, UK), Hot Compaction M/C (Kimya Ind., India), Melt Flow Index Tester, Izod Impact Tester
Computer Laboratory	HP Compac Pro 6300 Led Monitor Desktop 60 nos
Scanning Electron Microscope Laboratory	FE -SEM + EDS
Metallography and Image Analysis	Optical Microscope, Inverted Microscope, Optical Microscope with image analyser, Upright Microscope, Charpy, Hot Mounting Press, Automatic Polishing Machine, Stereo

	Microscope, Microhardness Tester, Inverted Microscope- Ziess.
Material Analysis Laboratory	Analytical Balance (2 Nos), Strohlins Carbon Analyser, Electrogravimetric analyzer, Atomic Absorption Spectroscopy.
Mechanical Testing Laboratory	Ericson Cupping, 60 T UTM, 10 T UTM, Vickers hardness tester, Brinell hardness tester, Rockwell hardness testers, Digital Charpy Impact testing machine.
Manufacturing Process Laboratory	Rolling Mill, Jaw crushers (2 No.), Rotary Swagger.
Foundry Laboratory	Induction Furnace, Centrifugal Casting machines (2 Nos.), Muller mixer (2 kg- 5 kg), Sieve analysis set up, Shell moulding machine, Sand testing equipments: UTM, Permeability meter, Rapid moisture teller.

## ❖ EQUIPMENT PURCHASED

Name of the Lab/ section	Module Description	Usage	Date of purchase / development dd/mm/yyyy	Resource consumed (amount in Lakhs)
Corrosion Laboratory	Electrically Heated High Temperature Furnace 1600	For UG, PG and Research Projects / Practicals	M 15-16/067/ dt.23/07/2015.	6.1
Ceramic Processing Laboratory	15 Ton Semi Automatic Table Top Hydraulic Lab, Pellet Press. Model No.AP-15, (sr.no.290116152)	For UG, PG and Research Projects / Practicals	TSI/TRD/322/ dt.23/02/2016.	1.08
Corrosion Laboratory	Slow Strain Rate Testing Equip. Model ; United SSTM-20 KN with accessories	For UG, PG and Research Projects / Practicals	43917/dt.09/09/2015.	22,600 U.S.Dollar
Polymer and Nano Composites	Computerised Vicate Softening Point/Heat	For UG, PG and Research Projects /	SLI/006/2015/ dt.20/10/2015.	1.60

Laboratory	Deflection Test Apparatus ,Bath oil	Practicals		
Powder Metallurgy and Tribology Laboratory	Glove Box with accessories	For UG, PG and Research Projects / Practical	0149/dt.26/02/2015.	2.38

### ❖ RESEARCH & DEVELOPMENT ACTIVITIES

<b>Sr. No</b>	<b>Research Activities</b>	<b>Total No.</b>
1	No. of Books Authored	01
2	No. of Conference/Seminars/ workshops attended	25
3	No. of Conference/Seminars/ workshops organized	07
4	No. of publications in International/National Journals and conference	48
5	No. of the Industry Sponsored Projects	02
6	No. of Government Sponsored Projects	01
7	Value of the Government Sponsored Projects (In Lakhs)	1.3
8	No. of Consultancy Projects	02
9	No. of Students gone to foreign universities for further studies	04
10	No. of Ongoing Ph. Ds	22

### ❖ Details of Sponsored Research Projects

Sr. No	Title	Name of the Project Leader	Year in which started	Funding agency	Duration	Amount sanctioned
1	"Effect of Filler and Concentration on the Dielectric Strength and Mechanical properties of Poly (Vinylidene flouride) Nanocomposites".	Manisha Kulthe	2015	Alumni Association	2015-2017	1.3

## ❖ PUBLICATIONS

Sr. No	Name of Department	Research Publications				Total
		National Journal	International Journal	National Conference	International Conference	
1	Metallurgy Engineering	00	21	06	21	48

International Journals: 21			
Sr.	Title of the Paper	Authors	Publication Details/Vol.No./ISSN No./ Page No.
1	Study on PVDF/Ni composites with low percolation	R. K. Goyal, R Sulakhe	Advanced Materials Letter, 6(4), 2015, 309-317
2	Automatic Quantitative Analysis of Microstructure of Ductile Cast Iron Using Digital Image Processing	Abhijit Malage, Priti P. Rege, Manoj J. Rathod	Metallurgical & Materials Engineering, Association of Metallurgical Engineers of Serbia, Vol. 21 (3) 2015, p. 155-165
3	Study of kinetics of Mill scale reduction: For PM applications	N.B.Dhokey, C. Joshi	Trans Indian Institute of Metals (2015) 68(1): 31-35
4	Few-Layer-Graphene/ Polycarbonate Nanocomposites as Dielectric and Conducting Material	P. K. Sain, R. K. Goyal, Y. V. S. S. Prasad, Jyoti, K. B. Sharma, A. K Bhargava	Journal of Applied Polymer Science, 2015, 132; 42443
5	Tribological Performance of Boronized, Nitrided and Normalized AISI 4140 Steel Against Hydrogenated Diamond-like Carbon (DLC) Coated AISI D2 Steel	A. A. Joshi, S. S. Hosmani, Jayshri Dumbre	Tribology Transactions 58 (3), 500-510
6	Synthesis of Iron Nanopowder and Its Nanocomposites with High Electrical Conductivity and Thermal Stability	R. K. Goyal, P. Dhoka, A. Bora, and P. Gaikwad	Journal of Materials Science & Surface Engineering 4 (1), 2016, 339-341.

7	Electrical Properties of Polycarbonate/ Nickel Composites Prepared by a Simple Processing Technique	A. Gupta, R. K. Goyal	Journal of Materials Science & Surface Engineering, Vol. 4 (2), 2016, 351-354
8	Synthesis of ZrO <sub>2</sub> Nanopowder using High Energy Ball Mill and Characterization	R. K. Goyal, S.P. Deshpande, S.S. Singare,	Journal of Materials Science & Surface Engineering, 19 <sup>th</sup> Jan 2016, Vol. 4 (2), 2016, 360-363
9	Abrasive wear response of cryotreated EN45 steel in simulated wear test rig fixture	N. B. Dhokey, A. Raskar, A. R. Hake & G. Mohapatra	Tribology - Materials, Surfaces & Interfaces, Volume 9, Issue 3, July 2015, pages 159-164
10	Effect of current density and deposition time on galvanostatic phosphating of Low Carbon Steel	M. Yantapure, P. P. Deshpande, S. T. Vagge	University Polytechnic Scientific Bulletin, Series B, Vol 77, Issue 1 (2015), pages 173-184
11	Synthesis and Microwave Dielectric Behavior of (Bi <sub>1-x</sub> Pb <sub>x</sub> )NbO <sub>4</sub> Ceramics	S.P. Butee, K.R. Kambale, Shaishav Upadhyay, S. BASHAIAH, K.C. James Raju, H.S. Panda	Journal of Advanced Dielectrics (Accepted: In Press)
12	Electrical properties of sodium beta- alumina ceramics synthesized by citrate sol-gel route using glycerine	S. P. Butee, K.R. Kambale, M. Firodiya,	Processing and Applications of Ceramics, Vol 10 (2) (2016), 67- 72
13	Disappearance of Curie Temperature of BaTiO <sub>3</sub> Nanopowder Synthesised by High Energy Ball Mill	S. Pendse, R. K. Goyal	Journal of Materials Science & Surface Engineering, 4 (3), 2016.383-385
14	Effect of Processing Routes on Electrical Properties of Polymer/Iron Composites	C. Kale, P. Dhoka, R. K. Goyal	Journal of Electronic Materials, in- press, DOI: 10.1007/s11664-016- 4652-9
15	Synergetic effect of thicker nanocrystalline structure with high amount of strain induced martensite on surface characteristics of plasma nitrided austenitic stainless steel	P.G. Ranaware, M.J. Rathod	Surface & Coatings Technology, 302 (2016) 265–274
16	Evolution of Thermoelectric $\beta$ -FeSi <sub>2</sub> Phase by Cryo Milling and Sintering	V. S. Poddar, N. B. Dhokey, S. P. Butee, N. B. Revade, M. M. Thombre, R. D. Purohit, Deep Prakash	Trans Indian Institute of Metals (Accepted)

17	Role of surface mechanical attrition treatment and chemical etching on plasma nitriding behavior of AISI 304L steel	Atul M. Gatey, Santosh S. Hosmani, Carlos A. Figueroa, Shashi B. Arya, Rajkumar P. Singh	Surface & Coatings Technology 304 (2016) 413–424
18	Surface mechanical attrition treated AISI 304L steel: role of process parameters	A. M. Gatey, S. S. Hosmani & R. P. Singh	Surface Engineering, Vol 32 (No1), 2016, pp: 69-78
19	Plasma nitriding of AISI 2205 steel: effects of surface mechanical attrition treatment and chemical etching	Atul M. Gatey, Santosh S. Hosmani, Shashi B. Arya, Carlos A. Figueroa & Rajkumar P. Singh	Surface Engineering, Vol 32 (No1), 2016, pp: 61-68
20	Conducting polyaniline nano composite based paints for corrosion protection of steel (Invited Paper)	Dimitra Sazou and Pravin P.Deshpande	Chemical Papers, Publisher : Springer, Germany Issue : Oct 2017 ( Special Issue on Conducting Polymers ) Accepted
21	Conducting polyaniline/ nano - zinc phosphate composite as a pigment for corrosion protection of low carbon steel (Invited Paper)	Pravin P.Deshpande*, Abhijit A. Bhopale, Vanadana A. Mooss, Anjali A. Athavale	Chemical Papers, Publisher : Springer, Germany Issue : Oct 2017 ( Special Issue on Conducting Polymers ) Accepted

### National Conference:6

Sr.	Title of the Paper	Authors	Publication Details/Vol.No./ISSN No./ Page No.
1	Corrosion and Tribo Corrosion Behavior of AISI316L Medical Grade Steel in Hank's Solution.	S. T. Vagge	Eighteenth National Congress on Corrosion Control, 24-26 February, 2016 Hotel Green Park, Chennai
2	Study of isothermal and cyclic oxidation of Thermal Barrier Coating	S. T.Vagge	Eighteenth National Congress on Corrosion Control, 24-26 February, 2016 Hotel Green Park, Chennai
3	Effect of Nanocrystallization on Commercial Plasma Nitriding Cycle of Austenitic Stainless Steel	P. G Ranaware, M J Rathod	Conference on Advanced Material Processing, CAMP2016, 2-5 December 2015, MNIT Jaipur
4	Effect of Vacuum on reduction in porosity of A380 alloy for high pressure die casting	R. Shingade, Dr. M.J. Rathod, Mr. V. Joshi	Aluminum Casters' Association of India, ALUCAST 2015, 11-12 December 2015, Pune

5	Fiber Laser Welding of Dissimilar Thickness Austenitic Stainless Steel Sheets	M.J. Rathod, R.S. Ranade, Anurag Girdhar	National Welding Seminar, NWS-2015, IIW, 9-11 December 2015, Washi, Navi Mumbai
6	Dissimilar Metal Joining of Pure Copper and Al 6061 by Using Friction Stir Spot Welding	M. J. Rathod, Rajiv R. Devmore	National Welding Seminar, NWS-2015, IIW, 9-11 December 2015, Washi, Navi Mumbai

<b>International Conference:21</b>			
<b>Sr.</b>	<b>Title of the Paper</b>	<b>Authors</b>	<b>Publication Details/Vol.No./ISSN No./ Page No.</b>
1	Polyaniline - Nano Zinc Oxide Composite as a Pigment for Corrosion Protection of Low Carbon Steel	P. P. Deshpande	International Conference on Advances in Functional Materials, AFM15, USA, 29th June - 3rd July 2015
2	Isothermal and hot corrosion behavior of thermal barrier coatings (TBC)	S.T.Vagge	17th APCCC, Mumbai, Jan 27-30, 2016
3	Study of tribological and corrosion properties of super duplex stainless steel piston rods used in marine environment	S.T.Vagge	IIM-NMD-ATM-2015 Coimbatore, 13- 16 November 2015
4	Synthesis of Molybdenum Disulphide (MoS <sub>2</sub> ) Nanopowder Using Planetary Ball Mill	Harishwar Kale, Manisha Kulthe, R.K. Goyal	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
5	Study on Polypropylene/ Electrolytic Grade Iron Composites Prepared by Twin Screw Extruder for Elevator Buckets	Chetan Kale, S. R. Panchal, Prakash Dhoka, R. K. Goyal	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
6	Study on High Temperature Poly(aryletherketon) (PAEK)/Iron Composites Prepared by Powder Metallurgy (P/M) Route	Suyog Gaikwad,	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
7	Development of Thermoelectric $\beta$ -FeSi <sub>2</sub> by Mechanical Alloying and its Response to Hot Press Sintering	N.B.Dhokey, V.S. Poddar, N.Revade, R.Garbade, R.Purohit, D.Prakash	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India



8	Fabrication of Thermoelectric Generator and Assessment of its Functionality	N.B.Dhokey, P. Kulkarni, A.Patil, R.Garbade, V. S. Poddar, D.Prakash, R.D,Purohit	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
9	Synthesis of In-Situ Titanium Metal Matrix Composite	N.B. Dhokey, K.Burande	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
10	Forgeability of Astaloy and its Response to Thermal Processing	N.B.Dhokey, V.Thavale, S.Dhokale, P.Ghosh	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
11	Conceptualization,Design and Mathematical Modeling of a Process:Conversion to Multi-oxide Mill Scale to Fe <sub>2</sub> O <sub>3</sub> Powder	N.B.Dhokey, Rushikesh Sabban, Pravin Tarate	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
12	Modification of Surface Properties of Al-Based PM Compacts by Plasma Nitriding	N.B. Dhokey, S. Biradar	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
13	Rapid Prototyping of Bronze Powders using Fiber Laser	M. J. Rathod, Sumitkumar S. Bind, Tuhid M. Shaikh	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
14	Synthesis and Characterization of Sodium-Beta-Alumina for Na-S Batteries	S. P. Butee, M. Firodiya, K.R. Kambale	International conference on Ceramic and Advanced Materials for Energy and Environment (CAMEE 2015) held at Christ University, Bengaluru, 15-17 Dec. 2015
15	A Study on practical difficulties associated with reaction sintering of some lead free perovskites	K.R. Kambale, S.P. Butee, Sameer Shroff, Dilip Kendre, Nikita Goswami	International conference on Ceramic and Advanced Materials for Energy and Environment (CAMEE 2015) held at Christ University, Bengaluru, 15-17 Dec. 2015
16	Synthesis and Characterization of ZnNb <sub>2</sub> O <sub>6</sub> - Polycarbonate composites (PM16-1449492110)	Sandeep Butee, . Nikhil Silam, R.K.Goyal, K. R.Kambale, Ganesh Kotiye	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
17	Improvement in transparency of Nd:YAG ceramics through hot press sintering.	S P Butee, K R Kamble, Prashant Dixit, M D Joshi, S A Dhawanjewar	International Conference on Powder Metallurgy and Particulate Materials (PM 16),18-20 February, 2016, Hyatt Regency Pune, India
18	Improvement in Wear Resistance and Thermal Properties of Polymer Nanocomposites	Manoj D. Joshi, R. K. Goyal	International Conference on Nanoscience, Nanotechnology and Advanced Materials (NANO2015) organized by GITAM University, Rushikonda, Visakhapatnam, Andhra Pradesh, India, 14-17 December, 2015

19	Study on the Effect of Ball Milling on Dielectric and Thermal Behaviour of High Performance Polymer Composites	S. D. Gaikwad, R. K. Goyal	International Conference on Nanoscience and Nanotechnology for Energy Applications (EAPP-2016), 27-29 June, 2016 organized by Sathyabama University, Chennai, India
20	High Performance Polymer nanocomposites for Biomedical Applications	S. D. Gaikwad, R. K. Goyal	International Conference on Biomaterials, biodiagnostics, tissue engineering, drug delivery and regenerative medicine (BiTERM 2016), 15-17 April, 2016 organized by IIT Delhi and AIIMS Delhi, India
21	Titanium dioxide Incorporated Phosphate Coatings on Low Carbon Steel for Corrosion Protection	P. P. Deshpande, V. S. Kathavate	International Conference on Metals and Materials Research (ICMR-2016), 20-22 June 2016, organized by IISc Bangalore, India

## ❖ PATENTS

Sr. No.	Faculty / Students	Title	Application No. & Date	Status
1	M. J. Rathod, P. G. Ranaware	Centrifugal Air Blast Shot Peening Reactor to Synthesize Thick Nanocrystallized Surface Layer	No.: 4020/MUM/2015-16532 Date: October 25 2015	Applied

## ❖ BOOKS PUBLISHED

Sr. No.	Name of the author	Title of the book	Name of the publisher	Date of publication (DD/MM/YYYY)
1	P P Deshpande, Dimitra Sazou	Corrosion Protection of Metals by Intrinsically Conducting Polymers	ISBN: 978-1-4987-0692-6, CRC Press	Dec-15



**NATIONAL / INTERNATIONAL CONFERENCES / SEMINAR / SYMPOSIA /  
WORKSHOP ATTENDED DURING LAST ACADEMIC YEAR.**

Name of Department	National Conferences Attended	International Conferences Attended	Workshop Attended	Seminar Attended	Total
Metallurgy engineering	00	09	16	00	25

**International Conferences Attended**

Sr. No.	Title of the Conference	Name of the Faculty	Period	Venue
1	Polyaniline - Nano Zinc Oxide Composite as a Pigment for Corrosion Protection of Low Carbon Steel	<b>Dr. P. P. Deshpande</b>	29 - 3 July, 2015	Stony Brook University, Stony Brook, New York State USA
2	Synthesis and Characterization of Sodium-Beta-Alumina for Na-S Batteries	<b>Sandeep P Butee,</b> Mayur Firodiya, K.R. Kambale	15-17 December, 2015	Christ University, Kengeri, Bangaluru, India
3	A study on Practical difficulties Associated with Reaction Sintering of some Lead Free Perroskites	<b>K.R. Kambale,</b> S.P. Butee, Sameer Shroff, Dilip Kendre, Nikita Goswami	15-17 December, 2015	Christ University, Kengeri, Bangaluru, India
4	Improvement in transparency of Nd:YAG ceramics through hot press sintering.	<b>S P Butee,</b> K R Kamble, Prashant Dixit, M D Joshi, S A Dhawanjewar	18-20 February, 2016	Hyatt Regency Pune, India
5	Synthesis of Molybdenum Disulphide (MoS <sub>2</sub> ) Nanopowder Using Planetary Ball Mill	<b>Manisha Kulthe</b>	18-20 February, 2016	Hyatt Regency Pune, India
6	Forgeability of Astaloy and its Response to Thermal Processing	<b>Vijay Thavale,</b> N. B. Dhokey	18-20 February, 2016	Hyatt Regency Pune, India

7	Effect of nano sized starting materials on the dielectric and ferroelectric behavior of barium titanate	<b>Kaustubh Kambale, A.</b> R. Kulkarni, N. Venkataramani	18-20 February, 2016	Hyatt Regency Pune, India
8	Synthesis and Characterization of ZnNb <sub>2</sub> O <sub>6</sub> - Polycarbonate composites	<b>Sandeep Butee, Nikhil</b> Silam, R.K.Goyal, K. R.Kambale , Ganesh Kotiye	18-20 February, 2020	Hyatt Regency Pune, India
9	Development of thermoelectric $\beta$ -FeSi <sub>2</sub> by Mechanical Alloying and its response to Hot Press Sintering	<b>Vaishali Poddar, N. B.</b> Dhokey	18-20 February, 2016	Hyatt Regency Pune, India

<b>Workshop Attended</b>				
<b>Sr. No.</b>	<b>Title of the Workshop</b>	<b>Name of the Faculty</b>	<b>Period</b>	<b>Venue</b>
1	One Week Workshop on Computaional Fluid Dynamics (CFD) and Sftware Training on ANSYS ICEM FLUENT 14.5	<b>S.V.S. Narayana</b>	July 13-17, 2015	VNIT, Nagpur
2	One Week Workshop on Computaional Fluid Dynamics (CFD) and Sftware Training on ANSYS ICEM FLUENT 14.5	<b>Pranay Bagde</b>	July 13-17, 2015	VNIT, Nagpur
3	MHRD-TEQIP-KITE Workshop titled " <b>Teaching Applied Mathematics to Post Graduate Students in Engineering</b> " conducted under Knowledge Incubation under TEQIP Programme	<b>S.V.S. Narayana</b>	May 13-15, 2015	IIT, Bombay
4	Two days training programme on " <b>Aluminium Gravity Die Casting Technology - I</b> ",	<b>V.S.Galphade</b>	April 28-29, 2015	Arkey Conference Hall, Pune

5	Two days Workshop on "The Asian Thermal Spray Conference"	<b>N.A.Patel</b>	Nov 22- 23, 2014	ARCI, Hyderabad
6	"Powder Metallurgy Short Course" (PMSC 2015)	<b>S.U.Dangarikar</b>	Oct.24-27,2015	COEP,Pune
7	"Powder Metallurgy Short Course" (PMSC 2015)	<b>V. T. Thavale</b>	Oct.24-27,2015	COEP,Pune
8	"Powder Metallurgy Short Course" (PMSC 2015)	<b>Kaustubh Kambale</b>	Oct.24-27,2015	COEP,Pune
9	Four day training program on "Scanning Electron Microscopy"	<b>S.U.Dangarikar</b>	Sept.2-5,2015	TRDDC/COEP,Pune
10	Four day training program on "Scanning Electron Microscopy"	<b>M.G.Kulthe</b>	Sept.2-5,2015	TRDDC/COEP,Pune
11	Four day training program on "Scanning Electron Microscopy"	<b>V. T. Thavale</b>	Sept.2-5,2015	TRDDC/COEP,Pune
12	Four day training program on "Scanning Electron Microscopy"	<b>S. P. Butee</b>	Sept.2-5,2015	TRDDC/COEP,Pune
13	Four day training program on "Scanning Electron Microscopy"	<b>R. K. Goyal</b>	Sept.2-5,2015	TRDDC/COEP,Pune
14	Two Week AICTE Sponsored Faculty Development Program on " <b>Advances in MicroManufacturing</b> "	<b>M. G. Kulthe</b>	June 1- 12, 2015	COEP , Pune
15	Two Days Workshop on Pedagogy " <b>Seven Habits for the 21 st Century Educators</b> "	<b>M. G. Kulthe</b>	September 12 & 20, 2014	COEP , Pune
16	Two Week AICTE Sponsored Faculty Development Program on " <b>Advances in MicroManufacturing</b> "	<b>S. P. Butee</b>	June 1- 12, 2015	COEP , Pune

**❖ NATIONAL / INTERNATIONAL CONFERENCES / SEMINAR / SYMPOSIA / WORKSHOP ORGANIZED DURING LAST ACADEMIC YEAR**

Name of Department	National Conferences Organized	International Conferences Organized	Workshop Organized	Seminar Organized	Total
Metallurgy engineering	00	00	07	00	07

Workshops Organized					
Sr. No.	Title of the Workshop	Name of the Faculty	Period	Venue	No. of Participants
1	One Day Workshop on "Challenges, Opportunitieis and Advances in Surface Engineering for Industrial Applications"	Dr. Pradip, Dr S. T. Vagge	27-Jul-15	COEP	70
2	Workshop on "Scanning Electron Mocroscopy"	Dr. S. P. Butee, Dr. Pradip	Sep 1-4, 2015	TRDDC and COEP	40
3	Workshop on "Recent Trends and Advances in Forging Industry"	Prof. S. V. S. Narayana, Prof. V. S. Galphade	12-Sep-15	COEP	130
4	<b>FEST 2015</b> - Forum for Engineering Students on Technoloies of Tomorrow: Part 1 Half Day Workshop on <b>Materials for Off-Highway Vehicles</b>	Dr. N. B. Dhokey, Dr. Gautam Mohopatra	18-Sep-15	COEP	70
5	<b>PMSC 15</b> Powder Metallurgy Short Course	Dr. N. B. Dhokey, Dr. S. P. Butee	Sep 24th - 27th, 2015	COEP	52
6	Short course on <b>Corrosion – Fundamentals, Forms and Materials Selection</b>	Dr. S. T. Vagge	6-Oct-15	COEP	52

7	IIM – ASM jointly organizes half day workshop on i) Cold spray and ii) Titanium forming	Dr. S. T. Vagge, Dr. N. B. Dhokey	23-Feb-16	COEP	40
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## ❖ AWARDS & HONORS

### ● For Faculty

Sr. No	Name of the Faculty	Name of the Award	Description	No. of Awards
1	N.B.Dhokey		Appreciation Letter for "Copper Atomization Project" by James Carnahan, University of Illinois, Urbana-Champaign	one
2	P.P.Deshpande	रा. भि. भिडे	"प्राचिन आणि मध्ययुगिन भारतिय धातुशास्त्रचा संक्षिप्त इतिहास"या ग्रंथासाठी	one
3	P.P.Deshpande	Chaired a session	International Conference on "Ancient Science and Technology: Retrospection And Aspiration ASTRA" 9-11 January 2016 held at Deccan College, Post Graduate and Research Center, Pune	
4	K. Kambale	PMAI Young Promising Professional Award	In PM16 International Conference on Powder Metallurgy and Particulate Materials, 18-20 Feb 2016 at Hyatt Regency , Pune	One
5	V. T. Thavale, N. B. Dhokey	G.S. Tendolkar Award	For the paper entitled "Forgeability of Astaloy and its Response to Thermal Processing" during PM16 International Conference on Powder Metallurgy and Particulate Materials, 18-20 Feb 2016 at Hyatt Regency , Pune	One

### ● For Students

Sr. No	Name of the student	Name of the Award/Achievement	Description	No. of Awards
1.	Shrotre Akhilesh	Completed an Internship apart of his studies	Topic: Solvent Extraction of Ni and Co Duration: From 26/05/2015 to 26/07/2015 ( 2 months)	One
2.	Shreeraj Joshi	Got an internship opportunity	at National Institute for Materials Science	One

			(NIMS) Duration: 57 days	
3.	Akash Patil	Got an internship opportunity at ISEN France	Topic: Non-conventional thermoelectric energy sources Duration: From 18/05/2016 - 20/07/2016	One
4.	Indrayani Kadu	Got an internship opportunity at CNRS, Caen	Topic: Growth of thin films of various semiconducting and magnetic oxides by PLD technique Duration: From 19/05/2016 - 15/07/2016	One

### ❖ DETAILS OF STUDENTS GONE FOR HIGHER STUDIES

Name of the Student	Name of the University/ institute		Year of Passing
	Foreign	Indian	
Narayan Shirolkar	Direct admission to Ph.D. program with Full fellowship at Georgia Tech. University USA		2015-2016
Saloni Pendse	Admission to MS program at Florida University USA		2014-2015
Dipali Patil	Admission to MS program In California State University USA		2015-2016
Akhilesh Shrotre	Universite Paris SACLAY France		2015-2016
RushikeshSabban		IISc Bangalore, Mtech Materials Engineering (GATE AIR 2)	2015-2016
Shubham Jadhav		IISc Bangalore, Mtech, Centre of Nano Science(GATE AIR 10)	2015-2016
Digvijay Yadav		IIT Bombay, Mtech Materials Science	2014-2015



		(GATE AIR 44)	
Dilip Kendre		IIT Bombay, Mtech Materials Science (GATE AIR 56)	2014-2015
Shubham Mohod		IIT Bombay, Mtech Materials Science (GATE AIR 71)	2015-2016
Sumit Sanjay Singare		IIM Ahmedabad	2015-2016

## ❖ SPECIAL MENTION

## ❖ MEMBERSHIPS TO SOCIETIES

Sr. No	Name of the Society	Name of the faculty/s
1	<u>Life member</u> of "Powder Metallurgy Association of India (PMAI), <u>Life member</u> of "Society of Polymer Science" Pune chapter.	Dr R K Goyal
2	<u>Life member</u> of "Powder Metallurgy Association of India (PMAI), <u>Life member</u> of "Indian Ceramic Society, <u>Life member</u> of The Indian Institute of Metals (IIM)	K. Kambale
3	<u>Life Member</u> of "Materials Research Society of India (MRSI)" LM B849 <u>Life Member</u> of "Powder Metallurgy Association of India (PMAI)" LM-00156	Prof. Manisha Kulthe

## ❖ FACULTY MEMBER

Sr.	Name of the	Highest	Designation	Areas of Interest
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No.	Faculty	Qualification		
1.	Dr. N. B. Dhokey	Ph.D.	Professor & Head	Tribology, Powder metallurgy, Energy Materials, Soft Magnetic materials , Cryotreatment of materials
2..	Dr. M. J. Rathod	Ph.D.	Professor	Material joining and Laser material processing
3.	Dr. S. T. Vagge	Ph.D.	Professor	Corrosion and Surface Engg
4.	Dr. S. P. Butee	Ph.D.	Associate Professor	Electro-Ceramics
5.	N. R. Anand	M.E.	Associate Professor	Heat Treatment
6.	Dr. R. K. Goyal	Ph.D.	Associate Professor	Nanotechnology, polymer matrix nanocomposites, composites, electronic materials and materials characterization.
7.	S. U. Dangrikar	M.E.	Assistant Professor	Heat Treatment, Metal Working
8.	Dr. P. P. Deshpande	Ph.D.	Assistant Professor	Conducting polymers and corrosion control of Steels
9.	V. T. Thavale	M.E. (Metallurgy)	Assistant Professor	Powder Metallurgy
10.	M. G. Kulthe	M.E. (Metallurgy)	Assistant Professor	Polymer matrix micro and nano composites
11.	R. S. Ranade	M.E. (Metallurgy)	Assistant Professor	Foundry Technology, Extractive Metallurgy
12.	A. M. More	M. Tech.	Assistant Professor	Physical Metallurgy
13.	K. Kamble	M.Tech	Assistant Professor	Ceramic processing, Electroceramics, ionic conductors, composite materials
14.	Nazia Patel	M.Tech	Assistant Professor	Thermal Spray Coating
15.	Dr. V. Gunjal	Ph.D.	Adjunct Faculty	Metallurgical Thermodynamics, Modelling in Materials Engg, Failure Analysis in Engg Materials
16.	V. S. Poddar	M.Tech	Adjunct Faculty	Wire Tech, Forging Tech, Electronic and Magnetic Materials
17.	Dr. P. R. Khangaonkar	Ph.D.	Adjunct Faculty	Physical Metallurgy
18.	M. U. Hosmane	M.E.	Adjunct Faculty	Forging Technology
19.	Dr. H. N. Dharwadkar	Ph.D.	Adjunct Faculty	Transport Phenomenon, Heat and Mass Transfer
20.	Dr. J. K. Chakravartty	Ph.D.	Steel Chair Professor	Mathematical Modelling