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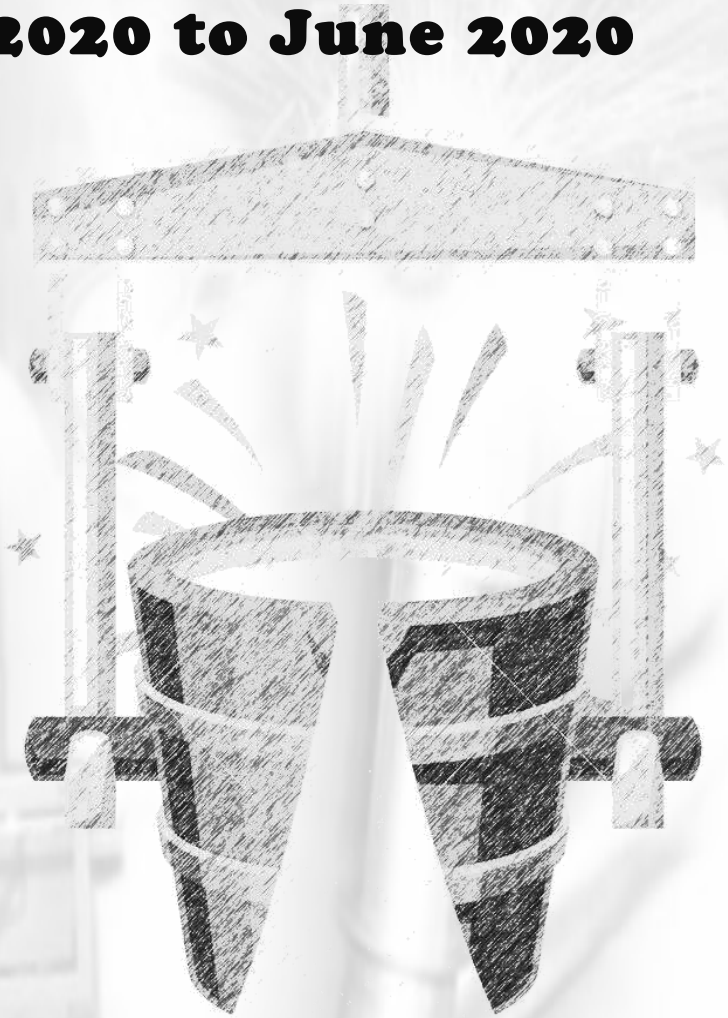
STUDENTS' SOCIETY OF METALLURGY ENGINEERING GANDHINAGAR
SSMEG
ESTD-2012
Regd.No. GUJ/2051/Gandhinagar

NEWSLETTER

METALLURGY DEPARTMENT

January 2020 to June 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.

METALLURGY

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., MSU, Vadodara	Professor & Head
2	Prof. S. I. Patel	ME (Met. & Mat. Engg.)	Assistant Professor
3	Prof. D. G. Sharma	M. Tech (Metallurgy)	Assistant Professor
4	Prof. H. H. Jadav	ME (Metallurgy)	Assistant Professor
5	Dr. P. K. Nanavati	ME (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. H. H. Thakar	ME (Met. & Mat. Engg.)	Assistant Professor
9	Prof. M. S. Dani	ME (Metallurgy)	Assistant Professor

ACHIVEMENTS OF THE FACULTIES

Prof. D. G. Sharma Presented paper in 10th Int. Conference on materials processing and characterization, which published in Scopus Indexed Journal as: "Manufacturing of Metal Matrix Composites: A State of Review," during 21-23 February 2020. Materials Today: Proceedings, ISSN: 2214-7853.

Prof. D. G. Sharma coordinated One Day Seminar on "Friction Stir Processing". IEI Sponsored One Day FSP Program on 15th Feb 2020.

Prof. D. G. Sharma Received letter of appreciation from zonal officer for placement camp activity at Mega placement camp RCTI during 13-14 Feb 2020.

Prof. P. K. Nanavati was awarded PhD degree in Metallurgical & Materials Engineering by the M. S. University of Baroda, in 68th Annual Convocation on 29th January 2020

Dr. P. K. Nanavati coordinated One Day Seminar on "Friction Stir Processing", IEI Sponsored One Day FSP Program on 15th Feb 2020.

Dr P. K. Nanavati has Contributed a talk on "Welding Metallurgy & Weldability of Steels" during IIW Sponsored Welding Inspector Course 2020, 25th January 2020.

Prof. D. V. Mahant Presented paper in 10th Int. Conference on materials processing and characterization, which published in Scopus Indexed Journal as: "Manufacturing of Metal Matrix Composites: A State of Review," during 21-23 February 2020. Materials Today: Proceedings, ISSN: 2214-7853.

Prof. H. H. Thakar received special appreciation from Hon. Principal Secretary Higher and Tech. Education, Anju Sharma (IAS) for highly esteemed contribution in planning implementation and organizing mega placement camps in all districts of gujarat.

Prof. H. H. Thakar served as an OSD and received appreciation for Scrutinizing and verification of MYSY applications of at MYSY cell ACPC Ahmedabad.

GLIMPSES OF "SEMINAR/WORKSHOP"

The Institution of Engineers (India), Gujarat State Centre sponsored One Day Seminar on "Friction Stir Processing" was jointly organised by Government Engineering College, Gandhinagar & IIW-PDPU Student chapter on 15-02-2020.

Although "Friction Stir Processing (FSP)" is not as recent area, the technology was developed in late 1980's. But the FSP technology is still on research scale. Until now, no national or international standard or codes developed for FSP Technology. There are still plenty of research conducted for optimization of various process parameters such as tool design.

The program was inaugurated by the chief guest Shri. B. J. Panchal, Jt. Director, DTE, Prof. Shayam Varghese, Hon, Secretary, IE, Prof. R. J. Dave, Former Jt. Director, DTE in presence of chairman IIW-PDPU Chapter Dr. Vishvesh Badheka in presence of Dr. S. P. Dave, Principal GEC Gandhinagar and Dr. I. B. Dave Head, Metallurgy Dept, GEC Gandhinagar. Departmental newsletter for the period of July 2019 to December 2019 was published by metallurgy department after lightening the lamp by dignitaries on the dais.

Total 64 BE/ B.Tech students including PhD research scholars have participated from reputed state institutions like PDPU-Gandhinagar, Rai University, Nirma University, The M. S. University of Baroda, Gujarat Technological University, SVNIT Surat and Indus University.

GLIMPSES OF "SEMINAR/WORKSHOP"

Sr. No	Speaker	Topic Delivered
1	**Dr Vishvesh J Badheka,** IWE, Prof & Head, Mechanical Engineering Dept, SoT, PDPU, Gandhinagar	"Friction Stir Processing and its applications"
2	**Dr Amit Arora,** Asst. Professor, Materials Science and Engineering, IIT Gandhinagar	"Advances in Friction Stir Processing "
3	**Dr Vivek V Patel,** Asst. Professor, Mechanical Engineering Dept. SoT, PDPU, Gandhinagar	"Friction Stir Processing of high strength AA7075 aluminium alloy"
4	**Prof. DaulatKumar G. Sharma,** Asst. Professor, Metallurgy Department, GEC-	"Manufacturing of Friction Stir Processed Hybrid Surface Composites."
5	**Prof. Minal Sanjay Dani,** Asst. Professor, Metallurgy Department, GEC-Gandhinagar	"Investigations of Friction Stir Processed AZ91 Mg alloy "

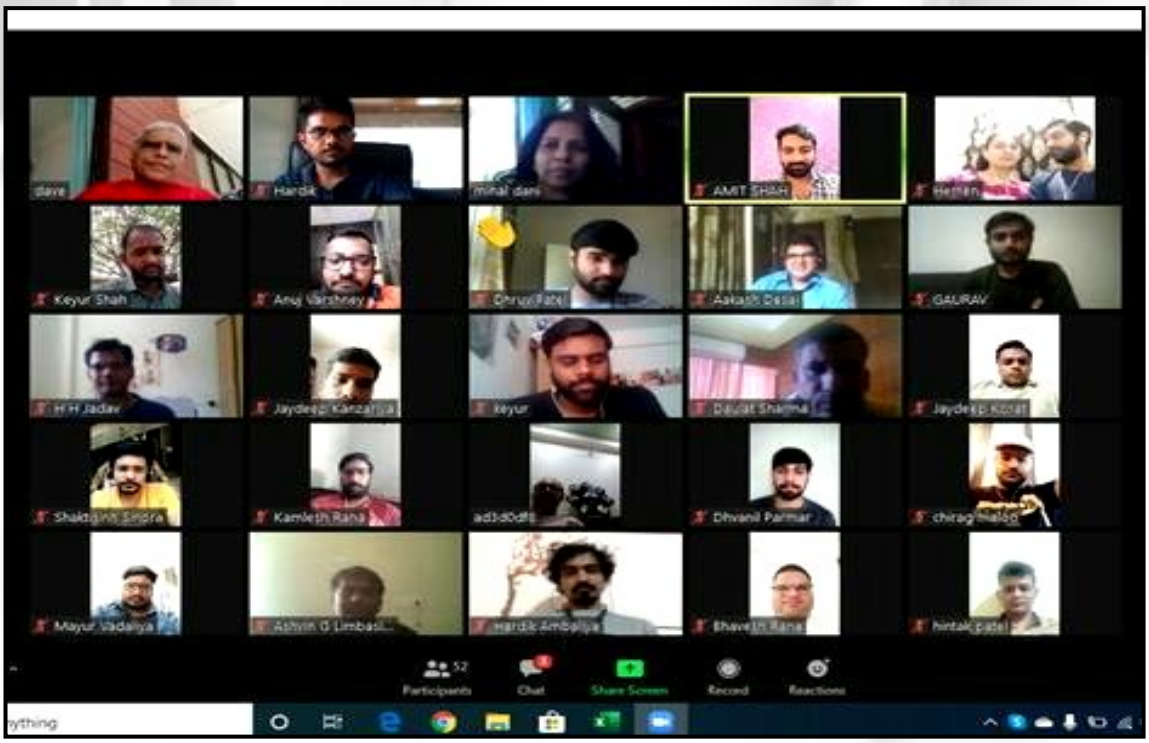
GLIMPSES OF "ALUMNI MEET 2020"

Alumnae are boys and girls who have completed their studies, esp. at a college or university. For Institute they are backbone. Creating an engaged, supportive alumni network is crucial to an institution's success. If communication stops once graduates leave an institution, their understanding of the university will become stale. Instead, they should be kept informed so they can remain engaged and keep abreast on the progress of the university.

Good alumni relationships bring many benefits to both the institution and the alumni. As graduates of the institution, alumni have a special connection with the university and as a result are likely to be some of its more loyal supporters. An engaged alumni network allows the University to benefit from the skills and experience of our graduates, by offering their support to our students, to the institution and to each other. If we keep them properly informed and engaged, alumni are our most loyal supporters and our best ambassadors, offering invaluable marketing and promotion across their personal and professional networks. Talented alumni will likely have a wealth of experience and skills to share with current students via talks and newsletters. n certain cases, this could go even further with alumni offering to practically support students in work placements and help them launch their careers.

Our online Alumni meet was conducted on 17 th May 2020 on digital platforms (Zoom). Almost 52 alumnae, 8 faculty members, our HOD sir Dr. I B Dave and our metallurgy department Bhishmapita Dr. G H Upadhyay sir have taken active participation for 3 hours online alumni meet. In our HOD sir mind just one thought came , Is it possible to meet our Alumnae during lock down period on Digital platform? He just share idea to departmental coordinator Prof. Minal Dani and alumnae. From alumnae Viraj Vyas, Hardik Ambaliya, Amit Shah and Keyur Shah have taken initiative and make it true within very short notice period for successful Alumni meet.

Really it was great experience and memorized so many old memories with Alumnae. Thank you Alumnae for your valuable time and experience sharing during lock down period. Department is very thankful to Viraj Vyas, Hardik Ambaliya, Amit Shah and Keyur Shah for making this event successful and proud to have Alumnae like you.



GLIMPSES OF VARIOUS "EXPERT LECTURES"

Sr. No	Date	Subject	Venue	Present Students
1	10/1/2020	By Mr Mahipal Jadav, Asst. Manager, Essar Steel Ltd.	GEC Gandhinagar	More than 50
2	5/5/2020	" Welding as a career" The Untold Success (Hindi) by Mr Gope Devendra - Business development Manager Western & Central- Fronius India Pvt Ltd	GEC Gandhinagar (Zoom Online Platform)	More than 100

Welding as a career" The Untold Success (Hindi) by Mr Gope Devendra - Business development Manager Western & Central- Fronius India Pvt Ltd was organised during 3:00 - 4:30 PM on 5th May 2020. More than 125 students along with Metallurgy / Mechanical engineering faculty members have attended the webinar.

GLIMPSES OF "CAMPUS SELECTION OF METALLURGY DEPARTMENT"

Following students have been selected in various industries through mega placement camps organised by placement cell, education department government of Gujarat during 13-14 February, 2020.

Sr. No.	Enrollment NO	Name of Student
1	160130121004	Uddhav Pramodchandra Bhatt
2	160130121048	Parth Nareshkumar Rana
3	160130121050	Dhaval Rajeshkumar Shah
4	160130121052	Suyash Ramesh Shrivastav
5	160130121059	Abhay Bharatbhai Thummar

INDUSTRIAL VISITS

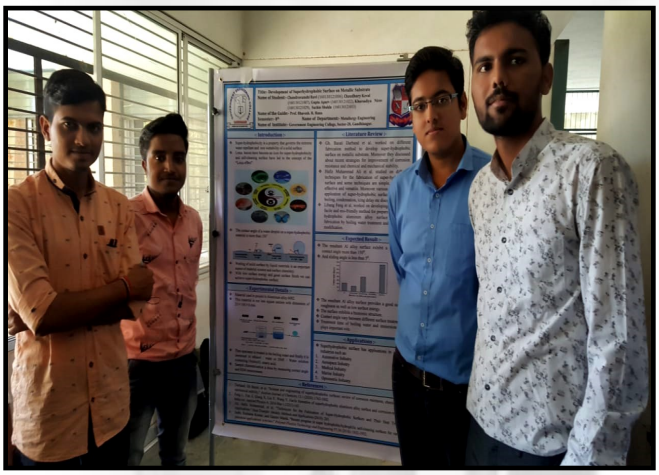
- 6th Semester 43 students have visited CFER, Odhav along with Prof. B. R. Rana, Prof. M. S. Dani and Prof D. V. Mahant on 7/1/2020.
- 6th Semester 43 students have visited Bhagwati Spherocast Pvt. Ltd., Odhav along with Prof. B. R. Rana, Prof. M. S. Dani and Prof D. V. Mahant on 7/1/2020.
- 6th Semester 43 students have visited Technocraft Enterprise (Heat Treatment) along with Prof. B. R. Rana, Prof. M. S. Dani and Prof D. V. Mahant on 7/1/2020.
- 15 students of Metallurgy department has undergone sand casting and sand testing training at IFTARC, Indus University during 11-12 Feb, 2020.

GLIMPSES OF VARIOUS INDUSTRIAL VISITS

ACTIVITIES AT THE DEPARTMENT

Prof. D. V. Mahant and Prof. B. R. Rana visited TDC Alloys Ltd, and received consumables useful for Foundry Technology subject from Mr. Jatish Patel, TDC Alloys, Vatva, Ahmedabad on 7/1/2020.

Open house project exhibition was organised at Metallurgy department for final year students on 7/3/2020. Various projects were displayed and valuable suggestion were given by judges.



Resume writing webinar was organised for Metallurgy final year students under training and placement cell GEC Gandhinagar. Dr. I. B. Dave, Prof. D. G. Sharma and 30 students participated in this event on 9/5/2020 .

Students, staff and alumnae have participated and presented their views on emerging science and technology in various fields at the National Science Day , celebrated at metallurgy department on 28/2/2020 .

ACTIVITIES AT THE DEPARTMENT

Students and faculties of metallurgy dept. participated and presented patent filled for RNIF in Orientation programme on "Women, Innovation, IP and Entrepreneurship" organised by GUJCOST and GEC Gandhinagar on 18/2/2020.

Students of Metallurgy department has undergone sand casting and sand testing training at IFTARC, Indus University during 11-12 Feb, 2020. Students have learned various testing operations and various steps for melting and casting of metals in to different shapes through hands on practice.

Prof. D. G. Sharma and Prof. D. V. Mahant presented paper in 10th Int. Conference on materials processing and characterization, which has been published in Scopus Indexed Journal as: "Manufacturing of Metal Matrix Composites: A State of Review," during 21-23 February 2020. Materials Today: Proceedings, ISSN: 2214-7853.

PEDAGOGY SESSIONS

Sr. No	Name of Speaker	Department	Topic Delivered	Date
1	Dr. I. B. Dave	Metallurgy	Rubrics preparation	04/01/2020
2	Prof. D. A. Patel	Mechanical	Activated TIG welding	04/01/2020
3	Prof. D. D. Mevada	Mechanical	Solar distillation	04/01/2020
4	Prof. S. D. Mali	Mechanical	Combustion phenomena of IC engine	13/01/2020
5	Prof. R. H. Patel	Mechanical	Stress concentration	18/01/2020
6	Prof. Vinod Patni	Mechanical	spirituality and life purpose	18/01/2020
7	Prof. D. G. Sharma/ Prof. D. V. Mahant	Metallurgy	Organizing the STTP- Case study	01/02/2020
8	Prof. D. G. Sharma/ Prof. D. V. Mahant	Metallurgy	Shared their learning experience at Int. Conference on "Processing & Material characterizations"	26/02/2020
9	Prof. T. I. Kathawala	Mechanical	NBA Criteria 9	29/02/2020
10	Prof. V. N. Modi	Mechanical	Modern Domestic Air Conditioner	29/02/2020
11	Dr. I. B. Dave	Metallurgy	SWOC Analysis	29/02/2020

TECHNO RIDE

- By, Prof H. H. Jadav, Asst. Prof. Metallurgy Department

A less common severe disease: Haemophilia

Haemophilia is an inherited condition that causes bleeding for a long time after injury or surgery and painful swelling of the joints either after injury or even without injury. Haemophilia caused because of absence of clotting factor, resulting in increased bleeding. There are two types of Haemophilia A (clotting factor VIII deficiency), which is more common and occurs in about 1 in 5,000 births. Haemophilia B (factor IX deficiency) is less common and occurs in around 1 in about 20,000 births. Haemophilia is X chromosome linked and inherited from the mother "haemophilia carrier", though the disease is present in males. Also many cases are due to a new acquired mutation in genes, and in these families, no family history is present. Patients of haemophilia, bleed for a longer time than others after any injury, injections, operations or tooth extractions. They may bleed inside (internally), and in the joints - knees, ankles, and elbows. This bleeding can damage the joints and internal bleeding (head, abdomen) may be life threatening. Haemophilia patients bleed for a very long time after injury, and often have delayed bleeding e.g. after a few days after tooth extraction or trauma. Patients with severe haemophilia they can bleed even without injury-spontaneously, this usually occurs in severe haemophilia patients.

Patients are graded (disease severity) according to the level of factor in their blood, lower levels of factor means more severe disease, as the deficiency from normal is much more. Patients with severe haemophilia that is less than 1% of factor in their blood can bleed spontaneously, without any injury, moderate haemophilia have 1-5% of factor VIII or IX while mild haemophilia patients with factor level more than 5% will bleed only after injury or surgery.

The doctor after accessing family history and performing physical examination of joints prescribe special blood tests to diagnose haemophilia. These include a baseline screening tests, which measure the coagulation time of blood called PT, APTT. Then if the APTT is prolonged , as is seen in Haemophilia a more specialized test is performed to see the deficiency of factor VIII (8) or IX(9) and the level of factor present. These test results will reveal if haemophilia is present, what type of haemophilia (A or B), and its severity. Severe haemophilia can result in serious bleeding problems even in babies. Children who have severe haemophilia usually are diagnosed during the first year of life. People who have milder forms of haemophilia may not be diagnosed until they are older or have a major injury or surgery. The bleeding problems of haemophilia A and haemophilia B are the same.

TREATMENT:

The main treatment for haemophilia is called **factor replacement therapy**, the deficient factor concentrates (clotting factor VIII (for haemophilia A) or clotting factor IX (for haemophilia B)) is injected through a vein (intra venous) directly into the blood which can be collected from blood plasma donors and purified (plasma derived) or they can be produced artificially in a laboratory (recombinant).

Types of replacement therapy-on demand and prophylaxis.

However many times there was a delay in starting the injections and repeated bleeding into the joints resulted in damage to the joints, this happened even in careful patients. This damage usually led to permanent deformity and disability. Later in life many haemophilia patients may even need joint replacement surgery for the damaged joints or become handicapped.
A better way of treatment is called prophylaxis (PRO-fi-lac-is). In this regular small doses of factor are given to the patient before a joint bleed. The end result of treatment is much better when the joints are evaluated by doctors and by the perception of the patients themselves. Also the child can lead a more active life without too many restrictions and fear. Though severe injury, is still to be avoided.

References:

https://www.nhp.gov.in/haemophilia_pg
www.haemophilia.org
www.haemophilia.in

- By, Prof H. H. Jadav, Asst. Prof. Metallurgy Department

A less common severe disease: Haemophilia

Therapy of inhibitors

This depends on the level (titer) of inhibitors and whether they are causing bleeding or not. The doctor's may use larger doses of clotting factor or try different clotting factor sources. If they are high titers and there is severe bleeding the doctor may use bypassing agents to control bleeding –FEIBA and recombinant factor VII (7). Occasionally other medicines may also be tried to reduce the antibodies.

Precautions

Avoid injury as much as possible, children should be watched for falls, avoid intramuscular injections. Most children's vaccines can be given in the skin with a thin needle. Avoid strong massage or rough exercise, particularly in a painful joint. If a joint becomes painful or swollen, immediately contact the doctor. Avoid movement-apply ice, raise the joint and rest.

Free factor replacement

Some states are providing free factor replacement, talk to the government doctor in your state and the haemophilia federation. A few states are also providing free factor for emergencies only.

Antifibrinolytic Medicines

Antifibrinolytic medicines (such as tranexamic acid and epsilon aminocaproic acid) may be used along with replacement therapy. They can be used alone for minor bleeds especially mouth bleeds.

Role of physical therapy

Strong muscles may help to protect the joint, so physical therapy is part of treatment for haemophilia. Avoid physical therapy or a new exercise plan if the joint is painful. An increase in factor may be needed if starting physical therapy after a gap or rest period. All physical therapy must be done under supervision of a trained physical therapist and under guidance of your doctor. If pain or swelling occurs, please go back to your doctor for a check-up. The benefit of physical therapy may not be immediate, it is important for long term mobility.

Gene Therapy

Researchers are trying to find ways to correct the defect in the genes that cause haemophilia. Gene therapy has not yet developed to the point that it's an accepted treatment for haemophilia. However, researchers continue to test gene therapy in clinical trials for haemophilia B.

References:

https://www.nhp.gov.in/haemophilia_pg
www.haemophilia.org
www.haemophilia.in

STUDENT ACHEIVEMENTS

Students of Metallurgy department, Aasif Mansuri, Aparna Srivastav, Apurva Chavhan and Shashi Shekhar has received appreciation form Principal, GEC Gandhinagar, Dr. S. P. Dave on 26/01/2020 for filing 2 patents on Revolutionary Non-ferrous Innovatory Furnace (Design and Utility) under the guidance of Prof. D. V. Mahant, under Students Start-up and Innovation Policy.

Semester 3 student Shivanshi Desai grabbed third rank in " Corona Warrior Digital Competition 2020-21" Organized by GTU in May 2020.

Semester 3 student Shivanshi Desai has qualified 1st round for National Engineering Olympiad 3.0 organized by NEO foundation during 24/4/2020 to 28/4/2020

Semester 3 student Ankush Meghani has qualified 1st round for National Engineering Olympiad 3.0 organized by NEO foundation during 24/4/2020 to 28/4/2020

MEDIA COVERAGE

ફાઉન્ડ્રી ઉદ્યોગમાં ૬૦થી ૭૦ ટકા ઉર્જા માત્ર ધાતુ પીગાળવામાં જ વપરાશ થાય છે

ગાંધીનગરની સરકારી ઈજનેરી કોલેજ દ્વારા બિન લોહ ધાતુ પીગાળવાની ભઠ્ઠીના સંશોધનનું પ્રકાશન કરાયું

અમદાવાદ, તા.૧૧

સરકારી ઈજનેરી કોલેજ, ગાંધીનગરના મેટલર્જી વિભાગના પ્રાધ્યાપક પ્રો. દેવાંગ વી. મહંતના માર્ગદર્શન હઠળ ભૂતપૂર્વ વિદ્યાર્થી આસિફ મનસુરી તથા તેઓની ટીમના સાથીઓ શશી શેખર, અપર્ણા શ્રીવાસ્તવ અને અપૂર્વા ચૌહાણ દ્વારા "Revolutionary Non-Ferrous Innovatory Furnace" (RNIF)ના સંશોધનનું ભારતીય પેટેન્ટ ઓફિસ દ્વારા પ્રકાશન તાજેતરમાં રોજ થયેલ છે. ફાઉન્ડ્રી ઉદ્યોગ એક વધુ ઉર્જા વપરાશ કરતું ઔદ્યોગિક ક્ષેત્ર છે. ફાઉન્ડ્રી યુનિટમાં ૬૦થી ૭૦ ટકા ઉર્જા માત્ર ધાતુને પીગાળવામાં જ વપરાય છે જે તેની પાયાની મૂડીનો બહુ મૂલ્ય ભાગ હોય છે. પરંપરાગત રીતે બિન લોહ ધાતુને પીગાળવામાં વધુ સમય અને કાર્યશ્રમ વ્યય થાય છે.લઘુ એકમના ફાઉન્ડ્રી ઉદ્યોગોની ઉપરોક્ત સમસ્યાઓને ધ્યાનમાં રાખીને RNIFની રચના અને અજમાયશી કાર્યરત પ્રતિકૃતિ "RNIF" કે જેમાં બિન લોહ ધાતુને પીગાળતી વખતે ઉત્પન થતી ઉર્જાને ઉર્જા સંચયના સિદ્ધાંત મુજબ વપરાશ કરી ભઠ્ઠીની કાર્યક્ષમતામાં વધારો કરવાનો પ્રયત્ન કરેલ છે. આ ભઠ્ઠીના કાર્યક્ષમતામાં વધારા સાથે બિન લોહ ધાતુના ઉદ્યોગ સાહસિકો ઓછા મૂડી રોકાણ સાથે લઘુઉદ્યોગ પ્રસ્થાપિત કરી શકશે.

આ પ્રોજેક્ટ ગુજરાત રાજ્ય સરકારની "Student Startup and Innovation Policy" હેઠળ પસંગી પામેલ હતો. ઉપરોક્ત સંશોધન પ્રક્રિયામાં સંસ્થાના આચાર્ય શ્રીમતી ડો. સ્વેતા પી. દવે, SSIP મેન્ટર ડો.કે.જી. મારડિયા તથા મેટલર્જી વિભાગના વડા ડો. આઈ.બી. દવેના સતત માર્ગદર્શન, પ્રોત્સાહન અને પ્રેરણા મળેલ છે.

ભઠ્ઠીમાં બિનલોહ ધાતુ પીગળાવાશે
સરકારી એન્જિ. કોલેજોમાં યુનિક ભઠ્ઠી તૈયાર કરાઈ

એજ્યુકેશન રિપોર્ટર | અમદાવાદ

ગાંધીનગરની સરકારી એન્જિનિયરિંગ કોલેજના મેટલર્જી વિભાગના પ્રાધ્યાપક દેવાંગ વી. મહંતના માર્ગદર્શન હેઠળ ભૂતપુર્વ વિદ્યાર્થી આસિફ મનસુરી તથા તેઓની ટીમ શશી શેખર, અપર્ણા શ્રીવાસ્તવ અને અપુર્વા ચૌહાણ દ્વારા રિવોલ્યુશનરી નોન ફેરિયસ ઈનોવેટરી ફુરનેસના સંશોધનનું ભારતીય પેટન્સ ઓફિસ દ્વારા પ્રકાશન 30 ઓગસ્ટ 2019એ કરાયું છે.

ફાઉન્ડ્રી ઉદ્યોગો એક વધુ ઊર્જા વપરાશ કરતુ ઔદ્યોગીક એકમ ક્ષેત્ર છે. ફાઉન્ડ્રી યુનિટમાં 60થી 70 ટકા ઉર્જા માત્ર ધાતુને પીગળાવવા માટે જ વપરાય છે. જેના પર મોટો ખર્ચ થાય છે. પરંપરાગત રીતે બિનલોહ ધાતુને પીગાળવા માટે વધારે સમય જાય છે.

લઘુ એકમના ફાઉન્ડ્રી ઉદ્યોગોની ઉપરોક્ત સમસ્યાઓને ધ્યાનમાં રાખીને આરએનઆઈએફની રચના અને અજમાયશી કાર્યરત પ્રતિકૃતિ આશરે 100 કિલો બિનલોહ ધાતુને પીગાળવાની ક્ષમતા ધરાવે છે. બિનલોહ ધાતુને પીગાળતા સમયે ઉત્પન્ન થતી ઊર્જાનો પણ ઉપયોગ કરીને ભઠ્ઠીની કાર્યક્ષમતામાં વધારો કરે છે. આ ભઠ્ઠીના ઉપયોગથી ઉદ્યોગ સાહસિકો ઓછા ખર્ચે વધારે કામ લઈ શકશે. આ પ્રોજેક્ટના ગુજરાત રાજ્ય સ્ટુડન્ટ્સ સ્ટાર્ટઅપ અને ઈનોવેશન પોલીસી અંતર્ગત પસંદ કરવામાં આવ્યું છે.

સરકારી ઈજનેરી કોલેજ, ગાંધીનગર ખાતે ટેકનીકલ સેમિનાર 'ફ્રિક્શન સ્ટિર પ્રોસેસિંગ'નું આયોજન

ગાંધીનગર, તા. ૧૭

ઉચ્ચ શિક્ષણના તાબા હેઠળના મેટલર્જી વિભાગ, સરકારી ઈજનેરી કોલેજ, સેકટર-૨૮, ગાંધીનગર ખાતે 'ફ્રિક્શન સ્ટિર પ્રોસેસિંગ' વિષયનું ટેકનીકલ સેમિનારનું આયોજન ઈન્સ્ટિટ્યૂટ ઓફ ઈજીનીયર્સ અને ઈન્ડિયન ઈન્સ્ટિટ્યૂટ ઓફ વેલ્ડિંગ- પીડીપીયુ સ્ટુડેંટ ચેપ્ટર ના સંયોજન થી તારીખ ૧૫ ફેબ્રુઅરી ૨૦૨૦ના દિવસે કરેલ છે. આ તાલીમના સંયોજક મેટલર્જી વિભાગના પ્રાધ્યાપકો શ્રી ડી. જી. શર્મા તથા શ્રી પી. કે. નાનાવટી હતા. ઉપરોક્ત તાલીમમાં ગુજરાત રાજ્યની વિવિધ ઈજનેરી કોલેજો અને યુનિવર્સીટીયો જેવી કે એસવીએનાઈટી, સૂરત, એમએસયુ બરોડા, નિરમા યુનિવર્સીટી, ઈંડુસ યુનિવર્સીટી, રાય યુનિવર્સીટી, ગોકુલ ગ્લોબલ યુનિવર્સીટી, જીટીયુ અમદાવાદ અને પીડીપીયુ ખાતેથી ૬૪ બી.ઈ., એમ.ઈ. અને પીએચડી ના વિધાર્થીયોએ ભાગ લીધેલ છે જેનો મુખ્ય હેતુ વિધાર્થીયોને મટિરિયલ્સની આધુનીક પ્રોસેસિંગ પ્રક્રિયા ફ્રિક્શન સ્ટિર પ્રોસેસિંગ અને તેના રિસર્ચનું તજજ્ઞનો દ્વારા તાલીમ આપવાનું હતું.

તાલીમનું ઉદઘાટન શ્રી. આર. જે. દવે, પુર્વ જોઈંટ ડાયરેકટર અને શ્રી બી. જે. પંચાલ, જોઈંટ ડાયરેકટર, ટેકનીકલ શિક્ષણ વિભાગના હસ્તે ડો. સ્વેતા. પી. દવે, આચાર્ય, સરકારી ઈજનેરી કોલેજ, ગાંધીનગર, ડો. આઈ. બી. દવે, મેટલર્જી વિભાગના વડા, ડો. વી. જે. બધેકા, ચેરમેન, ઈન્ડિયન ઈન્સ્ટિટ્યૂટ ઓફ વેલ્ડિંગ- પીડીપીયુ સ્ટુડેંટ ચેપ્ટર, શ્યામ વર્ગીજ અને શ્રી વિજય સોલંકી, ઈન્સ્ટિટ્યૂટ ઓફ ઈજીનીયર્સ તથા વિવિધ ખાતાના વડાઓની ઉપસ્થિતિમાં કરવામાં આવેલ હતું.

TRAINING/ACTIVITY ATTENDED BY STUDENTS

Sr. No.	Name of the Faculty	Title of Training/Activity	Duration	Organizer
1	Bhatt Uddhav Pramodchandra	Friction Stir Processing	15-02-2020	GEC Gandhinagar
2	Agrawal kirti Manish	Workshop on friction stir processing	15-02-2020	GEC Gandhinagar
3	Patel Parth	Friction stir Processing	15-02-2020	GEC Gandhinagar
4	Patel Parth	Women Innovation,IP. and Entreprenureship	18-02-2020	GEC Gandhinagar
5	Kachhadiya Hardik	E-learning program on Primary Steel Making	01-05-2020	TATA STEEL
6	Kachhadiya Hardik	E-learning program on Basic Metallurgy	01-05-2020	TATA STEEL
7	Kachhadiya Hardik	E-learning program on Desulphurisation	29-04-2020	TATA STEEL
8	Bhimani Dikshit Vijaybhai	FSP one day seminar	15-02-2020	GEC Gandhinagar
9	Bhimani Dikshit Vijaybhai	FSP one day seminar	15-02-2020	GEC Gandhinagar
10	Kalsariya Sanjay J	Friction stir process and another response welding of plastic &arc spot welding	14-06-2020	GEC Gandhinagar
11	Kachhadiya Hardik	NPTEL course Steel Quality : Role of Secondary Refining & Continuous Casting	15-06-2020	NPTEL
12	Sondagar Kuldeep P	Friction stir processing	15-02-2020	GEC Gandhinagar
13	Vaibhav	Friction stir processing	15-02-2020	GEC Gandhinagar
14	Raj Devani	Friction stir processing	15-02-2020	GEC Gandhinagar
15	Parth rana	Friction stir processing	15-02-2020	GEC Gandhinagar
16	Patel Alok	Friction Stir Processing	15-02-2020	GEC Gandhinagar
17	Ravi kumar Umesh Chandravanshi	Capability Development (Primary Steel making)	25-04-2020	TATA Steel
18	Ravi kumar Umesh Chandravanshi	Capability development (Heat treatment of steel)	20-05-2020	TATA Steel

TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr. No.	Name of the Faculty	Title of Training/Activity	Duration	Organizer
1	Prof. D. G. Sharma	One Day International Virtual Conference "Microplastics 2020"	30-06-2020	Vellor Institute of Technology
2	Prof. D. G. Sharma	National Webinar On "Formula For Success"	23-06-2020	Deogiri Institute Of Engineering And Management Studies
3	Prof. D. G. Sharma	Webinar On "Explosive Welding & Wire Arc Additive Manufacturing"	07-06-2020	Pandit Deendayal Petroleum University
4	Prof. D. G. Sharma	E-Quiz On "International Yoga Day"	21-06-2020	Soni College, Solapur
5	Prof. D. G. Sharma	Webinar on "Building Innovation & Startup Ecosystem"	29-06-2020	i-Hub, Vadodara
6	Prof. D. G. Sharma	Webinar on "Startup India Incentives for Start-ups"	30-06-2020	i-Hub, Vadodara
7	Prof. D. G. Sharma	Webinar on "Advances in Mechanical Engineering"	12-06-2020	MIC College of Technology
8	Prof. D. G. Sharma	Webinar on "Building Innovation & Startup Ecosystem in South Gujarat"	23-06-2020	i-Hub
9	Prof. D. G. Sharma	Webinar on "Role of Higher Educational Institutions to Promote Deep Tech Startups"	24-06-2020	i-Hub
10	Prof. D. G. Sharma	Webinar on "Welding of Plastic and Arc Spot Welding"	14-06-2020	Pandit Deendayal Petroleum University
11	Prof. D. G. Sharma	Webinar on "'Ecosystem Role in I2E-Innovator To Entrepreneur Journey"	18-06-2020	i-Hub
12	Prof. D. G. Sharma	International Faculty Development Program on "Research and Development in Materials Behaviour, Processing and Characterization Techniques	09-06-2020 to 14-06-2020	Indian Institute of Metals, GLA University & Panjab University
13	Prof. D. G. Sharma	Webinar on "Crafting a Golden Pitch : From Investor's Lense"	26-06-2020	i-Hub
14	Prof. D. G. Sharma	Webinar on "Building a Social Entrepreneurship Ecosystem in India - the AFI Story"	22-06-2020	i-Hub
15	Prof. P.K.Nanavati	AICTE Training and Learning (ATAL) Academy Online FDP on "Augmented Reality (AR)/ Virtual Reality (VR)"	18-5-2020-22-5-2020	SVNIT, SURAT
16	Prof. P.K.Nanavati	NPTEL Online Certification- "Welding Processes"	Jan-Apr-2020	IIT Madras

TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr. No.	Name of the Faculty	Title of Training/Activity	Duration	Organizer
17	Prof. D. G. Sharma	Webinar on "Opportunities for StartupsIn These Challenging Times"	07-06-2020	i-Hub
18	Prof. D. G. Sharma	Webinar on "Nuances of Business Incubators"	16-06-2020	i-Hub
19	Prof. D. G. Sharma	Webinar on "Business Model Canvas "	12-06-2020	i-Hub
20	Prof. D. G. Sharma	Webinar on "Research Paper Writing for Scientific Journals"	22-05-2020	Kalaignarkarunanidhi Institute of Technology
21	Prof. D. G. Sharma	Webinar on “Geometrical Dimensioning and Tolerancing for Engineering Design”	30-05-2020	VELS Institute of Science, Technology and Adavanced Studies
22	Prof. D. G. Sharma	Webinar on "Thesis Writing Using Application Software"	26-05-2020 to 27-05-2020	Sarvajanik College of Engineering and Technology
23	Prof. D. G. Sharma	E-Quiz on "Novel Corona Virus Pandemic General Awareness”	14-06-2020	Institute of Engineers, Gujarat State Centre
24	Prof. D. G. Sharma	Webinar on “Scope in Administrative Jobs After Engineering"	21-06-2020	NHSM Knowledge Campus
25	Prof. D. G. Sharma	Webinar on "NBA Accreditation"	11-06-2020	GTU & InPods
26	Prof. D. G. Sharma	Webinar on "FABRICATION WORKS"	30-05-2020	Dr. S. & S. S. Ghandhy College of Engg. & Tech.
27	Prof. D. G. Sharma	National Level Quiz on NAAC	25-05-2020	P.V.P.P. College of Engineering
28	Prof. D. G. Sharma	Mega Placement Camp of Ahmedabad Zone	13-02-2020 to 14-02-2020	R. C. Technical Institute
29	Prof. D. G. Sharma	Faculty Development Programme on ‘Future Materials: Nanocomposites’	15-06-2020 to 21-06-2020	Bharati Vidyapeeth College of Engineering

TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr. No.	Name of the Faculty	Title of Training/Activity	Duration	Organizer
30	Prof. D. G. Sharma	Faculty Development Programme on "Hands on with Creating & Managing Online Teaching Tools for Teachers"	28-05-2020 to 30-05-2020	S.N. Patel Institute of Technology & Research Centre
31	Prof. D. G. Sharma	National Level Quiz on NBA	05-06-2020	Padmabhushan Vasantdada Patil Pratishthan's College of Engineering
32	Prof. B. R. Rana	National Level Quiz on NBA	05-06-2020	Padmabhushan Vasantdada Patil Pratishthan's College of Engineering
33	Prof. B. R. Rana	Webinar on "Welding of Plastic and Arc Spot Welding"	14-06-2020	Pandit Deendayal Petroleum University
34	Prof. B. R. Rana	Webinar on "FABRICATION WORKS"	30-05-2020	Dr. S. & S. S. Ghandhy College of Engg. & Tech.
35	Prof. B. R. Rana	Webinar on "NBA Accreditation"	11-06-2020	GTU
36	Prof. H. H. Jadav	Webinar on "NBA Accreditation"	11-06-2020	GTU
37	Prof. H. H. Jadav	Webinar on "Building a Social Entrepreneurship Ecosystem in India - the AFI Story"	22-06-2020	i-Hub
38	Prof. H. H. Jadav	National Level Quiz on NBA	06-06-2020	Padmabhushan Vasantdada Patil Pratishthan's College of Engineering
39	Prof. H. H. Jadav	Webinar on "'Ecosystem Role in I2E-Innovator To Entrepreneur Journey"	18-06-2020	i-Hub
40	Prof. H. H. Jadav	Webinar on "Scope in Administrative Jobs After Engineering"	21-06-2020	NHSM Knowledge Campus
41	Prof. H. H. Jadav	E-learning Program on "Basic Metallurgy"	11-05-2020	TATA Steel
42	Prof. H. H. Jadav	Webinar on "Role of Higher Educational Institutions to Promote Deep Tech Startups"	24-06-2020	i-Hub
43	Prof. H. H. Jadav	Webinar on "Building Innovation & Startup Ecosystem in South Gujarat"	23-06-2020	i-Hub

TRAINING/ACTIVITY ATTENDED BY FACULTY

Sr. No.	Name of the Faculty	Title of Training/Activity	Duration	Organizer
44	Prof. H. H. Jadav	Webinar on "Building Innovation & Startup Ecosystem in Saurashtra"	17-06-2020	i-Hub
45	Prof. H. H. Jadav	E-Quiz On "International Yoga Day"	21-06-2020	Soni College, Solapur
46	Prof. H. H. Jadav	Webinar on "NBA Accreditation"	11-06-2020	GTU & InPods
47	Prof. D.V. Mahant	Webinar on "Building Innovation & Startup Ecosystem at Vadodara"	29-06-2020	i-Hub
48	Prof. D.V. Mahant	Webinar on "China out India in: An exponentianl opportunity for indian technology entrepreneurs to fill the void"	07-07-2020	i-Hub
49	Prof. D.V. Mahant	Webinar on "Building Innovation & Startup Ecosystem in South Gujarat"	23-06-2020	i-Hub
50	Prof. D.V. Mahant	National Level Quiz on NBA	05-06-2020	Padmabhushan Vasantdada Patil Pratishthan's College of Engineering
51	Prof. H. H. Thakar	Research Clinic course on "MANAGING LITERATURE DATA USING EXCEL"	01-06-2020	RESEARCHERS ONLINE
52	Prof. H. H. Thakar	National Level Quiz on NBA	05-06-2020	Padmabhushan Vasantdada Patil Pratishthan's College of Engineering
53	Prof. H. H. Thakar	Webinar on "FABRICATION WORKS"	30-05-2020	Dr. S. & S. S. Ghandhy College of Engineering & Technology, Surat
54	Prof. H. H. Thakar	webinar on "Opportunities for startups in these challenging times"	07-06-2020	i-Hub
55	Prof. H. H. Thakar	Using the Gleeble to Study Cracking in Welds- Guest	02-07-2020	Daniel Quigley
56	Prof. H. H. Thakar	Webinar on "NBA Accreditation"	11-06-2020	GTU and Inpods India Pvt. Ltd.
57	Prof. H. H. Thakar	Contribution in planning, implementation and organizing Mega Placement Camps in all Districts of Gujarat	28-02-2020	Placement cell, Department of Education, Government of
58	prof. S.I.Patel	National Level Quiz on NBA	06-06-2020	Vasantdada Patil Pratishthan's College of Engineering

Photography

By Aniket Dave MET Sem 3

'Netherworld'

"In an ideal world its not the humanity which is equal , its all existence that's equal."

'Inception'

"True your wheels and our actions shall spring out what we fundamentally desire."

'Firdaus'

"As the sun arose, so did our wings"

Photography by :

Aniket Dave Sem-3

શીખવી દેય છે

વધારે છે જરૂરી જે તે પહેલા શીખવી દેય છે
જન્મતાવેંત આંખો સહુને જોતા શીખવી દેય છે.

જરૂરી છે આ બધા લોકોની વચ્ચે સ્નેહ થી ભળવાની
જે ના આવડે તોં આ દુનિયા શીખવી દેય છે.

રહો છો આ દુનિયામાં હાથ જોડી મસ્તક જૂકાવી
ન પૂછો વાત આ દુનિયા શું-શું શીખવી દેય છે.

અહીંયા કોઈ ભાષા કે ઈશારા નહીં આવે કામ
ઠોકર છે તેનું નામ જે સરળતાથી શીખવી દે છે.

થવું કઈ રીતે ઉભા આ દુનિયામાં
શીખતા પહેલા બીજાને પડતા શીખવી દેય છે.

ગજબ છે આ દુનિયા ન બોલતાં ને બોલતાં
અપાહીઝ ને ચાલતા શીખવી દેય છે.

-Written by
Ankush Meghani
Sem 4

TITANIUM

Metallurgy Department

GOVERNMENT ENGINEERING COLLEGE
GANDHINAGAR
॥ कर्ममयं ज्ञानं एवं ज्ञानमयं कर्म ॥