

# **DEPARTMENT OF METALLURGY & MATERIALS SCIENCE**

## **(2019-2020)**

### **❖ 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 six students are admitted through Diploma stream and the NRI intake is around 15%. The total intake capacity for M. Tech programme is 36 with specializations in Materials Engineering and Process Metallurgy. In addition, there are 21 perusing Ph.D. program. This year 3 students were awarded Doctorate Degree.

### **❖ 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. Materials Engineering 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 Metallurgical Engineering
- M. Tech Materials Engineering
- M. Tech Process Metallurgy
- Ph.D

### **❖ FACULTY STRENGTH**

<b>Sr. No</b>	<b>Designation</b>	<b>No. of Faculty</b>
1	Professor	04
2	Emeritus Professor	02
3	Associate Professor	02

4	Assistant Professor	07
5	Visiting Faculty	01
6	Adjunct Faculty	03
Total		19



## ❖ 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, Electroytic 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 Furncae-I.
Polymer and Nano Composites Laboratory	Twin Screw Extruder, Thermogravimetric Analyser, DSC, Vaccum 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 Analyzer, 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.
Corrosion and Surface Protection Lab	Tubular High Temperature Furnace , Slow strain rate testing machine, Scratch tester, Wear and Friction motor, potentiostat, galvanostat.

### ❖ EQUIPMENT PURCHASED:

Name of the Lab/ section	Module Description	Usage	Date of purchase / development dd/mm/yyyy	Resource consumed (amount in Lakhs)
Powder Meta Lab Polymer/Nano Lab Ceramic Lab	Analytical Weighing Balance	Weighing of the metal powders	23/09/2019	1,30,500/-
Powder Meta Lab	High Temperature Heating Bath Furnace	Heat treatment	15/10/2019	1,37,170/-

	temp.1000°C with thermocouple & Panel			
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## ❖ RESEARCH & DEVELOPMENT ACTIVITIES

Sr. No	Research Activities	Total No.
1	No. of Books Authored	00
2	No. of Conference/Seminars/ workshops attended	26
3	No. of Conference/Seminars/ workshops organized	10
4	No. of publications in International/National Journals and conference	18
5	No. of the Industry Sponsored Projects	05
6	No. of Government Sponsored Projects	01
7	Value of the Government Sponsored Projects (In Lakhs)	16.5
8	No. of Consultancy Projects	06
9	No. of Students gone to foreign universities for further studies	03
10	No. of Ongoing Ph. Ds	23

## ❖ Details of Sponsored Research Projects

Sr. No	Title	Name of the Project Leader	Year in which started	Funding agency	Duration	Amount sanctioned (Rs)
1	A study on Piezoelectric properties of High Curie temperature piezoceramics	Dr. N.B.Dhokey, K. R. Kambale	2019	AICTE- MODROBS	2019- 2021	1650000/-

## ❖ Projects

Sr. No	Title	Name of the Project Leader	Year in which started	Funding agency	Duration	Amount sanctioned (Rs)
1	“Effect of alloying elements and different heat treatments (normalizing and stress relieving) on all-weld microstructure and mechanical properties in low alloyed steel weldments”.	Dr. Madhu Ranjan, Mr. Kedar Parasnis	2019-20	Ador Welding Ltd. Pune	1 year	Nil
2	“Effect of welding parameters on dilution, ferrite, chemical composition and corrosion properties in stainless steel strip cladding”.	Dr. Madhu Ranjan, Mr. Akshay Shitole	2019-20	Ador Welding Ltd. Pune	1 year	Nil
3	“Transfer and effect of nitrogen in duplex super duplex and austenitic stainless steel in various welding processes and its effect on mechanical properties”.	Dr. M. J. Rathod, Mr. Siddhant Rakhe	2019-20	Ador Welding Ltd. Pune	1 year	Nil
4	Effect of Carbo-Austempering Process on 20MnCr5 and its validation using MatCalc and JMatPro simulation Softwares.	Dr. A. M. More, Uttam Kadam	2019-20	ARAI, Pune	1 year	Nil
5	Optimization of mechanical properties of AA6061 alloy by optimizing thermomechanical process parameters using MatCalc simulation Softwares	Dr. A. M. More, Yogesh Ambhore	2019-20	ARAI, Pune	1 year	Nil

## ❖ Details of Consultancy Projects: Rs. 7.534 lakhs

Sr. No	Title	Name of the Project Leader	Year in which started	Name of Consultancy	Consultancy Amount (Rs)	Letter No. for ref.
1	Evaluation of wear resistance properties of sugar industry rollers	Dr. N.B.Dhokey	2-May-19	S.B.Resheller Pvt. Ltd. Kolhapur	35400	2372 MT/2019/NBD-01
2	Wear Test Analysis of cast iron roller material used in sugar industries	Dr. N.B.Dhokey	13-Jun-19	S.B.Resheller Pvt. Ltd. Kolhapur	103840	2407 MT/2019/NBD-02
3	Evaluation and sensitivity study of wear coefficients as part of fluid power genome program	Dr. N.B.Dhokey	22-Aug-19	EATON India Innovation Centre LLP	280000	2480 MT/2019/NBD-03
4	Study of heat treatment and vacuum treatment of energy materials and kinetics in rotary kiln	Dr. N.B.Dhokey	27-Aug-19	KPIT Technologies Ltd. Pune	100000	2489 CE/2019/NBD-05
5	Development of graphite-based composite and its wear studies	Dr. N.B.Dhokey	16-Sep-19	EATON India Innovation Centre LLP	220000	2527 MT/2019/NBD-06
6	Analysis and interpretation of phase of residue / deposit of urea dosing systems of BSVI	Dr. N.B.Dhokey	18-Nov-19	Cummins Technologies India Pvt. Ltd.	14160	2620 MT/2019/NBD-07

## ❖ PUBLICATIONS

Sr. No	Name of Department	Research Publications				Total
		National Journal	International Journal	National Conference	International Conference	
1	Metallurgy Engineering	00	14	00	01	15

**National Journals (2019-2020): 00**

<b>Sr. No</b>	<b>Title of the Paper</b>	<b>Authors</b>	<b>Publication Details/Vol.No./ISSN No./ Page No.</b>	<b>National/ International</b>
1	Nil			

**International Journals (2019-2020): 15**

<b>Sr. No</b>	<b>Title of the Paper</b>	<b>Authors</b>	<b>Publication Details/Vol.No./ISSN No./ Page No.</b>	<b>National/ International</b>
1	Polycarbonate–hexagonal boron nitride composites with better dielectric properties for electronic applications	Anita M. Patki, Aniket A. Maharwar, Swapnil K. Harde, R. K. Goyal	A Springer Nature Journal : Applied Sciences June (2019) 1:775 <a href="https://doi.org/10.1007/s42452-019-0781-0">https://doi.org/10.1007/s42452-019-0781-0</a>	International
2	Phase transformations and mechanical properties of thermomechanically processed 34CrMo4 steel	Arun S. Thakare *, S.P. Butee, R. Dhanorkar, K.R. Kambale	Heliyon, 2019, <a href="https://doi.org/10.1016/j.heliyon.2019.e01610">https://doi.org/10.1016/j.heliyon.2019.e01610</a>	International
3	Corrosion protection performance of nano-TiO <sub>2</sub> -containing phosphate coatings obtained by anodic electrochemical treatment	Vaibhav S. Kathavate, Nilesh S. Bagal and Pravin P. Deshpande	Corros Rev 2019; 37(6): 565–578 <a href="https://doi.org/10.1515/corrrev-2018-0094">https://doi.org/10.1515/corrrev-2018-0094</a>	International
4	Impressed Current Cathodic Protection of Low Carbon Steel in Conjunction with Conducting Polyaniline based Paint Coating	Pravin Deshpande, Aniket Kolekar	<i>ISSN 2070-2051, Protection of Metals and Physical Chemistry of Surfaces, 2019, Vol. 55, No. 6, pp. 1236–1241.</i>	International
5	Nano-TiO <sub>2</sub> Phosphate Conversion Coatings – A Chemical Approach	Nilesh S. Bagal, Vaibhav S. Kathavate, and Pravin P. Deshpande	Electrochem. Energy Technol. 2018; 4:47–54	International

6	Thermoelectric Properties of Iron Disilicide and Manganese Silicide: Synthesis and Characterization	V. S. Poddar, N. B. Dhokey	Trans Indian Inst Met <a href="https://doi.org/10.1007/s12666-019-01743-8">https://doi.org/10.1007/s12666-019-01743-8</a>	International
7	Role of nano ZnO particles in the electrodeposition and growth mechanism of phosphate coatings for enhancing the anti-corrosive performance of low carbon steel in 3.5% NaCl aqueous solution	V.S. Kathavate, D.N. Pawar, N.S. Bagal, P.P. Deshpande	Journal of Alloys and Compounds 823 (2020) 153812	International
8	Fabrication of ZnO-functionalized polypyrrole microcomposite as a protective coating to enhance anticorrosion performance of low carbon mild steel	Sudhakar Satpal, Abhijit Bhopale, Pravin Deshpande, Anjali Athawale	J. APPL. POLYM. SCI. 2019, DOI: 10.1002/APP.48319	International
9	Role of nano TiO <sub>2</sub> and nano ZnO particles on enhancing the electrochemical and mechanical properties of electrochemically deposited phosphate coatings	V.S. Kathavate, P.P. Deshpande	Surface and Coatings Technology, May 2020, DOI: 10.1016/j.surfcoat.2020.125902	International
10	Elucidating the deformation modes in incremental sheet forming process: Insights from crystallographic texture, microstructure and mechanical properties	Sumeet Mishra, KU Yazar, Abhishek More, Lailesh Kumar, R Lingam, NV Reddy, Om Prakash, Satyam Suwas	Materials Science and Engineering: A, April 2020	International
11	Incremental Forming of the Al-Li Alloy AA2195: Role of Texture and Microstructure	AM More, R Kalsar, P Shivashankar, R Lingam, NV Reddy, O Prakash, S Suwas	JOM, 72 (4), 1647-1655, April 2020	International
12	Effect of Hot Deformation and Aging of AA7075-Based 10 wt.% Graphite- Reinforced Composite on Wear Behavior and Microstructural Subsurface Deformation	N. B. Dhokey, A. G. Jadhav, M. L. Kandula, V. Nimbalkar	Metallography, Microstructure and Analysis, Volume 9, Year 2020, Pages 393-402	International



13	Evolution of ultrafine precipitates and its influence on wear mechanism in cryoprocessed high nitrogen martensitic steel	A. P. Upadhye, N. Shah, P. Lalge, N. B. Dhokey, T. Tharian	Tribology – Materials, Surfaces & Interfaces Volume 13, 2019 – Issue 4, pp: 223-229	International
14	Significant improvement in Curie temperature and piezoelectric properties of BaTiO <sub>3</sub> with minimum Pb addition	Sandeep Butee, K.R. Kambale, Ajinkya Ghorpade, Abhay Halikar, Rahul Gaikwad and Himanshu Panda	Journal of Asian Ceramic Societies, Vol. 7, Issue 4, Pages 407-416	International
15	Synthesis of High Curie Temperature La <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> Piezoceramic by Mechanochemical Activation: A preliminary Investigation	K.R. Kambale, Ajit R. Kulkarni, Narayanan Venkataramani, Amruta Vairagade, Sandeep Butee	“Advances in Ceramics for Environmental, Functional, Structural and Energy Applications II”, Conference proceedings of MS&T 2018 published by American Ceramic Society, Pages 59-66, ISBN: 9781119631484	International
16	Impact of Sinter Basicity and Alumina on Softening Melting Behavior in Blast Furnace	Vijay Kumar, Dhanraj Patil, K. P. Mrunmaya, Rameshwar Sah & Madhu Ranjan	Trans Indian Inst Met DOI 10.1007/s12666-019-01848-0	International
17	Corrosion behavior of nodular cast iron in biodiesel blends	Sunil Deshpande, Akshay Joshi, Shashikant Vagge, Nitinkumar Anekar	Engineering Failure Analysis Volume 105, November 2019, Pages 1319-1327	International
18	Effect of heat treatment on corrosion behavior of nodular (spheroidal graphite) cast iron using electrochemical tests in biodiesel environments	Sunil Deshpande, Akshay Joshi, Shashikant Vagge, Nitinkumar Anekar	Materials Today Proceedings: Volume 28, Part 2, 2020, Pages 684-692	International

## ❖ PATENTS

Sr. No.	Faculty / Students	Title	Application No. & Date	Status
1.	Prof. N.B. Dhokey, Jay	A MECHANICAL GRINDING SYSTEM AND PROCESS OF	Provisional Patent: E-2/160/2020/MUM Dated:	Filed

	Runwal, Revati Ambekar	SURFACE MODIFICATION OF IRREGULAR SHAPED POWDERS	21/01/2020	
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❖ **BOOKS PUBLISHED**

Sr. No.	Name of the author	Title of the book	Name of the publisher	Date of publication (DD/MM/YYYY)
1	Nil			

❖ **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	09	03	14	00	26

International Conferences Attended					
Sr. No	Title of the Paper	Title of the Conference	Name of the Faculty	Period	Venue
1	Design And Development Of Environment Friendly Material For Thermoelectric Coolers	PM 20 International Conference on Powder Metallurgy and Particulate Material + Exhibition and 46th Annual	N B Dhokey	19th to 21th, Feb 2020	The Lalit Mumbai

		Technical Meeting of PMAI			
2		PM 20 International Conference on Powder Metallurgy and Particulate Material + Exhibition and 46th Annual Technical Meeting of PMAI	S. P. Butee	19th to 21th, Feb 2020	The Lalit Mumbai
3		PM 20 International Conference on Powder Metallurgy and Particulate Material + Exhibition and 46th Annual Technical Meeting of PMAI	K. Kambale	19th to 21th, Feb 2020	The Lalit Mumbai

### National Conferences Attended

Sr. No	Title of the Conference	Name of the Faculty	Period	Venue
1	National Symposium on "Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles"	Madhu Ranjan	3-4 January 2020	Bhau Institute, COEP, Pune
2	National Symposium on "Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles"	S. B. Sarkar	3-4 January 2020	Bhau Institute, COEP, Pune

3	National Symposium on “Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles”	S. P. Butee	3-4 January 2020	Bhau Institute, COEP, Pune
4	National Symposium on “Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles”	N. B. Dhokey	3-4 January 2020	Bhau Institute, COEP, Pune
5	National Symposium on “Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles”	M. J. Rathod	3-4 January 2020	Bhau Institute, COEP, Pune
6	National Symposium on “Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles”	M. G. Kulthe	3-4 January 2020	Bhau Institute, COEP, Pune
7	National Symposium on “Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles”	V. S. Poddar	3-4 January 2020	Bhau Institute, COEP, Pune
8	National Symposium on “Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles”	P. G. Ranaware	3-4 January 2020	Bhau Institute, COEP, Pune

9	National Symposium on “Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles”	V. T. Thavale	3-4 January 2020	Bhau Institute, COEP, Pune
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<b>Workshop Attended</b>				
<b>Sr. No.</b>	<b>Title of the Workshop</b>	<b>Name of the Faculty</b>	<b>Duration and Period</b>	<b>Venue</b>
1.	FDP on” Nanomaterials-Synthesis, Properties and Characterization”	M. J. Rathod	16-20 Dec 2019	Bhau Institute, COEP, Pune
2.	FDP on” Nanomaterials-Synthesis, Properties and Characterization”	S. P. Butee	16-20 Dec 2019	Bhau Institute, COEP, Pune
3.	FDP on” Nanomaterials-Synthesis, Properties and Characterization”	V. T. Thavale	16-20 Dec 2019	Bhau Institute, COEP, Pune
4.	FDP on” Nanomaterials-Synthesis, Properties and Characterization”	M. G. Kulthe	16-20 Dec 2019	Bhau Institute, COEP, Pune
5.	FDP on” Nanomaterials-Synthesis, Properties and Characterization”	V. S. Poddar	16-20 Dec 2019	Bhau Institute, COEP, Pune
6.	FDP on” Nanomaterials-Synthesis, Properties and Characterization”	P. G. Ranaware	16-20 Dec 2019	Bhau Institute, COEP, Pune
7.	Modelling of Engineering Materials	Madhu Ranjan	6-7 March 2020	Bhau Institute, COEP, Pune
8.	Modelling of Engineering Materials	S. B. Sarkar	6-7 March 2020	Bhau Institute, COEP, Pune

9.	Modelling of Engineering Materials	S. P. Butee	6-7 March 2020	Bhau Institute, COEP, Pune
10.	Modelling of Engineering Materials	N. B. Dhokey	6-7 March 2020	Bhau Institute, COEP, Pune
11.	Modelling of Engineering Materials	M. J. Rathod	6-7 March 2020	Bhau Institute, COEP, Pune
12.	Modelling of Engineering Materials	M. G. Kulthe	6-7 March 2020	Bhau Institute, COEP, Pune
13.	Modelling of Engineering Materials	V. S. Poddar	6-7 March 2020	Bhau Institute, COEP, Pune
14.	Modelling of Engineering Materials	P. G. Ranaware	6-7 March 2020	Bhau Institute, 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		01	00	04	05	10
<b>International Conferences Organized</b>						
Sr. No.	Title of the Conference	Name of the Faculty	Period	Venue		
1	Nil					
<b>National Conferences Organized</b>						
Sr. No.	Title of the Conference	Name of the Faculty	Period	Venue		
1	National Symposium on "Opportunities and Challenges in Materials for Energy Generation and Storage for Electric Vehicles"	S. P. Butee, N. B. Dhokey, V. S. Poddar	3-4 January 2020	Bhau Institute, COEP, Pune		

<b>Workshop Organized</b>				
<b>Sr. No.</b>	<b>Title of the Workshop</b>	<b>Name of the Faculty</b>	<b>Period</b>	<b>Venue</b>
1	Powder Metallurgy Short Course (PMSC-19)	N.B.Dhokey, S. P. Butee	26-29 Sept 2019	Bhau Institute, COEP, Pune
2	PROF. BRAHM PRAKASH MEMORIAL MATERIALS QUIZ 2019,	Dr. S. B. Sarkar ,CEO, Engineering and Technology and Dr Madhu Ranjan, Chairman IIM Pune Chapter.	5th August 2019	Department Of Metallurgy & Materials Science, COEP, PUNE
3	FDP on" Nanomaterials- Synthesis, Properties and Characterization"	M. J. Rathod, Rishika Verma, V. S. Poddar	16-20 Dec 2019	Bhau Institute, COEP, Pune
4	Modelling of Engineering Materials	S. P. Butee, N.B.Dhokey, P. G. Ranaware, V. S. Poddar	6-7 March 2020	Bhau Institute, COEP, Pune

<b>Seminar Organized</b>				
<b>Sr. No.</b>	<b>Title of the Seminar</b>	<b>Name of the Speaker, Co-ordinator</b>	<b>Period</b>	<b>Venue</b>
1	Customization of nanomaterials for advanced applications	Dr. Priyesh More from DIAT, Prof. Rishika Verma	23-24 Sept 2019	Department of Metallurgy and Materials Science, COEP
2	A Ion Beams: A Materials Perspective	Dr. Saumitra K Vajandar, Dr. S. P. Butee	4 July 2019	Department of Metallurgy and Materials Science, COEP
3	High Strength and Corrosion Resistant Aluminum Alloys	Dr. Rajeev Gupta, Dr. S. P. Butee	21 June 2019	Department of Metallurgy and Materials Science, COEP
4	Metallurgy of Tire Cord Steel	Prof. Deepak Moghe, Metallurgy and Material Engineering	9 Sept 2019	Department of Metallurgy and Materials Science,

		Department, V.N.I.T., Nagpur, Dr. V. Poddar		COEP
5.	Monitoring and Control of Blast Furnace	Prof. Deepak Moghe, Metallurgy and Material Engineering Department, V.N.I.T., Nagpur, Prof. V. T. Thavale	7 Sept 2019	Department of Metallurgy and Materials Science, COEP

## ❖ AWARDS & HONORS

### ● For Faculty

Sr. No	Name of the Faculty	Name of the Award / Honor	Description	No. of Awards
1	Dr N. B. Dhokey	2nd Prize for Paper Submitted : Design And Development Of Environment Friendly Material For Thermoelectric Coolers	PM 20 International Conference on Powder Metallurgy and Particulate Material + Exhibition and 46th Annual Technical Meeting of PMAI Wed 19th to 21th, Feb 2020 The Lalit Mumbai, Sahar Airport Road, Andheri (East) Mumbai, India	01

### ● For Students

Sr. No	Name of the student	Name of the Award/Achievement	Description	No. of Awards
1.	Akshay Pawar	CET-MBA 2020	Stood 2nd in the state	01
2.	Natasha Nayak	2nd Prize for Paper Submitted : Design And Development Of Environment Friendly Material For Thermoelectric Coolers	PM 20 International Conference on Powder Metallurgy and Particulate Material + Exhibition and 46th Annual Technical Meeting of PMAI Wed 19th to 21th, Feb 2020 The Lalit Mumbai, Sahar Airport Road,	01



			Andheri (East) Mumbai, India	
3.	Harshvardhan Patil	2nd Prize for Paper Submitted : Design And Development Of Environment Friendly Material For Thermoelectric Coolers	PM 20 International Conference on Powder Metallurgy and Particulate Material + Exhibition and 46th Annual Technical Meeting of PMAI Wed 19th to 21th, Feb 2020 The Lalit Mumbai, Sahar Airport Road, Andheri (East) Mumbai, India	01

### ❖ DETAILS OF STUDENTS GONE FOR HIGHER STUDIES

Name of the Student	Name of the University/ institute		Year of Passing
	Foreign	Indian	
Nimish Prashant Nazirkar	Rensselaer Polytechnic Institute 110 8th Street, Troy, NY 12180-3590		2019-2020
Harshvardhan Patil		IISc Bangalore	2019-2020
Parikshit Tamhane	Master's Programme „Advanced Materials and Processes“ (MAP) at the Friedrich-Alexander University Erlangen-Nürnberg (FAU), Germany		2017-2018
Pranav Kulkarni	EPFL Switzerland		2016-2017

### ❖ DETAILS OF STUDENTS' INTERNSHIP PROGRAMME:

Sr.	Name of the	Year (Sy/ Ty/	Name of the	Duration	Stipend
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No.	Student	Final Year)	Organization where the students has done internship		received in Rs. (if applicable)
<b>Department of Metallurgy and Materials Science</b>					
1	Pratik S. Deshpande	TY	BARC, Mumbai	1 month	0
2	Neeta Kamat	TY	BARC, Mumbai	1 month	0
3	Fouziya Anjum	TY	BARC, Mumbai	1 month	0
4	Sanket Sope	TY	BARC, Mumbai	1 month	0
5	Bidisha Gupta	TY	BARC, Mumbai	1 month	0
6	Bidisha Gupta	TY	Rothe Erde India Pvt. Ltd. Nashik	1 month	0
7	Kaushik Sanjay Kulkarni	TY	Metal Impregnation Private Ltd.,Pune	1 month	0
8	Ganesh M. Nigudage	TY	Metal Impregnation Private Ltd.,Pune	1 month	0
9	Ganesh Sonawane	TY	S. B. Engineers, Bhosari, Pune	1 month	0
10	Kirti Y. Talekar	TY	JSW Steel Limited, Dolvi	1 month	0
11	Ashutosh Sawant	TY	Bharat Forge Ltd. Pune	1 month	0
12	Vaishnavi Menon	TY	Swapnil Auto Engg. Pvt. Ltd. Pune	1 month	0
13	Anuja A. Hadke	TY	Orange City Alloys Pvt. Ltd. Nagpur	1 month	0
14	Nikhil R. Biro	TY	Orange City Alloys Pvt. Ltd. Nagpur	1 month	0
15	Shubham Kumar Gupta	TY	Orange City Alloys Pvt. Ltd. Nagpur	1 month	0
15	Bhavesh V. Hume	TY	Orange City Alloys Pvt. Ltd. Nagpur	1 month	0
16	Vishal K. Ghule	TY	Indrani Heat Treaters, Kolhapur	1 month	0
17	Shruti Diwase	TY	Advanced Center for Energetic Materials	1 month	0
18	Shruti Diwase	TY	NRB Bearings Ltd. Aurangabad	1 month	0
19	Yashawardhan B. Falke	TY	NRB Bearings Ltd. Aurangabad	1 month	0
20	Tanushri R. Halmare	TY	Sunflag Iron & Steel Co. Ltd. Warthi	1 month	0
21	Bhavesh V. Hume	TY	Sunflag Iron & Steel Co. Ltd. Warthi	1 month	0

22	Bhavesh V. Hume	TY	Mahindra Sanyo Special Steel Pvt. Ltd.	1 month	0
23	Chinmay V. Patil	TY	Caspro Metal Industries Pvt. Ltd. Kolhapur	1 month	0
24	Rishabh M. Thakre	TY	Caspro Metal Industries Pvt. Ltd. Kolhapur	1 month	0
25	Amol Dalavi	TY	Om Heat Treat Industries, Pune	1 month	0
26	Pandurang Nawale	TY	Om Heat Treat Industries, Pune	1 month	0
27	Neha Patil	TY	Walchandnagar Industries Limited, Pune	1 month	0
28	Rushikesh S. Kothare	TY	Finarc Systems Pvt. Ltd. Pune	1 month	0
29	Abhishek N. Nagare	TY	Finarc Systems Pvt. Ltd. Pune	1 month	0
30	Satyajeet A. Nagargoje	TY	ARS Engineering Pvt. Ltd	1 month	0
31	Hrishikesh K. Sabade	TY	ARS Engineering Pvt. Ltd	1 month	0
32	Rutuja S. Sangale	TY	Vanaz Engineers Limited, Pune	1 month	0
33	Akshata Y. Kadam	TY	Vanaz Engineers Limited, Pune	1 month	0
34	Prashant R. Bade	TY	Garware Polyester Ltd. Aurangabad	1 month	0
35	Prashant R. Bade	TY	Greaves Cotton Ltd. Aurangabad	1 month	0
36	Amey Jadhav	TY	Indometa Forge Pvt. Ltd. Ahmednagar	1 month	0
37	Sujoy S. Shivde	TY	Milman Thin Films Systems Pvt. Ltd.	1 month	0
38	Parth Ashish Rathi	TY	Randack Fasteners India Pvt. Ltd	1 month	0
39	Vishakha Rodge	TY	ARAI Chakan	1 month	0
40	Aditya Phase	TY	HEMRL, Pune	1 month	0
41	Satyam S Sastare	TY	NMRL, Thane	1 month	0
42	Harshada M Bhand	TY	NMRL, Thane	1 month	0
43	Shruti Diwase	TY	NMRL, Thane	1 month	0
44	Taher B Balasinorwala	TY	NMRL, Thane	1 month	0

45	Vismay Chandra	TY	NMRL, Thane	1 month	0
46	Sejal Gandhi	TY	GKN SINTER METALS	1 month	0
47	Nalin Singh	TY	IIT, Kanpur	1 month	0

## ❖ SPECIAL MENTION

### ❖ MEMBERSHIPS TO SOCIETIES

Sr. No	Name of the Society	Name of the faculty/s
1	Indian Institute of Metals	Dr. V. S. Poddar

### ❖ FACULTY MEMBER

Sr. No.	Name of the Faculty	Highest Qualification	Designation	Areas of Interest
1.	Dr. S. P. Butee	Ph.D.	Professor & Head	Electro-Ceramics, Characterization techniques
2..	Dr. N. B. Dhokey	Ph.D.	Professor	Tribology, Powder metallurgy, Energy Materials, Soft Magnetic materials , Cryotreatment of materials
3.	Dr. M. J. Rathod	Ph.D.	Professor	Material joining and Laser material processing
4.	Dr. S. T. Vagge	Ph.D.	Professor	Corrosion and Surface Engg.
5.	N. R. Anand	M.E.	Associate Professor	Heat Treatment
6.	S. U. Dangrikar	M.E.	Assistant Professor	Heat Treatment, Metal Working
7.	Dr. P. P. Deshpande	Ph.D.	Assistant Professor	Conducting polymers and corrosion control of Steels
8.	V. T. Thavale	M.E. (Metallurgy)	Assistant Professor	Powder Metallurgy, Nuclear Materials, Foundry Technology
9.	M. G. Kulthe	M.E. (Metallurgy)	Assistant Professor	Polymer matrix micro and nano composites
10.	R. S. Ranade	M.E. (Metallurgy)	Assistant Professor	Foundry Technology, Extractive Metallurgy, Non Destructive Testing
11.	Dr. A. M. More	M. Tech.	Assistant Professor	Physical Metallurgy, Metal Forming

12.	K. Kamble	M.Tech	Assistant Professor	Ceramic processing, Electroceramics, ionic conductors, composite materials
13.	Dr. V. S. Poddar	M.Tech	Associate Professor	Wire Tech, Electronic and Magnetic Materials, Materials Characterization
14.	Dr. P. G. Ranaware	Ph.D.	Adjunct Faculty	Heat Treatment, Mathematical modeling of materials
15.	Priyangi Kulkarni	M.Tech	Adjunct Faculty	Electro ceramics and composites
16.	Rishika Verma	M.Tech	Adjunct Faculty	Nanomaterials, Polymer composites
17.	Dr. P. R. Khangaonkar	Ph.D.	Visiting Faculty	Physical Metallurgy
18.	Dr. S. B. Sarkar	Ph.D.	Emeritus Professor	Fatigue and Fracture Study, Advanced Steel Making
19.	Dr. Madhu Ranjan	Ph.D.	Emeritus Professor	Forging Technology, Materials Joining, Metal Working

**GATE 2020 Result:**

NAME	MARKS OUT OF 100	AIR	GATE SCORE
HARSHAVARDHAN SANJAY PATIL	65.33	118	640
NATASHA SUNIL NAYAK	56	332	472
PRAFULLA SUBHASH SARODE	61	197	562
VAISHNAVI VIJAY NERPAGAR	54.67	372	448
ANKUSH OMPRAKASH SHENDE	52.67	435	412