# Report of 1st International Conference

On

# Recent Innovations & Technological Development in Mechanical Engineering

## (RITDME-2018)

[April 6-7, 2018]



#### ~CONFERENCE CHAIR~

Dr. V. K. Chandna

#### ~CONVENERS~

Dr. M. P. Singh Dr. Bhuvnesh Bhardwaj

#### ~ORGANIZING SECRETARIES~

Mr. Kuldeep Sharma Dr. Manish Shrivastava Mr. Lalit Kumar Sharma Mr. Tejender Singh

#### ~ORGANIZED BY~

Department of Mechanical Engineering Jaipur Engineering College and Research Centre, Shri Ram Ki Nangal, Via Sitapura RIICO, Opp. EPIP Gate, Tonk Road, Jaipur-302022, Rajasthan, India





## Jaipur Engineering College and Research Centre International Conference on Recent Innovations & Technological Development in **Mechanical Engineering** (RITDME-2018)

**April 6-7 2018** 

April 06, 2018 [Day 1]					
Time	Details				
09:00AM – 10:00AM	Registration With Tea and Cookies				
	Inaugural Session [1	0:00AM – 11:30AM]			
10:00AM – 11:30AM	Welcoming of Guests, Address by delegates				
Conference G	Conference Group Photograph followed by High Tea [11:30 AM – 12:00AM]				
	Technical Session-I & II [12:00Noon – 2:00PM]				
12:00Noon – 12:30PM	Key Note Address: Prof. Noe G. Alba-Baena (UACJ, Mexico)				
12:30PM – 01:00PM	Key Note Address: Dr. Meghanshu Vashista (IIT BHU)				
	Parallel Session [0]	1:00PM – 02:00PM]			
Session Chair:	Session- I [Venue: C-401] Session Chair: Dr. J.P. Bhamu (GEC, Bikaner)  Session- II [Venue: CP-19] Session Chair: Dr. Ankur Pareek (TEQIP Coordinator)				
	Networking Lunch [	02:00PM – 03:00PM]			
	Technical Session-III [3:00PM – 5:00PM]				
03:00PM - 03:30PM	Key Note Add	ress: Dr. M.L. Meena (MNIT, Jaipur)			
[Venue: C-401] Session Chair: Dr. K. B. Rana (RTU, Kota)					





## Jaipur Engineering College and Research Centre International Conference on Recent Innovations & Technological Development in **Mechanical Engineering** (RITDME-2018) **April 6-7 2018**

April 6-7 2018				
April 07, 2018 [Day 2]				
Time	Details			
09:00AM – 09:30AM	Registration With Tea and Cookies			
	Technical Session-IV [09:30AM – 11:30AM]			
09:30AM – 10:00AM	Key Note Address: Dr. Jinesh Kumar Jain (GEC, Ajmer)			
	[Venue: C-401] Session Chair: Dr. B.K. Sharma (Chairperson of IFO, Rajasthan chapter)			
	High Tea [11:30AM – 12:00Noon]			
	Technical Session-V [12:00Noon – 2:00PM]			
12:00Noon – 12:30PM	Key Note Address: Dr. Varun Sharma (NIT, Jhalandhar)			
[Venue: C-401] Session Chair: Dr. Vijay Sharma (Anand International College, Jaipur)				
	Networking Lunch [02:00PM – 03:00PM]			
	Technical Session-VI [3:00PM – 5:00PM]			
03:00PM - 03:30PM	Key Note Address: Dr. Ashok Sharma (Manipal University)			
[Venue: C-401] Session Chair: Dr. Ravi Goyal (Bhartiya Skill Development University, Jaipur)				

## Technical Schedule for Parallel Session–I & II

Day and Date: Friday 06/04/2018 Venue: C-401 & CP-19 Timings: 12:00Noon -2:00PM					
12	12:00Noon – 12:30PM Key Note Address: Prof. Noe Alba-Baena (UACJ, Mexico)				
12	12:30PM – 01:00PM Key Note Address: Dr. Meghanshu Vashista (IIT BHU)				
	Venue: C-401	Session Chair: Dr. J.P. Bhamu (GEC, Bikaner)			
S. No.	Author Name	Title of paper	Paper Id	Remark	
1	Ganesh, Somesh Kr Sharma	Assessing manufacturing threats in aero engine components -Nozzle & Diffuser using Fuzzy logic	RITDME-012		
2	Ashish Ranjan	Automatic Gear shifting in Manual Transmission using Electromagnetic Clutch and Embedded System	RITDME-014		
3	Ajay Bangar, Mugdha Shrivastava, Rajan Sharma	Design and Stress Analysis of Car Chassis Due to Inertia Load	RITDME-025		
4	Jagdish Bhadu, Jaiprakash Bhamu	Implementation of Lean Tools/Techniques in SMEs-A Review	RITDME-039		
5	Badal Sharma, Sunand Kumar	Investigating Dimensional Accuracy of FDM Fabricated Acrylonitrile Styrene Acrylate (ASA) Parts Using Response Surface Methodology	RITDME-041		
6	Aishwerya Johari Dr. Bhuvnesh Bhardwaj	Laser Machining	RITDME-125		
7	Sumit Khurana Manish Shriwastava	Quality Improvement in a Machine in a Fuel Injector Manufacturing Plant	RITDME-136		
8	Rajesh Kumar Ojha	Vibration Analysis of sandwich beam with isotropic skins and viscoelastic core	RITDME-137		
9	Dharmendra Singh C S Rajoria Mohm Yunus Sheikh	Effect of microstructure on corrosion resistance and high cycle fatigue life of Al-Mg Alloy processed through cryorolling	RITDME-141		
	Venue: CP-19	Session Chair: Dr. Ankur Pareek (TE	QIP Coordina	ator)	
S. No.	Author Name	Title of paper	Paper Id	Remark	
1	Md. Inzamam-ul- Haque, Virendra Kumar, Akhil Vijay	Comparison of the Performance of a Spark-ignited gasoline engine blended with hydrogen-oxygen mixtures	RITDME-018		
2	Shashank Shekhar Singh Dr. Ahmad Ali Khan	Experimental Studies on Ten Bladed Fan Vibration Considering Flexibility of Shaft	RITDME-035		
3	Nikhil Yadav, Vinita Ramnani,	Investigation The Effect of Different Process Parameters on Defects in A713 Aluminium Alloy			
3	Vineet Chak, Yashvin Gupta, Dharmanshu S Sodha	Castings Produced by Investment Castings	RITDME-042		
4	Yashvin Gupta,		RITDME-042 RITDME-057		
	Yashvin Gupta, Dharmanshu S Sodha Pramod Kumar Jaiprakash Bhamu Rajendra Kukana, Omprakash Jakhar	Castings Produced by Investment Castings  Process Improvement through Kaizen Lean Tool (A Case study in small scale organization)  A Review: Recent development on Earth-Air Tunnel Heat Exchanger			
4	Yashvin Gupta, Dharmanshu S Sodha Pramod Kumar Jaiprakash Bhamu Rajendra Kukana,	Castings Produced by Investment Castings  Process Improvement through Kaizen Lean Tool (A Case study in small scale organization)  A Review: Recent development on Earth-Air Tunnel Heat Exchanger  Application of lean Manufacturing by Value Stream Mapping.	RITDME-057		
4 5	Yashvin Gupta, Dharmanshu S Sodha Pramod Kumar Jaiprakash Bhamu Rajendra Kukana, Omprakash Jakhar Shweta Sharma	Castings Produced by Investment Castings  Process Improvement through Kaizen Lean Tool (A Case study in small scale organization)  A Review: Recent development on Earth-Air Tunnel Heat Exchanger  Application of lean Manufacturing by Value Stream	RITDME-057 RITDME-072		
4 5 6	Yashvin Gupta, Dharmanshu S Sodha Pramod Kumar Jaiprakash Bhamu Rajendra Kukana, Omprakash Jakhar Shweta Sharma RAGHAV S. DHAKER	Castings Produced by Investment Castings  Process Improvement through Kaizen Lean Tool (A Case study in small scale organization)  A Review: Recent development on Earth-Air Tunnel Heat Exchanger  Application of lean Manufacturing by Value Stream Mapping.  Thermal Modeling of heat requirements for deep	RITDME-057 RITDME-072 RITDME-091		

## **Technical Schedule for Session–III**

O3:00PM – 03:30PM Key Note Address: Dr. M.L. Meena (MNIT, Jaipur)				
	Venue: C-401	Session Chair: Dr. K.B. Rana (RTU, Kota)		
S. No.	Author Name	Title of paper	Paper Id	Remark
1	Aditya Malik Bhuvnesh Bhardwaj	Design and Thermal Analysis of Mmc Based Disc Brake	RITDME-026	
2	Chandan Kumar K.B. Rana B. Tripathi Mukesh Kumar	Effect of methanol blended diesel fuel on agriculture based C.I. engine	RITDME-030	
3	Veerendra Kumar, Tejbahadur Singh Md. Inzamam Ul Haq	Effect of various antioxidants on oxidation stability of biodiesel produced from Prunus armeniaca oil, engine emission and engine performance	RITDME-031	
4	Palak Jindal Yogesh Dubey Akhil Vijay	Experimental Evaluation of MRR & Surface Roughness with AISI D3 Die Steel using SiC & Kerosene as Dielectric in EDM	RITDME-034	
5	Manmohan Sidh	Green Supply Chain Management: An Overview	RITDME-036	
6	Jaiprakash Bhamu	IoT-based Lean Logistics: a Case Discussion	RITDME-043	
7	Akhilesh Paliwal Shrikant Bansal Gourav Jain	Lean Thinking Principles Applied in Construction Industries	RITDME-045	
8	Jaiprakash Bhamu	Lean Implementation in Construction Industries for Sustainable Development- Case Study Review	RITDME-046	
9	Ankush Sharma Amar Patnaik	Mechanical and Tribological characterization of natural fiber reinforced composite and its Applications: A review	RITDME-049	
10	Manu Khare R.K. Gupta Bhuvnesh Bhardwaj	Stir Casting fabrication of Aluminum Metal Matrix Composite with Particulate Reinforcement: A Review	RITDME-088	
11	Sanjay Gomasta Manish Shriwastava	Green Practices in Logistics of an Automotive Industry: A case Study	RITDME-089	
12	Sen Kamlesh Akshay vyas Ajay Kumawat	Comparative Study of Inflatable Helmet with Existing Helmets	RITDME-092	
13	Shreya Jain Tushar Khanna Kaushal Singh Chauhan	Green Engine (Turbo Combustion Green Engine)	RITDME-093	
14	Laxman Kumar Pandey S P Singh Dhram Dutt Ankush Sharma	Startdard part library development based on CATIA	RITDME-097	
15	Pankaj Agarwal	A review on Nanomaterials as a filler material in natural Fiber Reinforced Composites	RITDME-099	
16	Varun Vinod Rawat Ashish Kumar Singh M.L Meena	A Review on Effect of Lean Six Sigma frameworks in Manufacturing SMEs	RITDME-117	
17	Ankesh Kumar Yadav Ashish Kumar M.L. Meena	Enablers of agile manufacturing : A Review	RITDME-129	
18	Krishna Kumar Purohit P.M. Meena	Application Improvement of Thermoelectric Generator Device installed at Waste Heat Recovery System Working on Engine Exhaust: An Experimental and Numerical Study	RITDME-143	

## **Technical Schedule for Session–IV**

Day and Date: Friday 07/04/2018 Venue: Conference Room Timings: 09:30AM – 11:30AM

	09:30AM – 10:00AM  Key Note Address: Dr. Jinesh Kumar Jain (GEC, Ajmer)				
	Venue: C-401 Session Chair: Dr. B.K. Sharma (IFO Chairperson, Raj. Chapt			Chapter)	
S. No.	Author Name	Title of paper	Paper Id	Remark	
1	Vikas Sharma M.L. Meena Mukesh Kumar	A review on tribological behavior of polymeric composites materials	RITDME-006		
2	Chandra Shekhar Pandey Harimohan Sharma	CFD Study of Corrugated Heat Exchanger Using Different Parameters With Taguchi Method	RITDME-016		
3	Harsh Sharma Sandesh Trivedi	Continum Modeling and Dynamic Analysis of Single Walled Carbon Nanotube Based Mass Sensor	RITDME-021		
4	Vikrant Sharma Jinesh Kr. Jain	Euclidean distance and hierarchical clustering method based on centroid linkage for the cell formation problem in cellular manufacturing	RITDME-033		
5	Chirag Solanki Arpit Akar Kuldeep Sharma	Study of Hybrid Vehicles technology	RITDME-038		
6	Lincoln Gori Nikhil Jain	Micro Machining (Micro EDM)	RITDME-050		
7	Shrikant Bansal Gaurav Jain Akhilesh Paliwal	Project Selction Using Hybrid AHP and Promethee	RITDME-059		
8	Rohit Goyal	Soft Actuation Technologies and Challenges	RITDME-075		
9	Nikhil Jian Ankur Pareek Bhuvnesh Bhardwaj	Investigation of Dry and near dry Electric Discharge Milling Process	RITDME-083		
10	Deepak Singh Ravi Kr. Goyal	Investigation on protection and optimum thermal design solution by using Thermal management for battery bank	RITDME-121		
11	Monika Khurana Jayant Purohit Bhuvnesh Bhardwaj	Investigation on two-body abrasive wear behavior of silicon carbide filled carbon fabric-epoxy composites	RITDME-123		
12	Ayush Kumar Gupta Arpit Agarwal Lalit Kumar Sharma	Application of Ant Colony Optimization in Several Engineering Domains	RITDME-124		
13	Durgesh Kardam Bhuvnesh Bhardwaj	Macine tool design by Innovative material	RITDME-131		
14	Jitendra Kumar Bairwa Bhuvnesh Bhardwaj	Soft Actuation Technologies and Challenges	RITDME-132		
15	Om Prakash Gurjar Bhuvnesh Bhardwaj	Investigation of Dry and near dry Electric Discharge	RITDME-133		
16	Ranjeet Kumar Singh Harimohan Sharma	Thermal Performance Analysis of Solar Air Heater having Rectangular Rib Configuration using Numerical Modeling	RITDME-134		
17	Pramod Kumar Verma Satyendra Kumar Jayesh Raj Singh	Modeling and Analysis of COTTER Joint of Various Materials using CAE tools	RITDME-135		
18	Ramesh Vabanagiri Jinesh Kr. Jain	Time saving with DX tool to reduce Automotive Nonlinear simulations	RITDME-139		

## Technical Schedule for Session-V

Day and Date: Friday 07/04/2018 Venue: Conference Room Timings: 12:00Noon – 02:00PM

12:00 Noon – 12:30 PM  Key Note Address: Dr. Varun Sharma (NIT, Jhalandhar)				
	Venue: C-401 Session chair: Dr. Vijay Sharma (Ananad International college)			
S. No.	Author Name	Title of paper	Paper Id	Remark
1	Aditya Khandal Ravi Yadav	Advancements in Abrasive Jet Machining	RITDME-009	
2	Ashish Kumar Gupta Tejbahadur Singh	Application of Quality Function Deployment in New Product Development	RITDME-011	
3	Neeraj Sharma, Satyendra Kumar	Biodiesel: A substitute to Conventional Fuel	RITDME-015	
4	Amitesh Sharma Bhuvnesh Bhardwaj Varun Sharma, Kedar narayan Bairwa	Investigation of the effect of GMAW parameters on tensile strength of weldment during the welding of ST-35 steel plates	RITDME-017	
5	Satyendra Kumar	Computational Study of Distribution of Mechanical Stress in Artificially Replaced Hip Joint Implants Using Mathematical Model	RITDME-019	
6	Rajendra Kr. Gupta	Current Implementation on Lean Manufacturing: A review	RITDME-022	
7	Brijesh A. Patel Hitesh H. Patel Dileep G. Patil	Design Simulation for Plate Fin Heat Exchanger Use in Screw Compressor	RITDME-027	
8	Hemant Bansal Lalit Kumar Sharma	Designing Welding Fixture in Order to Reduce Rejections of Welded Lever Assembly in Manufacturing Unit	RITDME-028	
9	Gaurav Jain Shrikant Bansal Akhilesh Paliwal	Developing a Coordination Framework for a Supply Chain Using Fuzzy Analytical Hierarchy Process in Small Scale Manufacturing Firm	RITDME-029	
10	Bhanu Pratap R.K. Gupta Bhuvnesh Bhardwaj	Surface Treatment Methods of Fibres of Polymer Composites - A Review	RITDME-073	
11	Sandeep Kumar Vikrant Bharath Vinay Verma	Laser Ignition System for IC Engine	RITDME-074	
12	Deepak Kachhot Rishi Dewangan	Effect of TiO2, CaF2, Fe2O3 and MnO additions on impact strength and hardness in submerged arc welding through regression analysis using developed flux by use of bauxite ore	RITDME-080	
13	Jogendra Choudhary Ramesh Vabanagiri Dr. Jinesh Kumar Jain	Quality Value Stream Mapping	RITDME-081	
14	Yashdeep S. Chauhan Sarthak Jain Sourabh Parihar Rishi Dewangan	Development of metal matrix composite reinforced with red mud and coconut shell ash	RITDME-090	
15	Sanjeet Kumar Bhasker Shrivastava Bhuvnesh Bhardwaj	Effect of welding parameters and electrodes on bead width using gas metal arc welding	RITDME-094	
16	Anand Pandey	Machining Performance Improvements By Adding Fine Powders In Electrical Discharge Machining	RITDME-096	
17	Mihir Mehta Chirag Taneja Vaibhav Gupta Ashish Mogra Ankush Sharma	Fabrication and finite element analysis of carbon fibre reinforced components used in automobile structure: A Concise Review	RITDME-113	
18	Anirudh Jain Mudit Garg Lalit Kumar Sharma	Analysis of Blended Wing Body Aircraft	RITDME-126	

### Technical Schedule for Session-VI

Day and Date: Friday 07/04/2018 Venue: Conference Room Timings: 03:00PM – 05:00PM

03:00PM – 03:30PM Key Note Address: Dr. Ashok Sharma(Manipal University)

Venue: C-401 Session chair: Dr. Ravi Goyal (Bhartiya Skill Development University, Jaipur)

S. No.	Author Name	Title of paper	Paper Id	Remark
1	Tejaram Saini Satya Prakash Saini	Homogeneous Charge Compression Ignition (HCCI) Engine	RITDME-001	
2	Yogesh Dubey Palak Jindal	Current Modernism and Special Effects of Critical Tool Parameters on Surface Unevenness	RITDME-002	
3	Manish Jain M.P. Singh	Advanced Manufacturing Technologies : An overview	RITDME-007	
4	M.P. Singh Manish Jain	Advanced Manufacturing Technology: A Case study in small scale organizations	RITDME-008	
5	Aashish Nagpal	Assessment of Renewable Energy in India	RITDME-013	
6	Akhil Vijay Palak jindal	Integrating Lean Six Sigma and Supply Chain Approach for Quality and Business Performance	RITDME-040	
7	Hukuma Chand Nagar M.P. Singh Dilip Prajapati	Performance & Emission Analysis of Bio-Diesel From Karanja Methyel Ester In A Compression Ignition Engine	RITDME-055	
8	Ravi Yadav Satyendra Kumar	Smart Materials: Another Revolution in Engineering and Science	RITDME-062	
9	Dilip Kumar Prajapati, Hement bansal, Abhishek Kumar	System Modeling of Service Supply Chain in Manufacturing Industry Using SAP-LAP Hills Framework	RITDME-066	
10	Shrikant Bansal Swadesh Kumar Agarwal Gaurav Jain	Vehicle Routing Problems: Literature Through Integration Approaches	RITDME-069	
11	Akhil Vijay Khushal Patodia	Vehicular Pollution Control in India Technical & Non- Technical Measure Policy: A Review	RITDME-070	
12	Bharat Agarwal Javed Khan Abhishek Kumar	Recent Advancement in Diamond Coated Cutting Tools	RITDME-077	
13	Varun Sharma Bhuvnesh Bhardwaj Subhod Kumar	Experimental Evaluation of the Optimal testing Conditions of the wear behavior of Hardox 400 steel using Box-Behnken Design	RITDME-084	
14	Navin H. Yadav Bhuvnesh Bhardwaj B.K. Sharma	A Review: Welding of Dissimilar Metal Alloys using hybrid welding technology & effect welding parameters on welding joints, weld bead & microstructure of materials	RITDME-085	
15	Arpit Gupta Akshay Galav R.K. Gupta	A Study on Advance Electronic Fuel Injection in Diesel Engine and Diagnosis of Common Faults.	RITDME-095	
16	Javed Khan Tejendra Singh	A review on CVT , Electric mechanical dual acting pully - CVT and Hybrid electric vehicle with CVT	RITDME-112	
17	Vinay Singh Marwal M.P. Singh	An Ergonomic Study of Work Related Musculoskeletal Disorder and Postural Stress Among Bamboo Handicraft Artisans of Jaipur District in Rajasthan	RITDME-118	
18	Akshay Pal Yash Sharma M.P. Singh	Analysis of Solar Vapor Absorption System Using Different Working Fluids	RITDME-122	

#### **International Conference**

on

#### Recent Innovations & Technological Development in Mechanical Engineering

International conferences have been organized on April 6-7, 2018 at Jaipur Engineering College and Research Center, Jaipur. The conferences have been collectively organized by the Department of Mechanical Engineering, Department of Information and Technology, Department of Electronics and Communication, and Department of Mathematics. The idea was to provide a common platform for researchers to learn and explore different dimensions with the motive to find solutions for the common good of the society.

#### **Inaugural Session**

India is a country of traditions. Following the culture and rituals, the conference was inaugurated with the lightening of the lamp to seek blessings from goddess Saraswati. The conference was graced by the presence of guests from different parts of the country and abroad.

The event was graced by the presence of Prof. (Dr.) Noe. G. Alba-Baena from University of Texas; Shri GunjanSaxena, General Manager in BSNL, Jaipur; Prof. (Dr.) Deepak Garg from Bennett University; Prof. (Dr.) Rajesh Kumar Tiwari from RVS College of Engg and Technology, Jamshedpur; Prof. (Dr.) Peeyush Chandra Retd. Professor of Mathematics from IIT Kanpur; Prof. (Dr.) MeghanshuVashista from Department of Mechanical Engg, IIT BHU; Prof. (Dr.) Purshotam Chaturani, Retd. Professor of Mathematics from IIT Bombay, along with Mr.Amit and Arpit Agrawal Director JECRC foundation and Prof V. K.Chandna, Principal JECRC, Jaipur. A video talk was also delivered by Prof. (Dr.) Paulo Haufs.



Shri Amit Agarwal, Director JECRC Foundations in his address praised the idea behind the conference. He declared the conference open and ensured participants and researchers that the following two days are going to be informative, pleasing and joyous as well. He was glad that the institution organizes various events with sheer dedication and innovation. He ensured that the management will organize more of such international events in the future also.



Prof. V. K. Chandana, Principal JECRC college was proud of his team. He appreciated the Head of various departments and the staff who had been working tirelessly for a long time to make this conference happen. He recognised the efforts put in by his team and applauded them for their hard work and dedication. The huge number of participant from different parts of the globe and the submission of...... papers is an evidence of how successful the conference was.



Prof. Noe G Alba Baena from UACJ Mexico, implanted the idea of changing the mindset of the youth from why to how. He emphasized on the fact that one should think overall changes that happen around him and should find reason on "how" it happens. He admired India a lot and told that we are fortunate to be in this country at this very crucial point of time as all advancement and technological development in each and every field are taking place in our nation. India is today the fastest developing nation with a huge number of young minds that can think beyond and bring change in the world. He praised the cultural diversity that our nation has and was moved by the hospitality that is embedded in our culture which he had found common all throughout the country.



Shri Gunjan Saxena, General Manager in BSNL, Jaipur addressed the session. His idea was that we don't need to take India forward to the move technologically advanced nation but we need to take the country back to the ancient era. The days of Ramayana and Mahabharata were the days when technology was at its pinnacle. The warfare, as well as the medical field, was at the ever best during those days. He explained the arrow as "Audio Encoded, Shoulder Propelled and Nuclear Missile". The successful transplantation of an animal's head on a human body by Lord Shiva. It is the technology that no country in the world, not even the US has ever possessed but we used to have it long back. This was the technology at that time and we need to work towards the goal of bringing back those days.



Dr. Peeyush Chandra, Retd. Professor of Mathematics from IIT Kanpur in his address told the importance of mathematics. He believed that mathematics is the foundation of each and every technology, without mathematics none of the technological development would have been possible. He emphasized on making the study of mathematics easy. Students often are afraid of the subject that it is the responsibility of the teacher to guide the student in the direction that he feels comfortable with the subject and enjoy his studies.



Dr. PurshotamChaturani, Retd. Professor of Mathematics from IIT Bombay told the audience the mathematics is like magic. The enthusiasm that he had even at the age of eighty years was a treat to watch. He believed that those who consider themselves dead worth at this age are mistaken. In his thought, the nation will lead to greater heights if the experience and knowledge of the aged and power of the youth are combined. He had been working on a certain topic related to medicine which he plans to discuss with the Prime Minister of India which would be a great boon for the nation.



Dr. M P Singh, Head Department of Mechanical Engineering at JECRC, Jaipur addressed the gathering and made everyone aware of the conference organized by his department. This was the first international conference organised by the Department of Mechanical Engineering on Recent Innovations and Technological Development in Mechanical Engineering (RITDME), in association with Intellectuals Society for Socio-Techno Welfare, Ghaziabad, UP. The department received 222 papers from different parts of the country and after thorough review and analysis, 92 papers were approved. The conference and such international events are organized as a step towards the Prime Minister's vision of Digital India. These ventures provide a platform to the students to think beyond and bring out innovation.



After the inaugural session, the different departments dispersed for conduction of

Technical session at their respective venues.

The two-day conference was divided into six technical sessions. Each session was chaired by experts from different institutions like IITs, NITs, IFO, etc. The papers presented covered various topics like.....

#### **Session-I and II**

Keynote Speech

RITDME started with the keynote speeches by Prof. Noé G. Alba Beana (UACJ, Mexico) and Dr. MeghanshuVashista(IIT BHU, India).

Prof. Noé G Alba Baena has a Ph.D. from the University of Texas in Material Science and Engineering. He holds specialization in aluminum alloys, nano composites, Ultrasonic Treatment, Product design and Manufacturing Process. He delivered a keynote speech on the topic Advancement in Metal Matrix Nano Composite Processing. He told the session about the manufacturing, uses, and application on Nano composites. He focused on the future of Nano particles and what development can be done using this technology. This topic is a hot potato in today's world as each and every object is to be made as small as possible. This is a field that will have great applications in the near future. He persuaded the students to think over this topic and work in the field of Nano technology to bring innovative ideas and discover new dimensions.

Dr. MeghanshuVashista is an associate professor at IIT BHU. He holds a PhD in Grinding from Indian Institute of Technology, Kharagpur and he has been awarded with the prestigious BOYSCAST fellowship for one year by the Government of India. He addressed the gathering with his keynote speech on the topic Advanced material characterization in manufacturing engineering. He provided a study on different methods to characterize material that is used in manufacturing engineering. The first point to be kept in mind is the Nature of Residual Stress. The residual stress should not be tensile for a material to be stable. Tensile nature of residual stress will always tend to break to material manufactured. He emphasized on the magnetic behaviour of the material, Barkhausen signal and the hysteresis loop. In his recent research, he has studied Barkhausenand grinding.



#### **Session Chair**

The Technical Sessions started on the first day of the conference. Two parallel sessions were organized.

The first session was chaired by Dr. J P Bhamu. He is an Associate Professor at Government Engineering College, Bikaner. He has a rich 17 years teaching experience and has published over forty research papers in national and international journals.

The second session had Dr. AnkurPareek as the Session Chair. He is currently working as the Intuitional Development and Academic Consultant for The Government of India on MHRD Project TEQIP-III which is sponsored by the World Bank.

The first two sessions had a total of eighteen papers registered out of which, twelve papers were presented.

#### Session –III

### Keynote Speech

The third session started with the keynote speech by Dr. M L Meena. He is an Associate Professor. In Mechanical Engineering Department at Malviya National Institute of Technology, Jaipur. He delivered his speech on Ergonomics Strategies for Prevention of Musculoskeletal Disorders. He emphasised on understanding the principal of ergonomics, recognizing the risk factor, signs and symptoms of Musculoskeletal Disorders and knowing how to protect oneself from Musculoskeletal Disorders and to reduce one's risk. He discussed the correct sitting postures, appropriate height of the working table and other methods to make working conditions operator friendly.



#### **Session Chair**

Dr. K B Rana from the Rajasthan Technical University was the session Chair for the third session.

Out of the eighteen papers registered to be presented the session had presentation of eleven papers.

#### Session IV (Day two)

#### Keynote Speech

The day two of the international conference brought with it the Fourth technical session that was addressed by Dr. Ashok Kumar Sharma Head Department of Mechanical Engineering at Manipal University, Jaipur. He gave his keynote speech on Development of Performance Measurement Metric Framework to verify effectiveness of education and training pillar of Total Productive Maintenance. He told that the Total Productive Maintenance is necessary in this competitive world for the firm to provide quality product at lowest possible cost. It is possible only if the firm is running at its highest possible productivity. This is why the firms are adapting productivity improvement tasks. The total productive maintenance aims at zero accident, zero defect, zero breakdown, zero abnormality and hence zero losses.



#### **Session Chair**

The session Chair for the fourth session was Dr. B K Sharma. He is currently the IFO Chairperson, Rajasthan Chapter. He had a rich experience of teaching and administration. He has served as the professor, Dean and the Principal in many institutions. In his address he told the students about the objective of education. We spend a major part of our life in gaining education but are unaware of the objective for which we are studying. We need to focus on our objective only then our education will be complete.



The fourth session had a total of eighteen papers registered for presentation. Fourteen papers were presented in this session.

#### Session-V

Keynote

Dr. Varun Sharma from the National Institute of Technology, Jalandhar delivered the keynote speech.

**Session Chair** 

Dr. Vijay Sharma from Anand International College was the session Chair.

The session had a total of eight papers presented out of the eighteen papers that were registered. The session chair praised the efforts put in by the researchers and provided the valuable insights on how they can improve their research and proceed further with their work.

#### **Session VI**

Keynote

Dr. Jinesh Kumar Jain from Government Engineering College, Ajmer delivered the keynote speech on the topic Supply Chain Management.

**Session Chair** 

Dr. Ravi Goyal from Bhartiya Skill Development University, Jaipur was the Session Chair for the sixth and the final session of RITDME.

Seven papers were presented out of the eighteen papers registered for the session.

The conference was a grand success and it was an abundance of knowledge and innovative idea.

## JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

Approved by The All India Council for Technical Education (*AICTE*) and
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