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GOVERNMENT ENGINEERING COLLEGE
GANDHINAGAR
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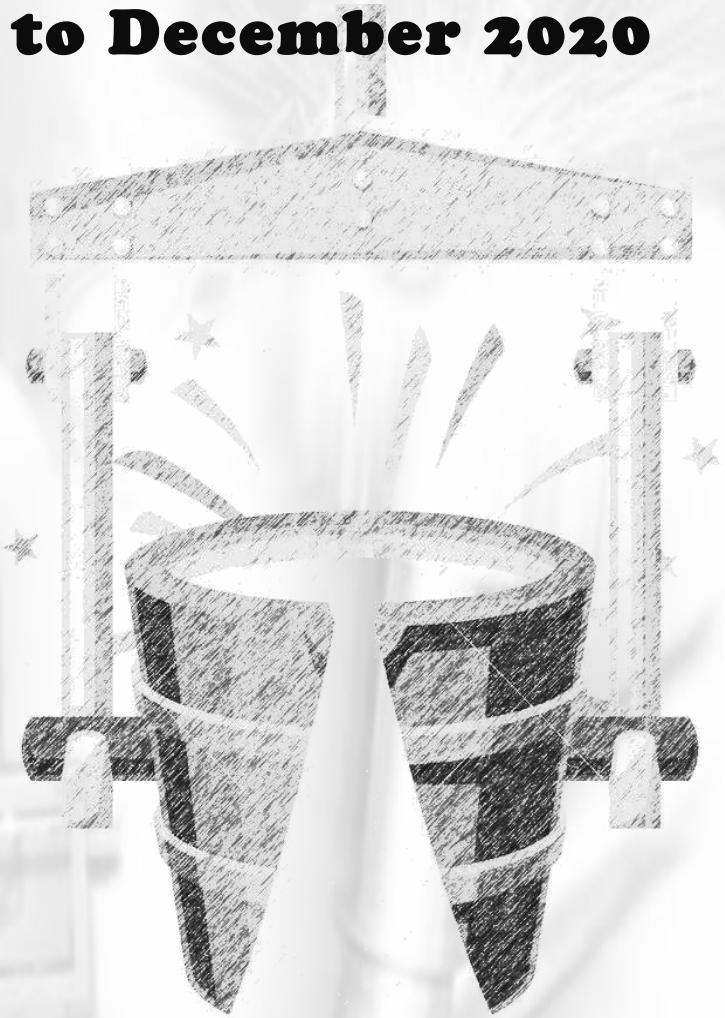
STUDENTS' SOCIETY OF METALLURGY ENGINEERING GANDHINAGAR
SSMEG
ESTD-2012
Regd.No. GUJ/2051/Gandhinagar

NEWSLETTER

METALLURGY DEPARTMENT

July 2020 to December 2020



METALLURGY

GOVERNMENT ENGINEERING COLLEGE
SEC-28. GANDHINAGAR

ABOUT THE INSTITUTE

Established in 2004, Government Engineering College, Gandhinagar (GEC-Gn) takes pride in its highly motivated students. Our students are life-long assets that help this institute to continuously evolve and work towards its Vision. Approved by AICTE. The College is administrated by Directorate of Technical Education, Gujarat State, Gandhinagar. GEC Gn is affiliated to Gujarat Technological University. GEC-Gn offers its students a wide range of courses like Biomedical, Computer, Electronics & Communication, Instrumentation & Control, Information Technology and Metallurgy.

VISION OF THE INSTITUTE

To be a premier engineering institution, imparting quality education for innovative solutions relevant to society and environment.

MISSION OF THE INSTITUTE

- To develop human potential to its fullest extent so that intellectual and innovative engineers can emerge in a wide range of professions.
- To advance knowledge and educate students in engineering and other areas of scholarship that will best serve the nation and the world in future.
- To produce quality engineers, entrepreneurs and leaders to meet the present and future needs of society as well as environment.

ABOUT THE DEPARTMENT

The Metallurgy Department since its inception in 2008 is a backbone of GEC-Gandhinagar's events, research activities and initiatives. It is a unique initiative of Government of Gujarat in the present science and technology education and research scenario of India. At present, the department offers a four year undergraduate course in engineering. Faculty members are good blend of industrial/ academic research experienced, studied from national and state reputed institutes. Department has developed COQ (Centre for Quality) NDT which established under "Vibrant Gujarat–2019"- Financial MOU in collaboration with Gulfnde along with various well equipped metallurgical laboratories.

Currently, the focus of department activities are multi-directional with an emphasis on both research and education. Our collaborations with FCIPT, CFER, INDUS University, PUPU, IIM–Baroda Chapter, IIF- Ahmedabad Chapter, ASM International - Gujarat Chapter, IE–Gujarat Section, etc. Students are encouraged and supported to actively participate in various curricular and non-curricular activities at different level.

VISION OF THE DEPARTMENT

Developing excellence in Metallurgy Engineering education through research, development innovation and team work for the benefit of society and environment.

MISSION OF THE DEPARTMENT

- To prepare competent metallurgy engineers who can apply metallurgical fundamentals to control and manage different metallurgical and materials processing operations to produce quality metals products in industries.
- To deliver information about current trends in the field of metallurgy and materials to the students.
- To encourage students to work on innovative projects related to metallurgy engineering for managing defects free, economical, energy efficient products, processes or devices to best serve the nation to fulfil the socio-economic, techno-commercial and environmental needs.

LIST OF FACULTY MEMBERS WITH QUALIFICATION

Sr. No.	Name of Faculty	Qualification	Designation
1	Dr. I. B. Dave	Ph.D (Met. & Mat. Engg.)	Professor & Head
2	Prof. S. I. Patel	ME (Met. & Mat. Engg.)	Assistant Professor
3	Dr.. D. G. Sharma	Ph.D (Metallurgy)	Assistant Professor
4	Prof. H. H. Jadav	ME (Met. & Mat. Engg.)	Assistant Professor
5	Dr. P. K. Nanavati	Ph.D (Met. & Mat. Engg.)	Assistant Professor
6	Prof. D. V. Mahant	ME (Met. & Mat. Engg.)	Assistant Professor
7	Prof. B. R. Rana	ME (Met. & Mat. Engg.)	Assistant Professor
8	Prof. D. A. Patel	ME (Met. & Mat. Engg.)	Assistant Professor
9	Prof. H. H. Thakar	ME (Met. & Mat. Engg.)	Assistant Professor
10	Dr. M. S. Dani	Ph.D (Metallurgy)	Assistant Professor

INDEX

ACHIVEMENTS OF THE FACULTIES

Dr. I B Dave delivered expert lecture on “Steel properties and its types”” in One Day webinar organized by Mechanical Engineering Department, Government Engineering College Patan on 19/10/2020.

Dr. I B Dave has published a research paper in reputed journal (Details are given in research activity)

Prof. D G Sharma received Ph.D. degree from Gujarat Technological University on 10/9/2020 for his research on “Surface composite manufacturing through Friction stir Processing”.

Dr. D G Sharma has published 3 research papers in reputed journal (Details are given in research activity)

Prof H H Jadav has published 2 research papers and presented 1 review paper in reputed journal (Details are given in research activity)

Dr. P K Nanavati delivered expert lecture at international webinar on “Welding inspection and approvals” organised by Gulf NDE and MSME -PPDC Agra IIW on 20/7/2020.

Expert talk presented by Dr. P. K. Nanavati on Basics of Welding Metallurgy ,Organised by MSME PPDC, Agra Extn. Centre Rajkot, jointly with GulfNde industrial services on 8/8/2020.

Dr P.K.Nanavati delivered a Webinar talk on “Welding Metallurgy of Stainless Steels” organised by (IIW) Student Chapter and Parul University-, on 23 rd Dec 2020,

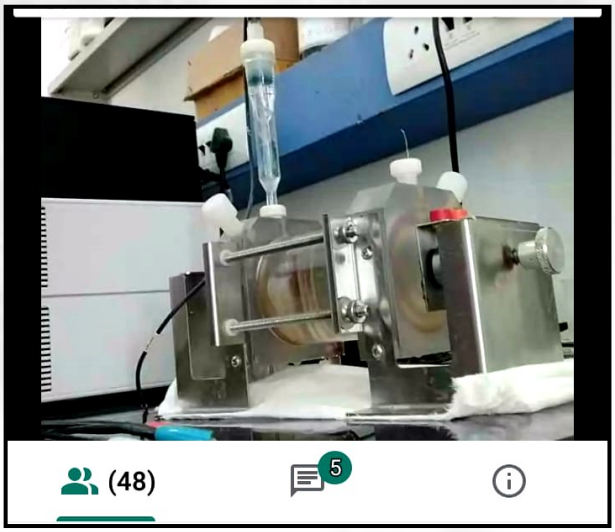
Prof D V Mahant has published a research paper in reputed journal (Details are given in research activity)

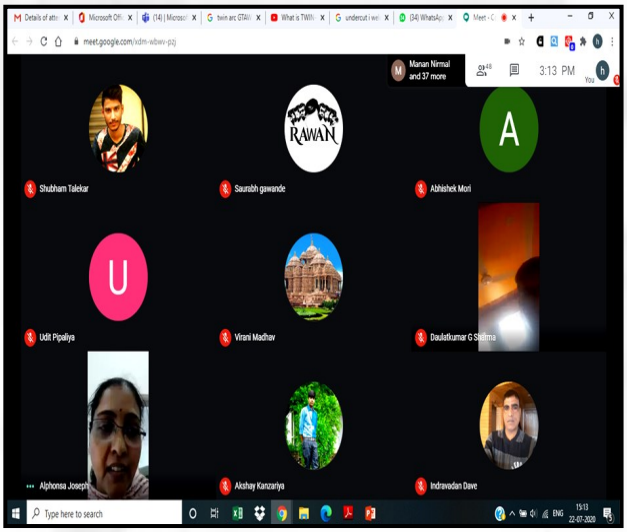
Prof. M S Dani received Ph.D. degree from Gujarat Technological University on 10/9/2020 for her research on “To study Corrosion and Mechanical behaviour of Friction stir processed AZ91 Mg alloy”.

Dr. M S Dani has published a research paper in reputed journal (Details are given in research activity)

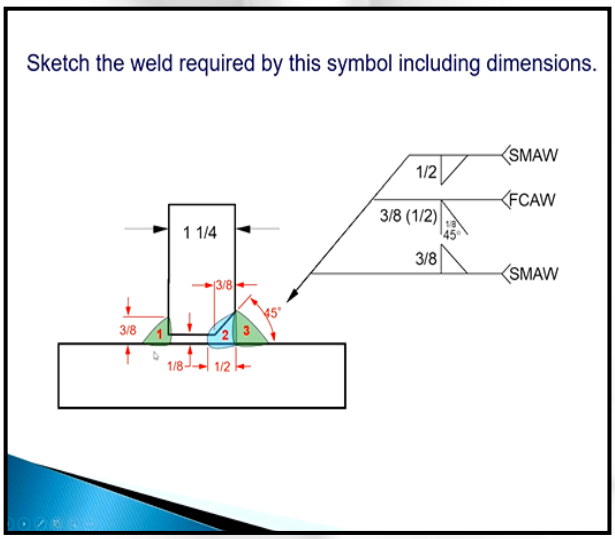
GLIMPSES OF "EXPERT LECTURE/WEBINAR"

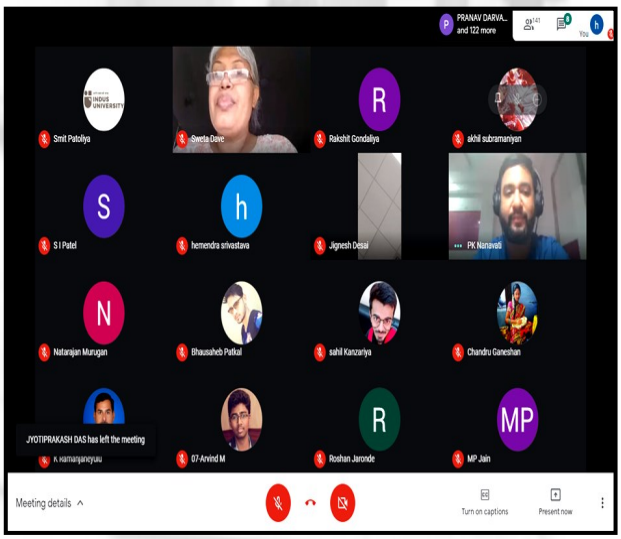
Expert lecture with practical demonstration On "Corrosion test using Potentiostat" by Dr. Alphonso Joseph Palakel, (PSED devision head, Scientific Officer G, FCIPT, IPR, Gandhinaar), was organised by Dr. D G Sharma and Prof. H H Jadav on 22nd July, 2020 , Time: 3.00 pm to 4.30 pm. For Final and Pre-final Year Students, BE, Metallurgy, GEC Gandhinagar. More than 48 students along with Metallurgy engineering faculty members have attended the webinar.





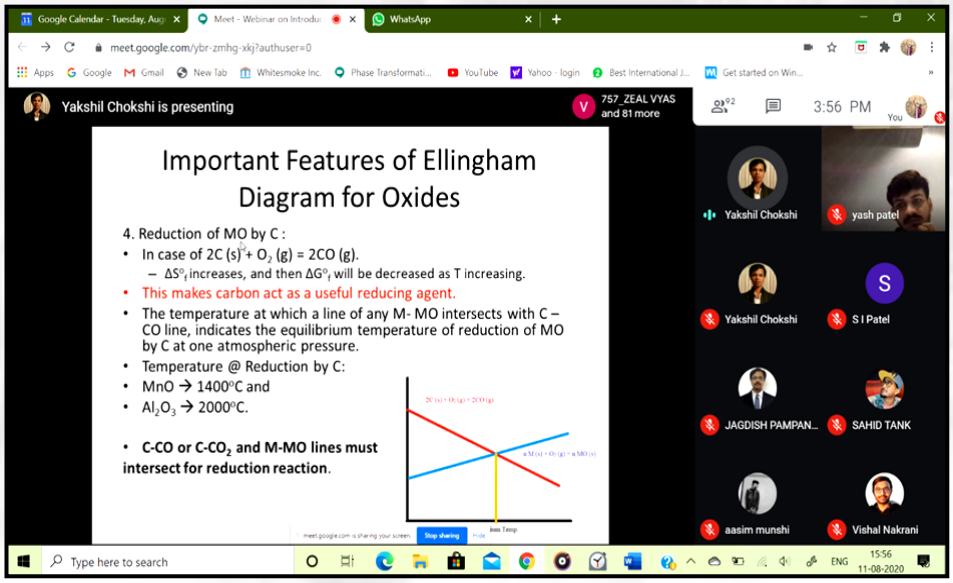
National level webinar on "Design of Weldments" by Mr. Mr. Urvesh Wala (Dy. General Manager Material Engineering Technology, Plant Integrity Division, L&T, Chiyoda, Baroda), was organised on 27/7/2020, 1:00 pm to 2:30 pm by Metallurgy department GEC Gandhinagar in association with IIM Baroda chapter . This webinar was organised by Dr. P K Nanavati and Prof. H H Thakar. More than 150 participants from various institutes and industries of our country have attended the webinar.

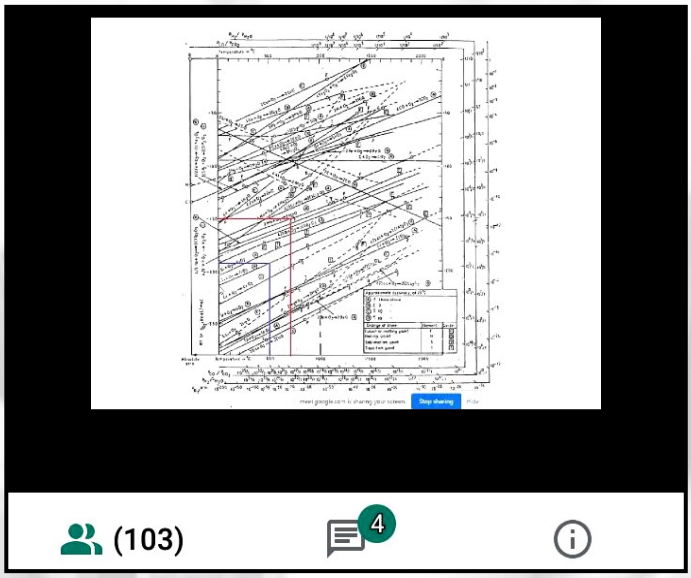




GLIMPSES OF "EXPERT LECTURE/WEBINAR"

Online free webinar on "Introduction to Ellingham Diagram" by Mr. Yakshil B. Chokshi (Lecturer GP , Rajkot) was organised on 11/8/2020 by Metallurgy department GEC Gandhinagar. This webinar was organised by Dr. M S Dani. More than 194 participants have attended this webinar from various institution like Govt. Polytechnic Rajkot, Govt. Polytechnic Bhuj, S S Gandhy College surat, M. S. University Baroda, Parul University etc.

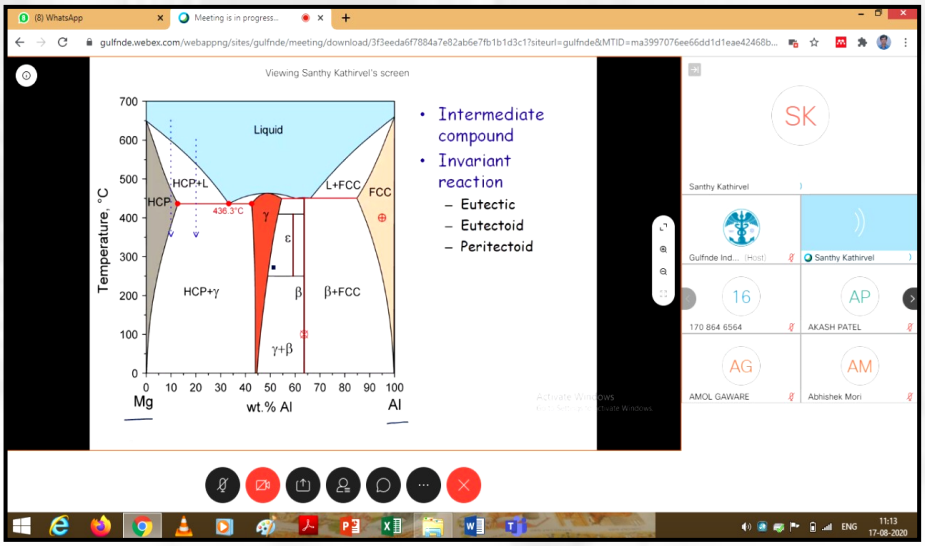


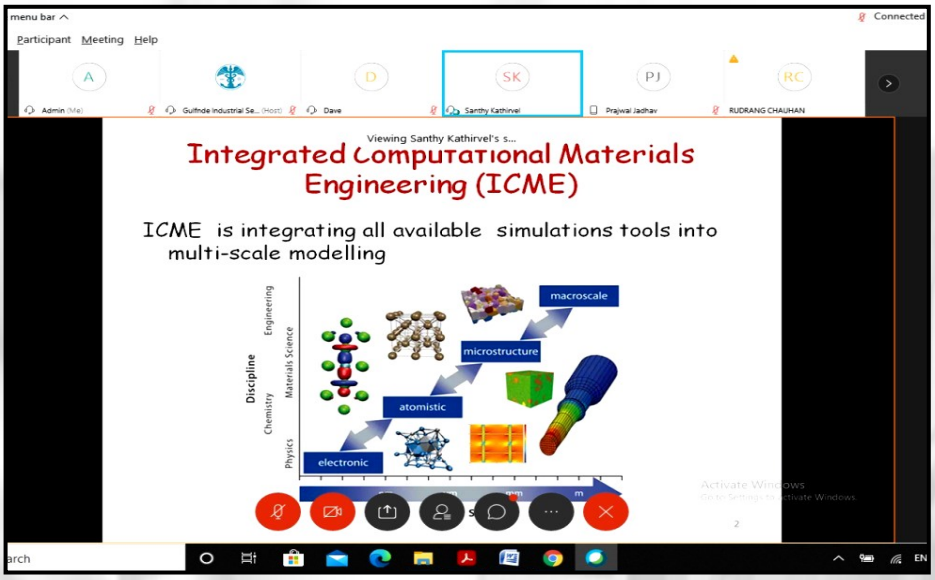


International webinar on "Industrial NDT, Welding and ASME standards" was jointly organised by Gulf NDE and Centre of Quality, Metallurgy Department, GEC Gandhinagar on 9/9/2020 having more than 160 participants 50 + industrial participation Companies - SGS India, Bharat forge, Sainest tube, Kelvion India, Essar, DNVGL University - IIT Kharagpur, IIT Bombay, Mahatma Gandhi Institute of Technology Hyderabad, M S University Baroda.

GLIMPSES OF "EXPERT LECTURE/WEBINAR"

Metallurgy Department GEC Gandhinagar in association with Department of Materials & Metallurgical Engineering IITE, Indus University has organised an online free webinar on "Development of Multi - component Phase Diagram -The CALPHAD Approach" on 17/8/2020 at 10:30 AM to 12:30 PM. Session was delivered by Dr. K Santhy, Associate Professor and Head, Materials & Metallurgical Engineering IITE, Indus University. The event is under coordination of Dr. P K Nanavati and Prof D V Mahant. More than 130 participants from various reputed universities and well known industries have participated in this session.





"Indigenous instrumentation for nanotechnology (IINT 2020)" was organised by Dept of Metallurgical Engg, BIT, Sindri, Dhanbad, Jharkhand, on 11/09/2020. Fruitful information on processing and characterization of nano materials was shared in this webinar. 28 Students of 5th sem Metallurgy department along with prof B.R. Rana have participated in this webinar.

GLIMPSES OF "WEBINAR SERIES"

A One Week Webinar Series on
PROCESSING AND CHARACTERIZATION OF MATERIALS (PCM 2020)
12TH TO 16TH OCTOBER, 2020

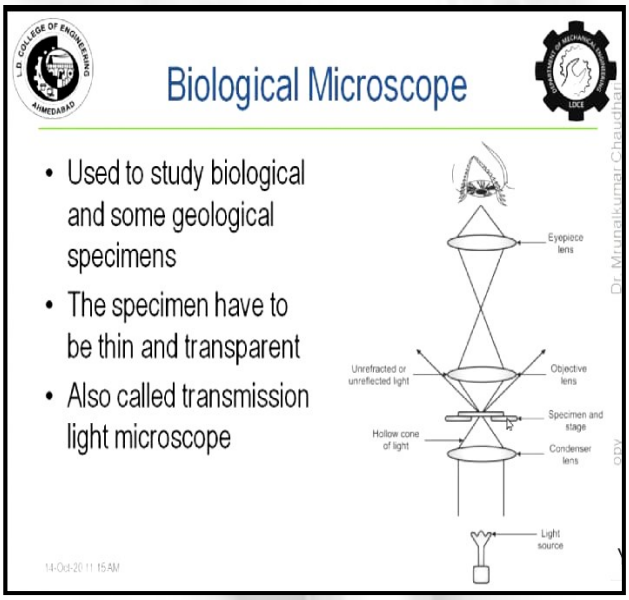
Date	Time	Topic	Speakers	Coordinators
12-10-20	3.15 pm to 5.15 pm	Corrosion and Passivity	Dr. S.B. Arya NIT, Surathkal	Dr. D. G Sharma Prof. D. V. Mahant
13-10-20	11.00 am to 01.00 pm	Ultrasonic Testing and Advance Ultrasonic Testing	Mr.Yatin Raval NDT Inspector	Prof. H. H. Jadav Prof. D. V. Mahant
14-10-20	11.00 am to 01.00 pm	Electron Microscopy	Dr. Mrunal Chaudhari LDCE, Ahmedabad	Dr. D. G Sharma Prof. B.R. Rana
15-10-20	11.00 am to 01.00 pm	Significance of Numerical Studies for a Metallurgist - An Overview	Mr. Prashant Shelar University of Western Ontario, Canada	Prof. D. V. Mahant Prof. D. A. Patel
16-10-20	02.00 pm to 4.00 pm	Advances in Iron and Steel Making	Dr. Sujoy Chaudhury Indus University Ahmedabad	Dr. D. G Sharma Prof. B.R. Rana

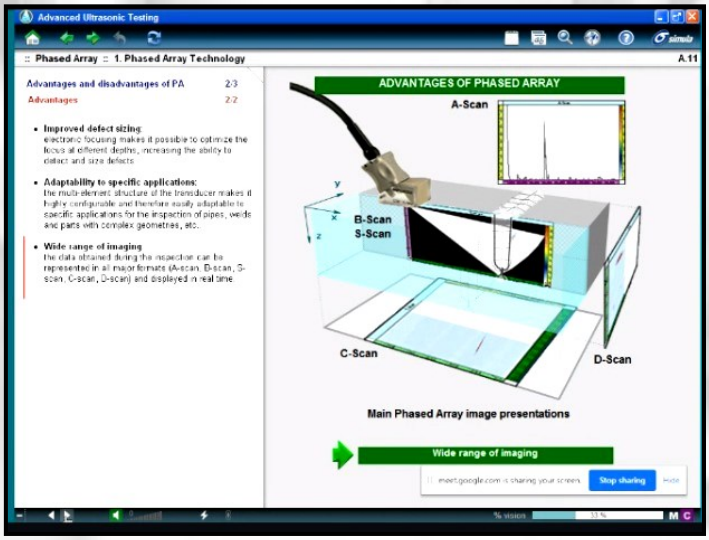
As part of celebration of IIM Baroda Chapters Golden jubilee Year (2020-21), One week Webinar series "Processing and Characterization of Materials" (PCM-2020) jointly organized by IIM Baroda Chapter & Metallurgy Department, GEC Gandhinagar during 12th to 16th October 2020

In the inaugural session Mr.Kushal Saha, Secretary General, The Indian Institute of Metals has given Directorial address as Chief Guest. Dr Sunil Kahar, Chairman, IIM Baroda Chapter has presented activities of IIM Baroda Chapter while Dr. S. P. Dave, Principal, GEC-Gandhinagar has given Inaugural Address, Convener Dr. I. B. Dave, HOD, Metallurgy, GEC-Gandhinagar has brief about Metallurgy Department and Event:. Coordinator Dr. Daulat Kumar Sharma, EC member, IIM Baroda Chapter & TPO & Asst. Prof GEC , Gandhinagar has proposed voted of thank. Prof. D V Mahant also coordinator.

Total more than 250 delegated from 65 Cities of 18 states in capacity of Director, MD, Assistant manager , Plant inspector, Sr Manager , QA Engineer, Manager , Integrity Section Leader from 19 Industries, scientific officer from 5 Govt of India organization, Professor, Associate professor, Assistant Professor, Phd Research scholar , UG & PG students from more than 40 University /Colleges , IITs & NITs has been registered.

GLIMPSES OF "WEBINAR SERIES"





GLIMPSES OF "WEBINAR SERIES"

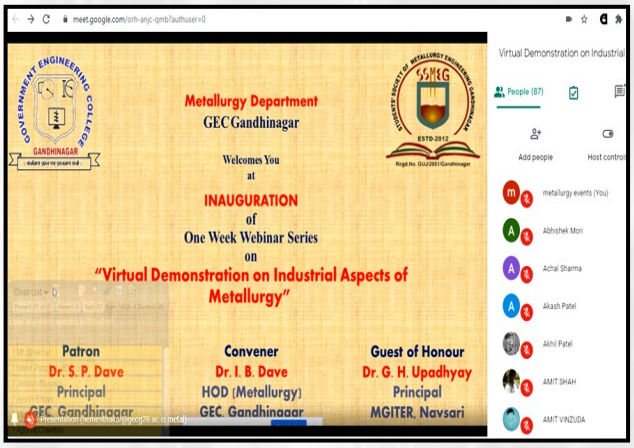
Alumni are the brand-ambassadors of the institution they graduated from. alumni can play an active role in voluntary programmes like mentoring students in their areas of expertise. Alumni is a huge talent pool whose guidance can be beneficial to many students and other fellow-alumni in their respective areas of study. With this viewpoints, under the guidance of Dr. S. P. Dave, (Principal, GEC Gandhinagar), Metallurgy department, GEC Gandhinagar has organized a one week online webinar series on "Virtual Demonstration on Industrial Aspects of Metallurgy" in association with alumni association Students Society of Metallurgy Engineers Gandhinagar during 2/11/2020 to 6/11/2020, 3:15 PM to 5:15 PM.

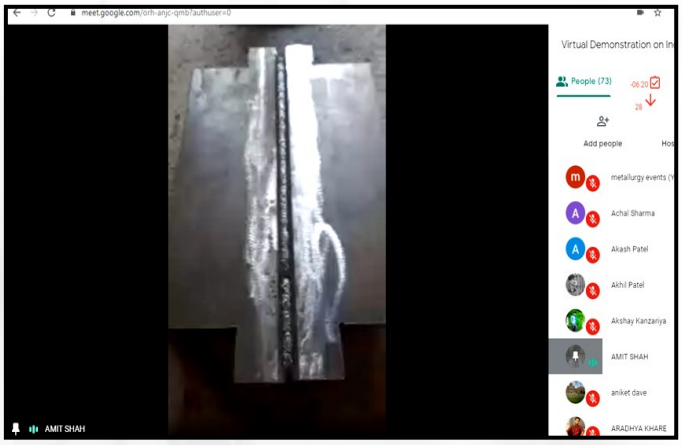
This webinar was coordinated by Prof. H. H. Thakar and Dr. M. S. Dani. Motive of this event was to give practical exposure to students and make them familiarise with various aspects of industrial metallurgy by giving a live demonstration.

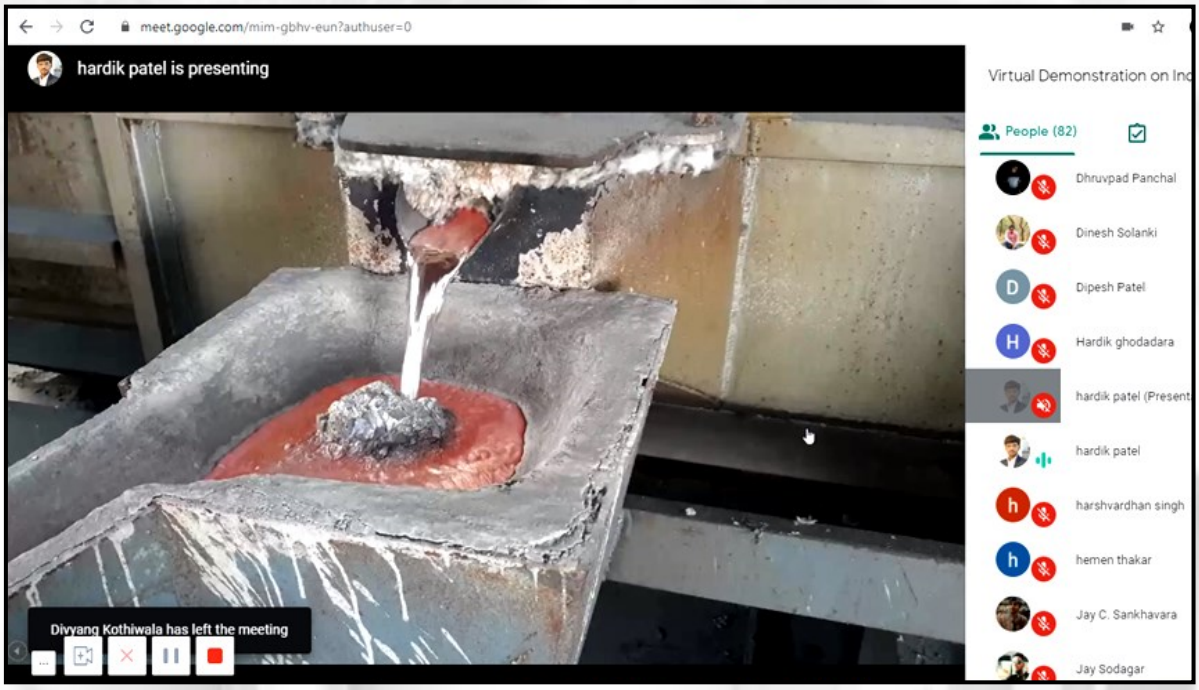
The webinar was inaugurated on 2/11/2020 3:15 PM by Dr. I. B. Dave, HOD Metallurgy Dept. and Dr. G. H. Upadhyay, Principal, MGITER. Navsari. More than 100 participants like current students and alumni were remain present. Online practical session and expert lectures were given on various topics of metallurgy during this event. Uniqueness of the event was the expert speakers, being alumni of the department and currently working on remarkable positions in reputed industries at national and international level. Schedule of the event was as follows,

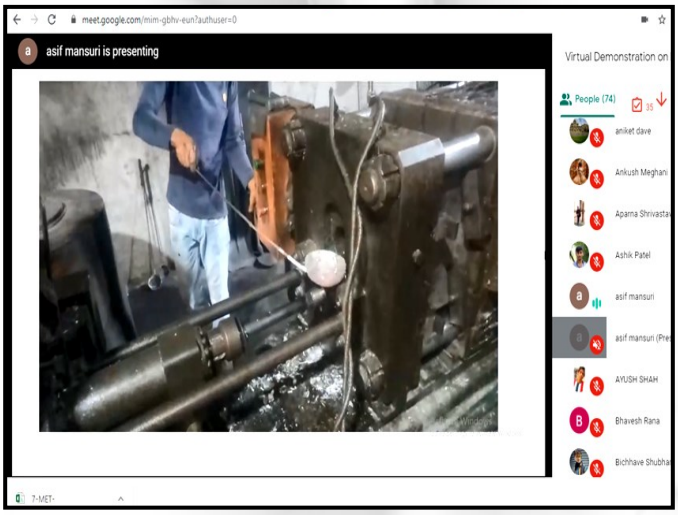
Date	Expert Details	Topic
2/11/2020	Mr. Amit Shah Sr. Welding Executive, Thermax Ltd. Vadodara	"Welding documents and processes"
3/11/2020	Mr. Viraj Vyas Supplier Quality Er. SPXFLOW Technology India Pvt. Ltd. Mr . Deepak Prasad APAC Quality Leader, SPXFLOW Technology India Pvt. Ltd.	"5S, Mistake Proofing (Pokayoke) & 8 Waste"
4/11/2020	Mr. Keyur Panchal Product support service engineer, Metso India Pvt. Ltd. Mr. Nakul Dholu Sr. Metallurgical Engineer, Cummins Inc, Columbus USA	"Crushing and screening of aggregate and mining" "Basics of failure analysis"
5/11/2020	Mr. Ashish Patel Technical Manager, Gulfnde Industrial services	"Industrial NDT Techniques and Standards"
6/11/2020	Mr. Hardik Patel Director, Devashree Aluminum Pvt. Ltd. Vijapur Mr. Aasif Mansuri Joint Managing Director, Honest Metal Cast Ltd.	"Essentials of Aluminum Melting & Casting Technology"

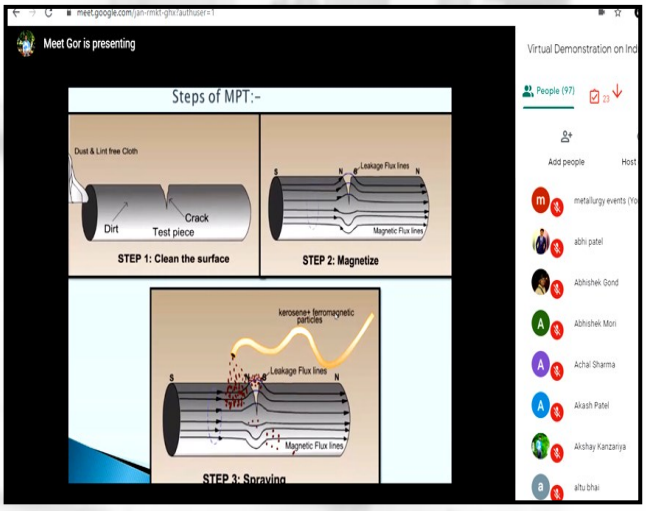
GLIMPSES OF "WEBINAR SERIES"





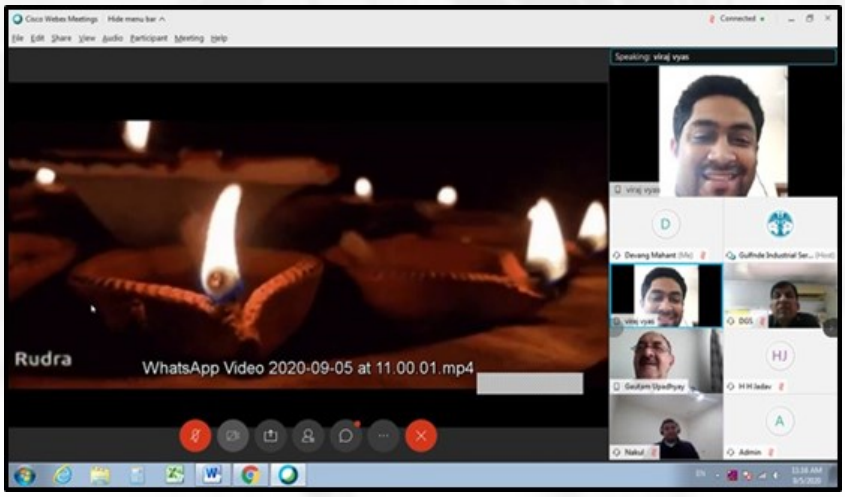






CELEBRATION OF "DAYS"

Online Teacher's day was celebrated by metallurgy department, GEC Gandhinagar on 5/9/2020 from 11:00 AM to 12:00 AM on WebEx platform. More than 48 alumni from various countries like Germany, USA and current students have joined the event. Event started with virtual lightening of lamp and prayer by Mr.Viraj Vyas. A video has been shared by alumni in respect of all teachers. Dr. I B Dave shared a motivating speech on the auspicious day. Mesmerising speech was given by Dr. G H Upadhyay. All the faculties have shared their feeling and wished all the students. Various alumni working in various industries and associated in higher studies in various reputed institutes have shared their experience which was very helpful in terms of guiding existing students of the department. Program was concluded with vote of thanks by Prof. B R Rana.



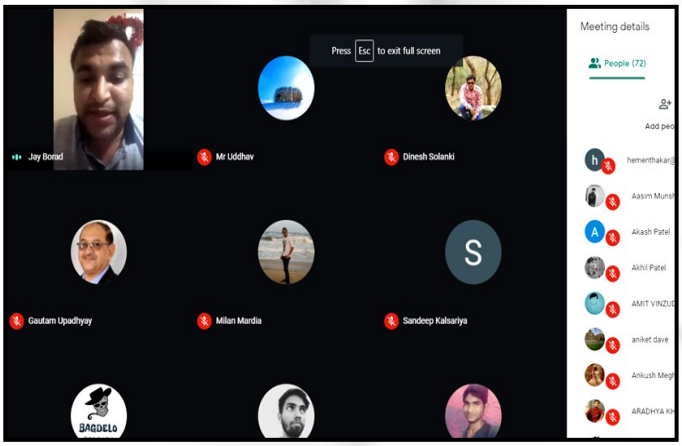
The Engineering community is celebrating the Engineer's day on 15th September every year as a remarkable tribute to the greatest Indian Engineer Bharat Ratna Mokshagundam Visvesvaraya. The Metallurgy Department of Government Engineering College, Sector 28, Gandhinagar believes in overall development of students by virtue of which Metallurgy Department celebrated Engineer's Day on 15/09/2020, Tuesday by conducting the national level online quiz on material science. This event was coordinated by Prof. B R Rana and Prof H. H Thakar. 194 participants had attempted the quiz and received certificate of participation. The Metallurgy Department, GEC, Gandhinagar expressing the deep thanks for the registration as well as active participation. The participants were belong to different Government institution, Private colleges, grant in aid colleges, industries, Alumni students all across the country.

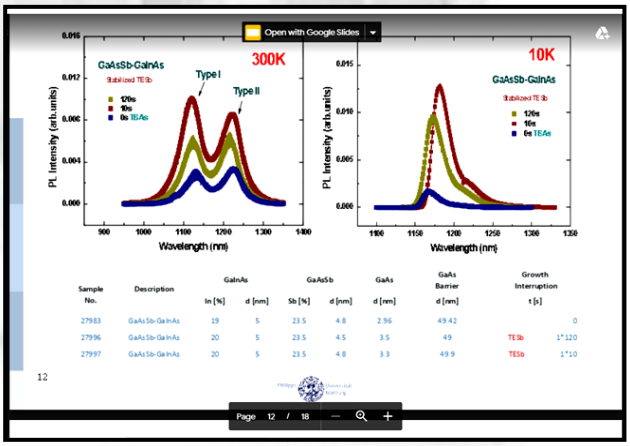
GLIMPSES OF "ALUMNI/STAKEHOLDERS MEET 2020"

The Department of Metallurgy Engineering have organized an expert talk by Alumni in this meeting for all current batches and pass out 2020 students on 11th October 2020 on the Google Meet Platform between 10 to 12 pm. The meeting started at 10.00 a.m. with welcome introduction by Dr I B Dave , HOD, Metallurgy . He handed over programme hosting to Dr. Minal Dani for introduction of Experts who are Alumni of GEC, Metallurgy Department . Expert talks on two different topics were delivered by alumni experts. Approximate 82 current students from all batches and faculty members from Metallurgy and Mechanical Engineering and Dr. G H Upadhyay sir who was former HOD of Metallurgy department have participated in this event. Dr. G H Upadhyay sir have blessed and motivated HOD sir Dr. I B Dave, both alumni experts and all departmental staff with his good wishes. Alumni Experts and faculty members have shared the memories, The event was stimulating and enjoyable and simultaneously profitable as all insights came up.

At the end, the Metallurgy Department alumni coordinator Dr. Dani Minal Sanjay ,sincerely expressed its gratitude to the honorable Principal Madam , Dr. G H Upadhyay sir and Dr. I B Dave sir Head of Metallurgy Department for their guidance and support to make this event a grand success and thanks to Prof. H H Thakar for background support, all Faculties, students ,Staff Members of metallurgy and Mechanical Engineering department and Alumni for attending Expert talk during Alumni Meet and contributing towards making it such an unforgettable holiday.

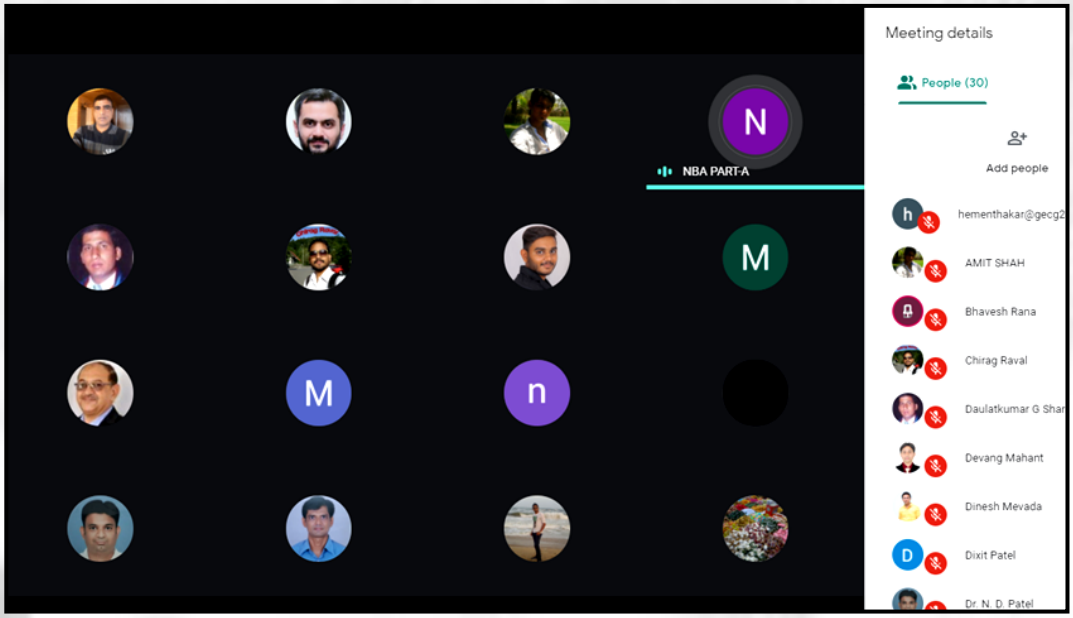
Sr. No.	Expert Details	Topic
1	**Mr. Jay Borad** Alumni student batch 2017 pass out GEC, Met department have finished his masters in ME (Materials Engineering) from Windsor University, Canada. At present he is working in Astrex Inc, Windsor as Quality Technician	**"Tensile and etching behaviors of extruded aluminum components"**
2	**Mr. Milan Maradiya** Alumni student batch 2015 pass out GEC, Met department have finished his masters in M.Sc. (Functional Materials) from Philips University, Germany. At present working as Research Assistant in same department	**"An optical spectroscopy of type II transition in 3-5 heterostructure for different growth interruption"**





GLIMPSES OF "ALUMNI/STAKEHOLDERS MEET 2020"

Metallurgy Department, Government Engineering college, Gandhinagar has organised a stakeholders meeting on 11/10/2020 at 12-1 PM. Meeting started with welcome address by Dr. P K Nanavati. Prof. and head of department Dr. I B Dave discussed about institute and department's Vision and Mission. Further Dr. I B Dave represented various activities done at the metallurgy department. He justified that the vision statement is in-line with the research as most of the staff is involved in various research activities like Doctoral studies, SSIP projects, and publishing technical papers in reputed journals. More than 30 stakeholders were remained present during the meeting and have given their views regarding Vision and Mission of the department.



PEDAGOGY SESSION

Prof B R Rana presented his research work on "Development of super hydrophobic surface" on 5/12/2020. He described various research findings and attempts made for development of super hydrophobic surface on various objects for water repellent properties. Faculties from Metallurgy and Mechanical engineering department have attended the session.

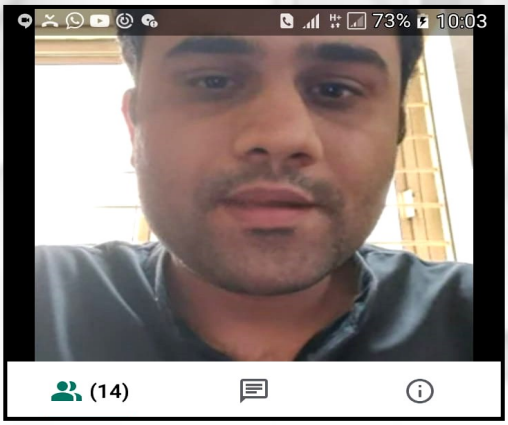
RESEARCH ACTIVITIES

Research Paper counter	Previously published	Addition	Total
	17	7	24

Sr. No.	Faculty	Title of the Paper	Conference/Publication
1	Dr. M S Dani Dr. I B Dave	"Grain refinement and improvement in micro hardness of AZ91 Mg alloy via Friction stir processing.	2nd International Conference on Recent Advances in Mechanical Infrastructure 21st - 23rd August 2020 @ IITRAM
2	Prof. H H Jadav	"Applicability of Bobbin Tool Friction Stir Welding for Dissimilar Al-Mg Joint"	
3	Dr. P K Nanavati	"A study on the comparison between activated TIG variants on the weld bead profile of P91 Steel. Part: 1",	
4	Dr. D G Sharma Prof. H H Jadav Prof D V Mahant	"Surface Composite AA6061/SiC Manufactured by Hole and Groove Method Friction Stir Processing",	
5	Prof. H H Jadav (Presented)	"A Review on Effect of Friction Stir Processing on the Welded Joints"	I[ST] International Conference on Energy, Material science & Mechanical Engineering 2020 on 31 Oct 2020 @ NIT Delhi
6	Prof. H H Jadav Dr. D G Sharma	"Effect of pin diameter and different cooling media on friction stir welding of dissimilar Al-Mg alloys"	Materials Today Proceedings (in press)
7	Dr. D G Sharma	"Different reinforcement strategies of hybrid surface composite AA6061/ (B_4C+MoS_2) produced by friction stir processing"	Journal of Material Science & Engineering Technology on 10th November 2020

RESEARCH SUPPORT

Metallurgy and mechanical department faculties interacted with Mr. Ronaksinh Parmar, (MS from Texas, USA, Director Devine laboratory) regarding SSIP projects and several different areas for possible research scope were discuss in detail with interactive questions and answers. This discussion ended with confirmation of technical support from Mr. Ronaksinh Parmar for promoting research activities like 3D printing, super-hydrophobic surface development etc at the department.



TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr. No.	Name of the Faculty	Title of Training/ Activity	Duration	Organizer
1	Dr. I B Dave	"COMPREHENSIVE ONLINE INTELLECTUAL PROPERTY RIGHTS (IPR)"	06/07/2020 to 14/09/2020	Gujarat Student Start-up and Innovation Hub (i - Hub)
2	Prof. S I Patel			
3	Prof. D G Sharma			
4	Prof. H H Jadav			
5	Dr. P K Nanavati			
6	Prof. D V Mahant			
7	Prof. B R Rana			
8	Prof. D A Patel			
9	Prof. H H Thakar			
10	Dr. I B Dave	UDAYAM (Unlimited Digital Advanced Yearlong Academic Method of Learning) E-Content Development Course	28/07/2020 to 18/08/2020	Knowledge Consortium of Gujarat, Ahmedabad and HRDC, Gujarat University
11	Prof. S I Patel			
12	Prof. D G Sharma			
13	Prof. H H Jadav			
14	Dr. P K Nanavati			
15	Prof. D V Mahant			
16	Prof. B R Rana			
17	Prof. D A Patel			
18	Prof. H H Thakar			
19	Dr. I B Dave	International Webinar on "Hardfacing- Industrial Applications"	05/08/2020	Department of Metallurgical and Materials Engineering, MAHATMA GANDHI INSTITUTE OF TECHNOLOGY, Hyderabad
20	Dr. I B Dave	Webinar on "W10- Applying for accreditation"	20/08/2020	NITTTR, Bhopal
21	Dr. I B Dave	Webinar on "W11- Planning Required During the visit and Post- visit Activities"	25/08/2020	NITTTR, Bhopal
22	Dr. I B Dave	Webinar on "W12- Action plan to prepare Institute for accreditation"	27/08/2020	NITTTR, Bhopal
23	Prof. S I Patel	Webinar on "W10- Applying for accreditation"	20/08/2020	NITTTR, Bhopal

TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr. No.	Name of the Faculty	Title of Training/Activity	Duration	Organizer
24	Dr. D G Sharma	Intelligent Revolution Technology in Welding Solutions for Welding Challenges in Advance Manufacturing and Industry 4.0	28/11/2020	Indian Institute of Metals
25	Dr. D G Sharma	"CORROSION BEHAVIOUR OF FRICTION STIR WELDED AA 7075-T651 ALLOYS"	24/7/2020	IIW- PDPU students chapter, Gandhinagar
26	Dr. D G Sharma	webinar on 'In conversation with Padma Shri T.V. Mohandas Pai'	02/07/2020	i-Hub, Gujarat
27	Dr. D G Sharma	International Virtual Conference on "High-Performance Materials for Energy, Environment & Healthcare in the Digital Era"	30/06/2020 to 01/07/2020	Centre for Materials Technology, School of Advanced Sciences, VIT, Vellore
28	Dr. D G Sharma	National e-conference on Recent Advances in Materials Science & Nanotechnology	01/08/2020 to 02/08/2020	Department of Physics Yashwantrao Chavan College Aurangabad, Maharasthra.
29	Dr. D G Sharma	National Webinar on "Opportunities and Challenges in Friction Stir Welding and Processing of Nickel Based Superalloys"	01/08/ 2020	Department of Metallurgical and Materials Engineering, Mahatma Gandhi Institute of Technology, Hyderabad
30	Dr. D G Sharma	"Understanding Tribology of Materials for Better Deployment in Application"	10/07/ 2020	IIW- PDPU students chapter, Gandhinagar
31	Dr. D G Sharma	"Superplasticity in Non Ferrous Metal"	15/07/2020	IIW- PDPU students chapter, Gandhinagar
32	Dr. D G Sharma	Online Short-Term Course on "Cryogenics and Composites: Theory and Applications (CCTA 2020)"	03/07 2020	Dr. B R Ambedkar National Institute of Technology Jalandhar
33	Dr. D G Sharma	Webinar Series "RECENT TRENDS IN METALLURGY"	19/10/2020 to 23/10/2020	Metallurgy Department, Dr. S. & S. S. Ghandhy College of Engg. & Tech., Surat
34	Dr. D G Sharma	QUIZ ON HUMAN RIGHTS	10/12/2020	Department of Physical Education and Sports, Government College Jaipur
35	Prof. H. H. Jadav	Nurturing Innovation and Startup Ecosystem (NISE)	08/09/2020 to 24/10/2020	GKS, I-Hub
36	Prof. H. H. Jadav	Theory and Practice of Non Destructive Testing	Jan-April 2020	NPTEL Online Certification Course
37	Prof. B R Rana	Webinar on Teacher Support Program - workshop	05/11/2020	University of Cambridge
38	Prof. H H Thakar	Short term Training Programme on "INDUCTION PHASE 2"	19/10/2020 to 30/10/2020	NITTTR, Bhopal
39	Prof. H H Thakar	Webinar on "W10- Applying for accreditation"	20/08/2020	NITTTR, Bhopal
40	Prof. S I Patel	MOOC on Steel Quality: Role of secondary refining & cont. casting	Jan-April 2020	NPTEL Online Certification Course

STUDENT ACHIEVEMENTS

Semester 3 student Madhu Chaudhari represented Metallurgy Department GEC Gandhinagar by winning a Kabaddi tournament organized at PDPU in March 2020.

CAMPUS PLACEMENTS

Sr. No.	Name of Student	Name of Industry/Institute
1	Subham Singh Gangwar	OCEAN Steels Pvt. Ltd.
2	Jigar Parmar	OCEAN Steels Pvt. Ltd.
3	Suyash Shrivastav	OCEAN Steels Pvt. Ltd.
4	Hemang Vasani	OCEAN Steels Pvt. Ltd.
5	Chirag Modasiya	Sakar Industries Ltd.
6	Raj Devani	Sakar Industries Ltd.
7	Parth Rana	Sakar Industries Ltd.
8	Uddhav Bhatt	ME Welding Tech (MSU Baroda-L&T sponsored)
9	Jignesh Mori	ME Welding Tech (MSU Baroda)

ટ્રેલર ભુજ તરફથી ડીસા તરફ આવી રહ્યા હતા. ડીસાના આખોલ ચાર રસ્તા પર આવેલ બ્રિજ પર એક ટેલર સ્પીડ બ્રેકર જોઇ બ્રેક મારતા બનાવના પગલે ઘટના સ્થળે લોકો દોડી આવ્યા હતા. આગ ભયાનક લાગતા ટ્રેલરમાં સવાર ડ્રાઇવર બળીને ભડથું થઈ ગયો હતો. એન ક્લિનિક ગંભીર રીતે ઘાયલ થતા સારવાર માટે ડીસા સિવિલ માટે ખસેડાયો હતો.

આગે વિકરાળ સ્વરૂપ ધારણ હતો. તેમજ ડીસા તાલુકા પોલીસને તેમજ હાઇવે ઓથોરીટીને જાણ કરતા ડીસા તાલુકા પોલીસ તેમજ હાઇવે ઓથોરિટી ઘટના સ્થળે દોડી આવી હતી. ટ્રાફિકને દુર કરી મૃતકની લાશને બહાર નીકળી ડીસાના સિવિલ પીએમમાં મોકલી વધુ તપાસ હાથ ધરી હતી.

આર.એન.પટેલ પ્રાયમરી સ્કુલ દ્વારા ઓનલાઈન સ્પર્ધા

ગાંધીનગર,બુધવાર

સર્વ વિદ્યાલય કેળવણી મંડળ સંચાલિત આર.એન.પટેલ પ્રાયમરી સ્કુલ દ્વારા ધોરણ-૮ના વિદ્યાર્થીઓ માટે તાજેતરમાં ઓનલાઈન વકૃત્વ સ્પર્ધાનું આયોજન કરવામાં આવ્યું હતું. કોરોનાની વૈશ્વિક મહામારી, ઓનલાઈન એજ્યુકેશનના લાભ - ગેરલાભ તથા અખંડ ભારતના શીલ્પી સરદાર વલ્લભભાઈ પટેલ જેવા વિષય સાથે યોજાયેલી વકૃત્વ સ્પર્ધામાં શાળાના વિદ્યાર્થીઓએ ઉત્સાહભેર ભાગ લીધો હતો.

સરકારી ઈજનેર કોલેજ દ્વારા ઓનલાઈન વેબીનાર

ગાંધીનગર,બુધવાર

સરકારી ઈજનેર કોલેજ સેક્ટર-૨૮ ગાંધીનગર ખાતે મેટલર્જી વિભાગ દ્વારા ઓનલાઈન સપ્તાહિક વેબીનારનું આયોજન તા.૨ થી ૬ નવેમ્બર દરમિયાન કરાયું છે. વિભાગના ભૂતપૂર્વ વિદ્યાર્થીઓના સહયોગથી આયોજીત કરાયેલાં વેબીનારમાં તજજ્ઞો દ્વારા માર્ગદર્શન પુરુ પાડવામાં આવી રહ્યું છે. હાલની પરિસ્થિતિમાં વિદ્યાર્થીઓને વિવિધ ઔદ્યોગિક એકમોમાં લાઈવ ડેમોટ્રેશન દ્વારા વિષયને અનુરૂપ પ્રાયોગિક જ્ઞાન આપવાનો હેતુ વેબીનારમાં રજૂ કરવામાં આવ્યો છે.

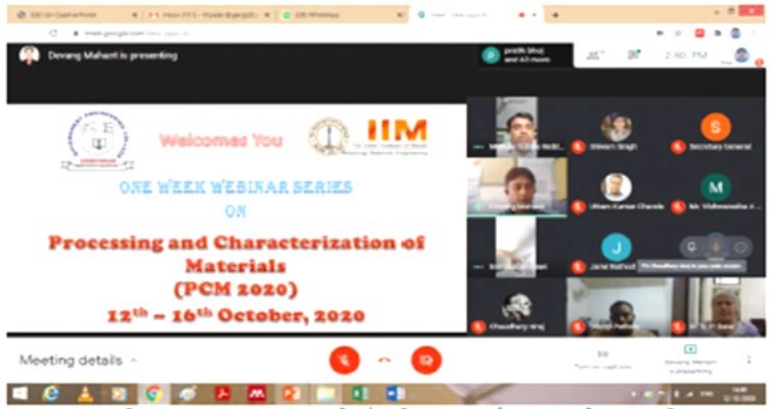
બુનિયાદ પાટણ | BUNIY

પાટણની સરકારી ઇજનેરી કોલેજ ખાતે સ્ટીલ પ્રોપર્ટીસ એન્ડ ઇટ્સ ટાઇપ્સ વિષય પર વેબિનાર યોજાયો

(બુનિયાદન્યુઝ, પાટણ)

પાટણ જીલ્લાના કતપુર મુકામે આવેલી સરકારી ઇજનેરી કોલેજ ખાતે ૧૯-૧૦-૨૦૨૦ના રોજ સ્ટીલ પ્રોપર્ટીસ એન્ડ ઇટ્સ ટાઇપ્સના વિષય પર મીકેનીકલ ઇજનેરી વિભાગના ત્રીજા સેમિસ્ટરમાં અભ્યાસક રતા ૬૦ વિદ્યાર્થીઓ માટે વેબીનાર યોજાયો. આ વેબીનારમાં સરકારી ઇજનેરી કોલેજ ગાંધીનગરના મેટલર્જી વિભાગના પ્રોફેસર ડૉ. આઇ.બી. દવેએ પોતાનુ વ્યાખ્યાન પ્રસ્તુત કર્યું હતું. સ્ટીલના પ્રકારો અને તેની ઉપયોગીતા તેમાં રહેલી ખામીઓ, ખામીઓ નિવારવા માટે કરવામાં આવેલા પ્રયત્નો ખુબ જ સુંદર રીતે અને બધા વિદ્યાર્થીઓને સંજય તે રીતે પ્રોફેસર ડૉ. આઇ.બી. દવેએ પ્રસ્તુત કર્યા હતા. આ સમગ્ર વેબીનારમાં વિદ્યાર્થીઓ તરફથી પુછવામાં આવેલા બધા પ્રશ્નોના સચોટ જવાબ પણ પ્રોફેસર દ્વારા આપવામાં આવ્યા હતા. માટે વિદ્યાર્થીઓ પણ લેકચર યોજવા બદલ સારા પ્રતિસાદ આપ્યા. આ સમગ્ર વેબીનારનુ સંચાલન કરવા બદલ ડૉ. હિતેશ પંચાલનો મીકેનીકલ ઇજનેરી વિભાગના વડા ડૉ. ડી.કે. પટેલ અને સંસ્થાના આચાર્ય ડૉ. એચ.એસ. પટેલે આભાર વ્યકત કર્યો હતો.

સરકારી ઈજનેરી કૉલેજ, ગાંધીનગર ખાતે 'પ્રોસેસિંગ એન્ડ કેરેક્ટરાઈજેશન-૨૦૨૦'નું આયોજન



ગાંધીનગર, તા. ૧૩

ઉચ્ચ શિક્ષણના તાબા હેઠળના મેટલર્જી વિભાગ, સરકારી ઈજનેરી કોલેજ, સેકટર-૨૮, ગાંધીનગર ખાતે સાપ્તાહિક ટેકનીકલ વેબિનાર સીરીજ "પ્રોસેસિંગ એંડ કેરેક્ટરાઈજેશન (PCM 2020)" નું આયોજન ઈન્ડિયન ઈન્સ્ટિટ્યૂટ ઓફ મેટલ્સ – બરોડા ચેપ્ટર ના સંયોજન થી તારીખ ૧૨ થી ૧૬ ઓકટોબર ૨૦૨૦ દરમિયાન કરવામાં આવેલ છે. આ વેબિનાર સીરીજના સંયોજક મેટલર્જી વિભાગના પ્રાધ્યાપકો ડૉ. ડી. જી. શર્મા તથા ડી. વી. મહંત છે. ઉપરોક્ત તાલીમમાં ભારતવર્ષની વિવિધ નામાંકિત યુનિવર્સીટીયો, અને ઈંડસ્ટ્રીજ જેવી કે આઈઆઈટી, એનાઈટી, એમએસયુ બરોડા, જીટીયુ, પીડીપીયુ, જિંદાલ સ્ટીલ, ભારત કોર્જ, ટાટા સ્ટીલ, વેલ્સપનર કોર્પોરેશન, એનએમડીસી લિમીટેડ, સ્ટીલ અથોરીટી ઓફ ઈંડીયા ખાતેથી ૨૫૧ પાર્ટીશિપેંટ્સ ભાગ લીધેલ છે જેનો મુખ્ય હેતુ મટિરિયલ્સની આધુનીક પ્રકિયા અને તેના વિવિધ કેરેક્ટરાઈજેશન વિષયનું તજજ્ઞનો દ્વારા તાલીમ આપવાનું છે. વેબિનાર - સીરીજનું ઉદઘાટન કુશલ સાહા, સેકેટરી જનરલ, ઈન્ડિયન ઈન્સ્ટિટ્યૂટ ઓફ મેટલ્સ ના હસ્તે ડૉ. સ્વેતા. પી. દવે, આચાર્ય, સરકારી ઈજનેરી કોલેજ, ગાંધીનગર, ડૉ. આઈ. બી. દવે, મેટલર્જી વિભાગના વડા, ડૉ. એસ. ડી. કાહર, ચેરમેન, ઈન્ડિયન ઈન્સ્ટિટ્યૂટ ઓફ મેટલ્સ – બરોડા ચેપ્ટર તથા વિવિધ ખાતાના વડાઓની ઉપસ્થિતિમાં ૧૨મી ઓકટોબર ૨૦૨૦ રોજ કરવામાં આવેલ હતું.

થયેલા તાલીમાર્થીઓ માટે સંસ્થા ખાતે દર વર્ષની જેમ ૧૧માં વાર્ષિક પ્રમાણપત્ર વિતરણ કાર્યક્રમ યોજવામાં આવ્યો હતો. જે અંતર્ગત તા. ૨૭ થી ૨૯મી દરમિયાન ઓટોમોબાઇલ, ઇલેક્ટ્રિશ્યન, ફિટર તેમજ રેફ્રિજરેશન જેવા ટેકનિકલ ટ્રેડના ૪૦૦થી વધારે તાલીમાર્થીઓને પ્રમાણપત્ર એનાયત કરવામાં આવ્યા હતા.

સરકારી ઇજનેરી કોલેજ ખાતે વેબિનાર યોજાયો

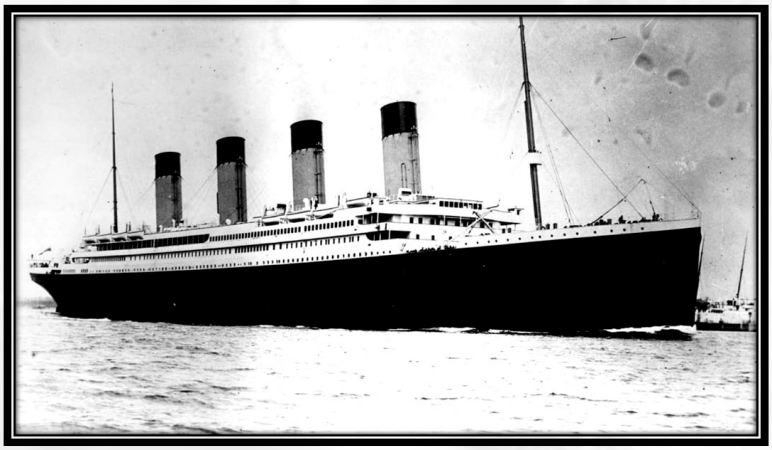
મેટલર્જી વિભાગ સરકારી ઇજનેરી કોલેજ ખાતે સંસ્થાના આચાર્ય ડો. એસ.પી.દવેના માર્ગદર્શન હેઠળ સાપ્તાહિક ઓનલાઇ વેબિનાર વર્ચ્યુઅલ ડેમોસ્ટ્રેશન ઓન ઇન્ડસ્ટ્રીયલ એક્સપેકટસ ઓફ મેટલર્જીનું મેટલર્જી વિભઆગના પુર્વ વિદ્યાર્થીઓના સંયોજનથી યોજવામાં આવ્યુ હતું. આ તાલીમના સંયોજક મેટલર્જી વિભાગના પ્રધ્યાપક એચ.એચ. ઠાકર અને ડો. એમસએસ. દાની છે.

બાપુ કોલેજમાં બીડીએની શ્રેષ્ઠ લેબનો ઉદ્ઘાટન કાર્યક્રમ યોજાયો

બાપુ ગુજરાત નોલેજ વિલેજ કેમ્પસ સંચાલિત શંકરસિંહ

- By, Mr. Rudrang Chauhan. 170130121007, Sem 7

Why did titanic sank? An engineer's perspective



Titanic was deemed as most technologically advanced and "unsinkable" ship at her time. But unfortunately, on her maiden voyage it sank in the Atlantic Ocean leaving all the survivors and people associated with her startled. On the 14th April 1912 R.M.S titanic began her maiden voyage from Southampton, England to New York, united states of America. None of her passengers on board might have anticipated about the upcoming event that would completely change their lives Titanic was huge in size, it was 230 metres long and 25storeys tall, one of the biggest cruise ships built till that time. Nearly 20000 times as heavy as a regular family car.

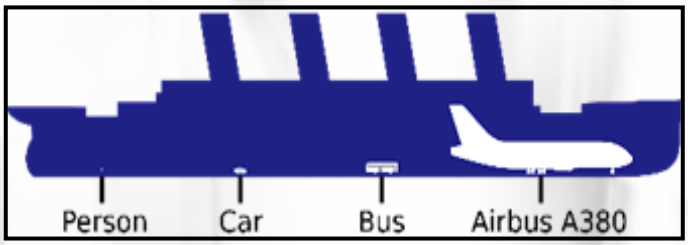


Figure 2- Titanic's size comparison

Beside she was deemed to be unsinkable by its designers. Titanic had 16 water tight compartments on the bottom of its hull. In the case of collision with another ship or any icebergs, as anticipated by designers, the leaking water could be stopped from entering from other undamaged compartments, giving ship enough time before sinking and saving her passengers.

There are many theories that came out as the ship wreck of titanic was examined in 1991. There were two major contributing aspects to the failure, first was the materials flaw and other was designing flaw.

The material that is the steel which was used at the time was low carbon steel containing large amount of oxygen and sulphur, was prepared by open hearth process. During that time too oxygen and sulphur content in Titanic's steel was more in comparison to other ships. When the samples collected from ship's wreak where tested against Charpy impact test, it was clearly obvious that brittle fracture occurred without any significant plastic deformation. The sulphur and oxygen content were high enough to increase the ductile to brittle transition temperature to 25- 35 degree centigrade. The temperature during the time of collision was below freezing point, there was a sudden high impact from massive iceberg and ships momentum was large- all this contributed to catastrophic failure. The ship was also anchored for a long time in sea before starting its journey. This also lead to crevice corrosion of wrought iron rivets on steel plates. Due to weaken structure, failure rate increased drastically.

- By, Mr. Rudrang Chauhan. 170130121007, Sem 7

Now talking about the design flaw, the compartments where never being tested and weren't water tight. They were only horizontally water tight. Out of sixteen, when water started to fill six compartments the ship started to bend towards the front right side.

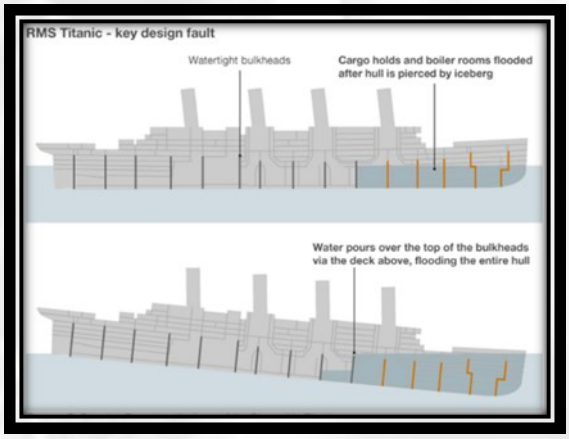


Figure 4- RMS Titanic: key design flaw explaining why the Titanic sank so rapidly. It is apparent that as the water filled up one of the compartments, it entered into the other compartment from the top. Not exactly watertight!

The ship's stern(back) region was comprised of three heavy propellers and when the ship started to bent over in front, the middle portion of hull wasn't that strong to bear the forces from both the sides, and eventually was broken open and ship was teared apart in two parts. It happened the exactly in same way as a weak lever could-n't bear a force of one very heavy and other less side.

What could have been done to prevent this catastrophe?

First of all, the concept of water tight compartments was not totally viable. If there were no compartments rather a basic hull design then water could just spread over all the surface area and then ship would have eventually sunk but would also have more time so it could be saved by nearby passing ships. bulkheads with more heights must be made for each compartment to provide transverse water tight ability.

The hull could be made with extra steel plates, so if outer plates were punctured that wouldn't affect inside plates. Precise control of oxygen and sulphur content bellow hazardous levels should have been practiced to avoid easy increase in ductile to brittle transition temperature. Today's ship building steels are tested to have DBTT below as -60 degree centigrade.

There should also be enough number of lifeboats for all passengers, titanic had less no of lifeboats and that to only for eminent class passengers .While today we also use FEA (finite element analysis) and CFD (computational fluid dynamic) methods to observe the stresses on the ship's hull as simulated for real case scenario. This has now become a mandatory task before constructing any water vessel throughout the globe.

The titanic catastrophe has yielded a lot of experience that could help us in our future to not repeat this petty mistakes and ignorance by engineers to save huge amount of money and people's lives.

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Google photos

TECHNO RIDE

- By, Mr. Kishor Mali. 170130121020, Sem 7

THE IMPACT OF 5M ➡ CHANGING THE WORLD

M ➡Mining

M ➡Metals

M ➡Metallurgy

M ➡Metallurgist

M ➡Metal Industries

Mining is the extraction of valuable minerals & different materials from the Earth's crust. It's the First & Basic Step. Evolution & Revolution Changes The Term & Definition Of Metallic World.

Metal have been one of the core drivers of Industrialization. For past to current civilization, Metal makes it's very important impact & valuable role.

Metallurgy is mainly known as the mother of all the engineering fields. Simply it's the Extracting metals from their ores, minerals to make Refined alloys. It's Gasification of various processes & treatments, different composition &components, Microstructures & Methods, Parameters & factors, Tests Results. "If there is no metallurgy, nothing is!!! " Through this we can achieve our required product based on our criteria, and things are made possible.

The Main and most important part of 5M is Metallurgist. We can call them, Metallurgists Or Metal Doctors Or Metallurgical Engineers or MPE. Metallurgical Engineers have the ability to make processes beneficial to the environment as well as industry. They have very good knowledge about metal processes, Specifications, Quality. Through Their Experience & Research, Developments, Innovations, modifications, they are able to solve new challenges, and able to find the best way to process will be done. After mining, all the things are in the hands of metallurgy & metallurgists.

Metal industry is one of the major important industries all around the world. It secured a high amount of percentage in the world economy. It also affects the GDP of the countries. If Metal Production & Industries are shut down, it instantaneously makes an impact on the economy of the world. And GDP will also imbalance. The Iron &Steel industry is the heart of the metal industry. The overall impact of the steel industry is US$2.9 Trillion value&96 million jobs globally. These all 5M are really helpful to the world, without this we are unable to think of new insights.

Metallurgical Engineers have played a key role in the development of new & advanced materials, complex parts, new manufacturing techniques, Sustainability of our technological based industry and societies.

Industry 4.0,digital revolution like IOT, Artificial intelligence and many other new amazing techniques will make metal industries more and more upgrading and advanced. With this, many new challenges are on the way.

Hey! Metallurgist.

Are You Ready to Deal with challenges???

- By, Mr. Lokesh Dhoke, 190133121005 , Sem 5

Why Vacuum Heat Treatment is Increasing in Use???

Air is the perfect mix of moisture, oxygen, carbon dioxide, hydrogen and other gases in small quantities, which helps keep all living things alive. However, it is not very good for the metals found in much of our surrounding infrastructure which reacts with moisture and oxygen in particular under the right conditions. In order to manipulate metals, heat is often necessary, but the application of heat can cause metals to react with air at an accelerated rate. This heat treatment causes a skin or layer on the surface of the metal that is harder or softer and thereby changes the properties of the metal. To avoid this oxidation process – where oxygen has reacted with the metal - it is therefore helpful to remove all the air and reactive elements in a vacuum chamber.

Vacuum heat treatment is a method of hardening metals at extremely high temperatures in the absence of air. It uses a vacuum which has an absolute pressure below that of the normal atmosphere, creating an unreactive environment. During vacuum heat treatment, the metal parts go into a tightly sealed treatment chamber where a vacuum pumping system removes as much of the air as possible so that there is nothing left to react with the metal. It is then heated up to as much as 2,400°F/1316°C at a controlled rate before the temperature is lowered. The soak time - the amount of time required for a chemical purging compound to complete its reaction - depends on the needs of the part and type of metal it is made from. It can take anywhere from three to 24 hours and is controlled by a computer to ensure repeatability and uniformity. As well as being an environmentally friendly method of hardening metals, there are three main benefits to vacuum heat treatment; the parts need no further forming, they have no scaling or discolouration, and there is no need for further cleaning. The process improves the overall condition of the metal alloy – it allows the surface of the metal to be treated evenly, the cooling process is much quicker, and it improves the lifespan and functionality of the alloy.

Applications of Vacuum Heat Treatment:

Vacuum heat treatment is used on metal based super alloys (heat resistant materials based on nickel such as iron-nickel or cobalt-nickel), reactive and refractory materials like titanium, and stainless steel of various grades. Even some parts of musical instruments containing brass or bronze may also be subjected to the treatment. The process is used for parts which must withstand high heat conditions and other stresses during normal operation such as airplane engines and exhaust parts - many of which can be difficult to form in the first place. One of the most important uses of heat treatment is in the aerospace industry in aircraft structures, where the type of vacuum heat treatment is as important as the aluminium alloy used to build the plane. The choice of alloy is critical; the lifespan of an aircraft is reliant on the grain structure of the alloy, which in turn is dependent on the vacuum heat treatment it receives. NASA has determined nine different types of vacuum heat treatment definitions – including age hardening, natural aging and artificial aging – which they utilise in the training and certification of their vacuum heat-treating personnel. The type of heat treatment is essential as it allows a designer to build a plane from higher strength materials which yield better functionality, fewer repairs and a longer lifespan.

The process of vacuum heat treatment is a means of treating difficult pieces of metal while also conferring additional benefits such as strength and cleanliness to the metal it is treating in an environmentally friendly process with no harmful side effects. At a time when industry is being encouraged to be more cautious about its environmental outputs, it is not difficult to see why vacuum heat treatment is increasing in use.

- By, Ms. Janvi Rathod, 180130121045 , Sem 5

Graphene - An Engineering Material

Graphene has extremely high thermal conductivity, which makes graphene a promising material in thermal engineering. [1]

Fig. Graphene[5]

Graphene is an allotrope of carbon consisting of a single layer of atoms arranged in a 2-dimensional honeycomb lattice. Units of graphene are known as Nano-graphene, which are further fabricate to produce complicated generic graphene .Each atom in a graphene sheet is connect to its three nearest neighbors by a σ-bond, and contributes one electron to a conduction band that extends over the whole sheet. This is the same type bonding seen in carbon nanotubes, polycyclic aromatic hydrocarbons, partially in fullerenes and glassy carbon. These conduction bands make graphene a semimetal with unusual electronic properties.[2][4]

Graphene strongly absorbs light of all visible wavelengths, which accounts for the black color of graphite, yet a single graphene sheet is nearly transparent because of its extreme thinness. The material is also about 100 times tougher than steel, lighter than aluminum, harder than diamond, it's mobility is 100x faster than silicon, electric conductivity is 13x better than copper, yet more elastic than rubber. So graphene is the strongest known material. [3][1] Graphene is basic building block for other 2D graphitic materials. The IUPAC recommends use of name **Graphene** only when layers suspended or transferred to **Silicon dioxide** or **Silicon carbide.**

Applications of graphene:

Graphene is often produced as a powder and as a dispersion in a polymer matrix.

This dispersion is supposedly suitable for advanced composites, paints and coatings, lubricants, oils and functional fluids, capacitors and batteries, thermal management applications, display materials and packaging, solar cells, inks and 3D-printers' materials, and barriers and films.[3]

Graphene also uses as water purifier for brackish water by capacitive deionization (CDI) technology. The CDI has no secondary pollution, is cost-effective and energy efficient. Researchers have developed a CDI application that uses graphene-like nanoflakes as electrodes for capacitive deionization.

Graphene can used to produce graphene face masks which has an anti-bacterial efficiency of 80%, which can be enhanced to almost 100% with exposure to sunlight for around 10 minutes.[4]

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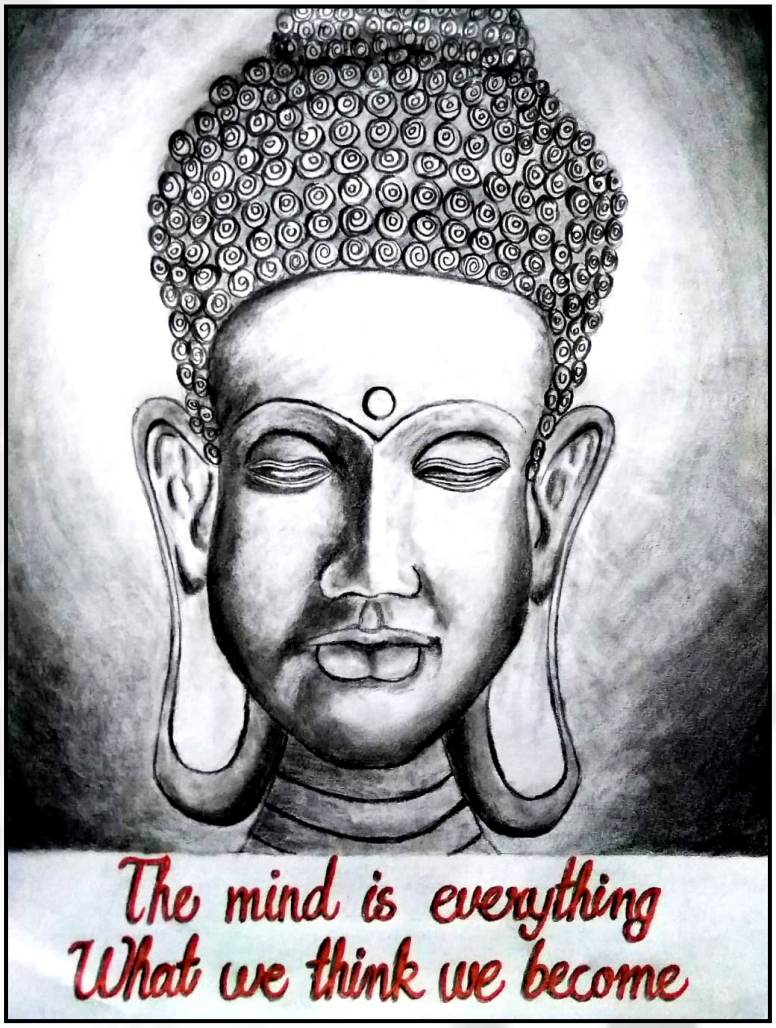
ART GALLERY

" गुरु "

गु हमें सबसे ऊपर दिखाता ,
रु पाओ ज़मीन पे लाता ।
कभी जीवन में अंधकार आता ,
तब गुरु उजाला दिखाता ।
सिर्फ़ ज्ञान दे वो गुरु नहीं ,
सच्चा गुरु जीना सिखाता ।
प्रथम गुरु माँ-बाप ,
मित्र दुजा गुरु कहलाता ।
गुरु शिष्य का शिष्य गुरु का ,
सदा सदा मान बढ़ाता ।
एक दूजे का आदर करके ,
ख़ुद के मन में श्वमान चढ़ाता ।
सच्चा शिष्य वही बने ,
जो स्वयं अच्छा गुरु बन जाता ।
गुरु शब्द ना देखे कुछ ,
इसी लिए वे अंधा कहलाता ।
ना उम्र ना व्यक्ति ना जगह देखे ,
गुरु अच्छी सीख दे जाता ।
गुरु ब्रह्मा गुरु विष्णु गुरु देवों महेश्वरा:
गुरु साक्षात परब्रह्मा इसी लिए वे गुरु कहलाता ।

गुरुदेव नमः ।



-Written by
Jainam Sakariya, 180130121048 Sem 5

-Art performed by
Vinay Pandit, 170130121027 Sem 7

-Art performed by
Keval Solanki, 180133121023 Sem 7

यह सिर्फ हिंदुस्तान नहीं, हमारे वीरों की पहचान है।
आई जो संकट देश पर उसका निवारण भी हमारा काम है।

ईश्वर, अल्लाह, भगवान की आज, डॉक्टर ही पहचान है।
सिर्फ हाथ धो कर, उनका नमन करना भी हमारा काम है।

घर में रोटी बनती रहे किसानों ने भी यही ठाना है।
अन्ना बिना बर्बाद किए, उनके घर में भी दिए जलाने हैं।

सिपाही ने भी देश को संभालने का भी मोर्चा उठाया है।
घर घर जाकर सबको समान पहुंचाया है।

देश को करे साफ, देश हो साफ, यह नारा भी सब ने अपनाया है।
जान से बढ़कर देश और देशभक्ति को गले लगाया है।

सकारात्मक और सच्ची खबर भी सबको बताना है।
देश में कैसे जीता जंग, मीडिया ने भी सबको बताने का ठाना है।

आज घर पर रहकर सब ने देशभक्ति निभाई है।
कोरोना के इस जंग में देश को जीत दिलाएंगे, ऐसी कसम भी सब ने खाई है।

यह सब धरती नहीं, वीरो की पहचान है।
आप सब सरहद पर नहीं, देश के अंदर भी कई जवान हैं।

-Written by
Madhu Chaudhari
190130121012 Sem 3

ALUMINUM

Metallurgy Department

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॥ कर्ममयं ज्ञानं एवं ज्ञानमयं कर्म ॥