

A report on
Two Days National Seminar
On
“Recent advances in Modern Manufacturing Processes
(RAMMP)”

February 07-08, 2019

Organized by
Department of Mechanical Engineering, School of Technology,
Pandit Deendayal Petroleum University
Gandhinagar, Gujarat, India
And
Indian Institute of Welding (IIW) Student chapter



A National level two days seminar of Recent advances in Modern Manufacturing Processes (RAMMP) was held in PDPU – Gandhinagar.

Dates of competition: 7th to 8th February, 2019

Venue of competition: E-Block 204, Second floor and Fabrication Technology laboratory (Workshop-PDPU)

Participants: There are 103 participants participated in the event of RAMMP including *51 internal candidates from PDPU and 52 external candidates.*

The external participants were from different organizations such as Institute for Plasma Research (IPR), International Automobile center for excellence, IIT-Gandhinagar, IITRAM, LD College of Eng.-Ahemdabad, LDRP-Gandhinagar, IIET-Dharmaj, MEC-Basna, GEC-Gandhinagar, GEC-Patan, SVMIT-Bharuch, KIT-Kalol, Indus University, BIT-Vadodara, and Rai University.

Team RAMMP 2019

Coordinators: Dr. Kush P. Mehta, Dr. Jaykumar Vora

Organizing Committee: Prof. Vishvesh Badheka, Mr. Rakesh Chaudhary, Mr. Krunal Mehta

The details of the event are mentioned as under.

Introduction

Manufacturing of any product using conventional techniques, involves several steps such as primary manufacturing (using casting, forming and powder metallurgy) to impose basic size and shape on the product, joining (of similar and dissimilar materials). Modern Manufacturing Processes are developed under the umbrella of conventional manufacturing processes to overcome the issues faced for specific application and different materials. This seminar gave an idea on recent advances in Modern Manufacturing Processes such as advanced machining, welding and materials processing. Further, it was followed by practical demonstration and hand on experience for few of the processes such as Non Destructive testing (NDT) methods for manufacturing, Electro discharge machining (EDM), Hot-TIG welding, and Friction stir welding (FSW).

Objectives of the program

“Recent Advances in Materials Joining and Processing (RAMJP)” was conducted on 22-24 August 2017 as a Series: 1 in Manufacturing Discipline of Department of Mechanical Engineering-SOT, PDPU. 60 delegates participated including 40 external delegates.

This is Series: 2 planned on Modern Manufacturing Processes to share the worldwide experience in the recent advances of different manufacturing processes along with practical demonstration and hand on experience.

Bringing researchers from industries and academia to discuss current problems and their solutions. To increase the networking with Manufacturing professionals.

Day 1

On 7th of February, morning at 9.30 Inaugural Function starts with welcome speech given by **Director-SOT**. He delivered a speech by addressing current issues on Manufacturing and explained importance of Seminars and Workshop for networking and knowledge sharing source.

Mr. Jignesh Patel from Apollo Industries Limited delivered a lecture on Hard facing overlay on Metal surfaces of Mining equipment and shared his experience as well as knowledge with candidates. Candidates found enthusiastic during lecture and interacted with him during question answer session regarding mining equipment and role of hard facing and coating in mining equipment.

Dr. Vishvesh Badheka gave a lecture on Advances in Welding. He delivered a talk on research activities carried out by PDPU faculties and research scholars working under the theme of Manufacturing and Advanced Welding. Friction stir welding, Hot wire TIG, Activated TIG, Friction surfacing are some of the topics that delivered during his speech.

After a lunch break, a talk is deliver by Mr. Chetan Shah, Managing Director/CEO of Hertz Testing Laboratory, Ahmedabad and his one of the colleagues, on Basics of Non Destructive Testing (NDT) and Job prospects in the field. Radiography, Ultrasonic testing, Liquid penetrant test, Magnetic particle inspection are some of the techniques that explained during his talk.

After their lecture, A team consists of 3 members from Hertz Testing Laboratory, Ahmedabad including CEO of lab demonstrated different NDT techniques along with some hand on experience for candidates in PDPU-Workshop (Fabrication Technology Lab).

Glimpse of Day 1





Day 2

Dr. Pankaj Sahlot presented a talk on Numerical modelling of manufacturing process. He explained role of wear in friction based manufacturing in term of equation to understand the physics of the process.

Dr. Abhishek Kumar delivered a talk on Hybrid Machining processes wherein he considered non-conventional machining processes in his talk. He explained importance of ECM and EDM processes in his lecture with more emphasis on ECDM.

Mr. Bharat Doshi – Scientist from IPR, Gandhinagar delivered a talk on two different topics of Magnetic Pulse Welding and Abrasive water jet Machining. He explained importance of these manufacturing processes in industry and IPR for research and development.

After their lecture, A team of PDPU members demonstrated different Manufacturing techniques along with some hand on experience for candidates in PDPU-Workshop (Fabrication Technology Lab).

Glimpse of Day 2



The Indian Institute of Welding – Baroda team participated in validatory function with validatory speech of Mr. D. V. Acharya-CEO of Inox India Ltd. Vote of thanks was conveyed by Dr. Jay Vora. Participants have provided their feedback through feedback form and speech (Mr. Samir Rava-GEC Patan, Mr. Raghavendra Darji-SRF and Ms. Priyanka Jagnade-Indus University have presented feedback through speech).