M.A.M SCHOOL OF ENGINEERING
Accredited by NAAC
Approved by AICTE, Affiliated to Anna university
Siruganur,Tiruchirapalli-621 105.

Guest Lecture Report on "Advancement in micromachining"

09.03.2018

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COMPILED BY
(Dr. T T M. Kannan)

H.O.D/Mechanical

PRINCIPAL

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Students and Faculty members of the department activity of Guest lecture programme on "Advancement in micromachining" at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 5.00 pm on 09.03.2018.

Venue: Seminar Hall

Resource Person:

Prof.D.Rajkumar
Associate Professor
J J college of Engineering & Technology
Tiruchirappalli - 620 001

Email:

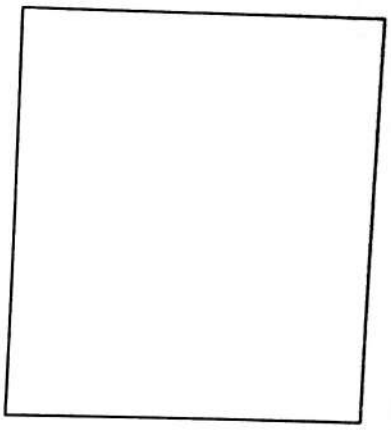
Mobile Number: 7539946484

GUEST PROFILE

RESOURCE PERSON:

Prof.D.Raj kumar
Associate Professor
JJ College of Engineering & Technology
Trichy

Email:
Mobile Number: 7539964484.



PROGRAMME DETAILS

Prof D.Rajkumar, Associate Professor gave a Guest lecture about "Advancement of micromachining" at M.A.M School of Engineering on 09.03.2018. He is presented the topics of introduction to micromachining, concept of micro machining, application and limitations of micro machining and role of micro machining for micro manufacturing system. Totally 42 students and 4 Faculty members are attended this program.

PROGRAM

- Introduction to Resource person
- Guest Lecture Topic on " Advancement in Micro machining"
- Power point presentation of Micro machining techniques
- Micromachining principle
- Micro manufacturing systems
- Video session.
- Case study of micro machining
- Feedback session
- Vote of Thanks

Course Content

Surface micromachining builds microstructures by deposition and etching different structural layers over a substrate.] This is different from Bulk micromachining, in which silicon substrate wafer is selectively etched to produce structures. Generally, *poly silicon* is used as one of the substrate layers while *silicon dioxide* is used as a *sacrificial layer*. The sacrificial layer is removed or etched out to create the necessary void in thickness direction. Added layers tend to be very thin with their size varying from 2-5 micrometers. The main advantage of this machining process is the ability to build electronic and the mechanical components (functions) on the same substrate. The surface micro machined components are smaller compared to their bulk micro machined ones counter parts. As the structures are built on top of the substrate and not inside it, the substrate's properties are not as important as in bulk micromachining. Expensive silicon wafers can be replaced by cheaper substrates, such as glass or plastic. The size of the substrates may be larger than a silicon wafer, and surface micromachining is used to produce TFTs on large area glass substrates for flat panel displays. This technology can also be used for the manufacture of thin film solar cells, which can be deposited on glass, but also on PET substrates or other non-rigid materials.

Bulk micromachining is a process used to produce micro machinery or micro electro mechanical systems (MEMS).Unlike surface micromachining, which uses a succession of thin film deposition and selective etching, bulk micromachining defines structures by selectively etching inside a substrate. Whereas surface micromachining creates structures *on top* of a substrate, bulk micromachining produces structures *inside* a substrate. Usually, silicon wafers are used as substrates for bulk micromachining, as they can be anisotropically wet etched, forming highly regular structures. Wet etching typically uses alkaline liquid solvents, such as potassium hydroxide (KOH) or tetramethyl ammonium hydroxide (TMAH) to dissolve silicon which has been left exposed by the photolithography masking step. These alkali solvents dissolve the silicon in a highly anisotropic way, with some crystallographic orientations dissolving up to 1000 times faster than others. Such an approach is often used with very specific crystallographic orientations in the raw silicon to produce V-shaped grooves. The surface of these grooves can be atomically smooth if the etch is carried out correctly, and the dimensions and angles can be precisely defined. Pressure sensors are usually created by bulk micromachining technique.Bulk micromachining starts with a silicon wafer or other substrates which is selectively etched, using photolithography to transfer a pattern from a mask to the surface. Like surface micromachining, bulk micromachining can be performed with wet or dry etches, although the most common etch in silicon is the anisotropic wet etch. This etch takes advantage of the fact that silicon has a crystal structure, which means its atoms are all arranged periodically in lines and planes.

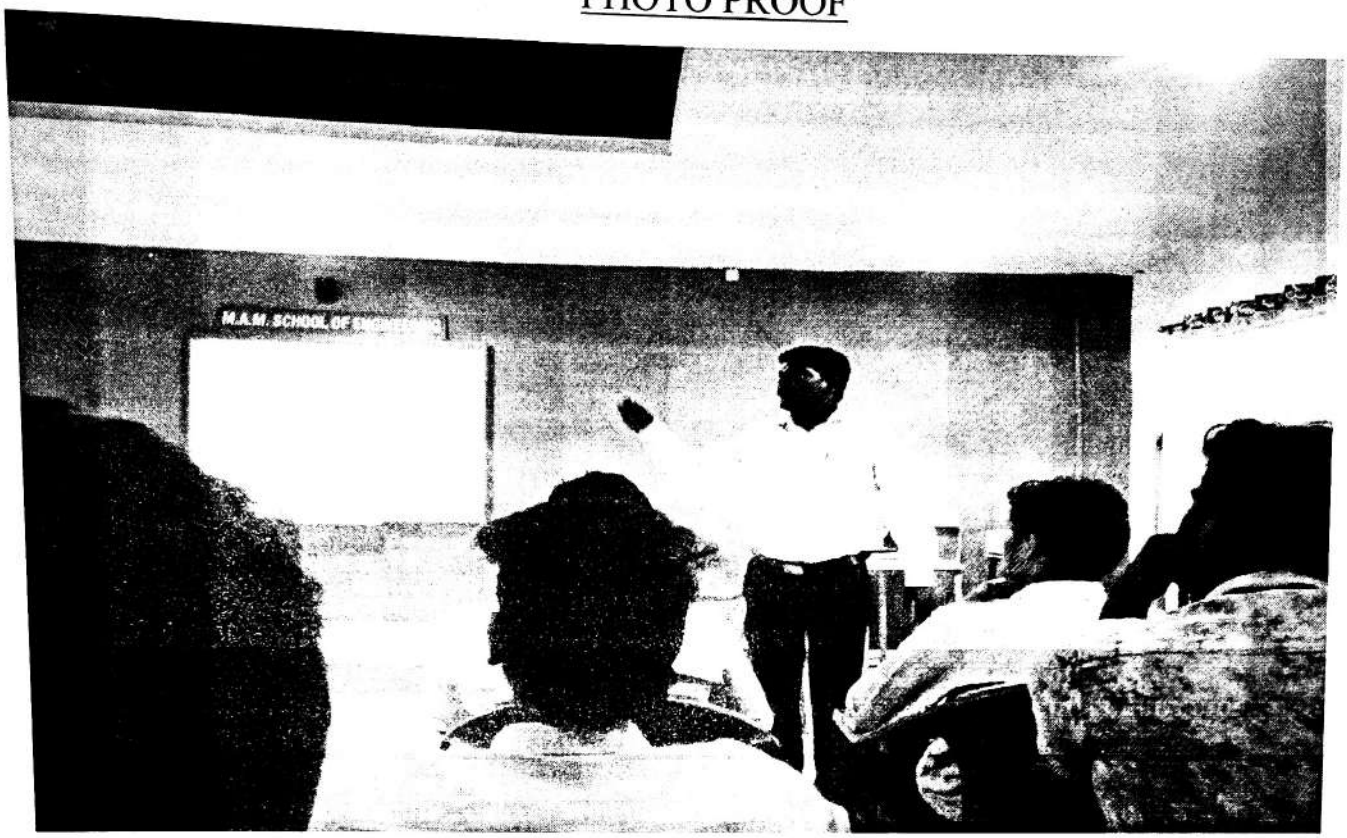
Microfabrication is the process of fabricating miniature structures of micrometre scales and smaller. Historically, the earliest micro fabrication processes were used for integrated circuit fabrication, also known as "semiconductor manufacturing" or "semiconductor device fabrication". In the last two decades micro electromechanical systems (MEMS), microsystems (European usage), micro machines (Japanese terminology) and their subfields, micro fluidics/lab-on-a-chip, optical MEMS (also called MOEMS), RF MEMS, Power MEMS, BioMEMS and their extension into nanoscale (for example NEMS, for nano electro mechanical systems) have re-used, adapted or extended microfabrication methods. Flat-panel displays and

solar cells are also using similar techniques.Miniaturization of various devices presents challenges in many areas of science and engineering: physics, chemistry, materials science, computer science, ultra-precision engineering, fabrication processes, and equipment design. It is also giving rise to various kinds of interdisciplinary research.[1] The major concepts and principles of microfabrication are microlithography, doping, thin films, etching, bonding, and polishing.

There is a growing demand for industrial products with increased number of functions and of reduced dimensions. Micro-machining is the most basic technology for the production of such miniature parts and components. Micro machining is defined as the ability to produce features with the dimensions from 1 m to 999 m or when the volume of the material removed is at the micro level. Lithography based micro-machining technology uses silicon as material to produce integrated circuitry components and microstructures. However, these methods, in general, lack the ability of machining three-dimensional shapes because of poor machining control in the Z axis. Fabrication using hard and difficult-to-machine materials such as tool steels, composites, super alloys, ceramics, carbides, heat resistant steels and complex geometries for demanding aerospace, mechanical or biomedical applications requires alternative novel methods. 1.2

APPLICATIONS OF MICROMACHINING In recent years, manufacturing industry has witnessed a rapid increase in demand for micro-products and micro-components in many industrial sectors including the electronics, optics, medical, biotechnology and automotive sectors. Examples of applications include medical implants, drug delivery systems, 2 diagnostic devices, connectors, switches, micro-reactors, micro-engines, micropumps and printing heads. These micro-system-based products represent key value-adding elements for many companies and, thus, an important contributor to a sustainable economy (Brousseau et al. 2010). As a result of the current trend towards product miniaturization, there is a demand for advances in micro- and nano- manufacturing technologies and their integration in new manufacturing platforms. These platforms must enable both function integration (i.e. combination of different functions) and length-scale integration (i.e. mixing of the macro-, micro- and nano-dimensions) in existing and new products and, at the same time, their cost effective manufacture in a wide range of materials.

PHOTO PROOF



Prof.D.Rajkumar had delivered the topic of Advancement of micromachining

Department of Mechanical Engineering students are attended lecture program

Conclusion

M.A.M. School of Engineering, Department of Mechanical Engineering had organized Guest Lecture program on **"Advancement in Micromachining "** totally 40 Mechanical students and 4 faculty members are participated in this program. Prof. D.Rajkumar, Associate Professor had delivered lecture on "Advancement of Micromachining" on 09.03.2018 at Seminar Hall, M.A.M. School of Engineering. In session – I cover Introduction to micromachining, Concept of micro machining process, Micro drilling process, micro turning, micro EDM process, benefits and roles of micro machining processes. In Session –II micro manufacturing through micro machining process, bulk micro machining process, limitations of micromachining process, applications of Micro machining process and mems based micro machining processes. The outset of this program students and faculties are learned an idea about micromachining process and their applications. Finally the student association coordinator conveys vote of Thanks.

12/3/18

M.A.M SCHOOL OF ENGINERING
SIRUGANUR, TRICHY-621105
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Guest Lecture / Seminar/Workshop /Training Program

Title: Advanced Micromachining **Date:** 9/3/2018

Resource Person: D. Raj kumar **Time :** 3.15 pm

Sl.No	Name of Student	Year of study	Feed back	Signature
1	A. Mohamed Ismail	III year.	Very useful Guest Lecture.	
2.	T. Ajith kumar	"	learn more & very useful.	
3.	C.S. Pavithran	III year	It is useful in UCMP subjected micro Parts.	
4.	P. Pancu	III year	I am analysed in more information in usefulling.	
5.	A. Sadham HUSSain	III Year	It is very useful class	
6.	A. Sathiyamoorthi	III year	It is very useful class	
7	S. Surya (41063)	III - year.	It is very uiful in UCMP subjected micro Parts.	
8.	K. SivaBharathi (59)	III - year	very uiful in UCMP	
9	NITHIN-PH	"	It is USEFULL FOR SUBJECT	
10.	Annarajan. A	III Yr	Useful and Dubgesting lecture	
11.	N. Pasupathibose	III yr	useful and teach is good	
12.	S. Amarnath	III yr	Very interesting and teach is good is very useful	
13	S UKESHKUMAR.	III year	very usefull information to settle	
14	R. Siva	II nd year	many micro machine process and usage	
15.	B. Praveen Kumar	III rd year	Many information to gether.	
16.	T Amarthe Babu	III rd year	highly Informative	
17.	S. Antony prince	III rd year	very Pintresting and useful.	
18.	B. PRABAKARAN	III - Year	Wow very nice.	
19	M. DINESH	III - year	very useful to the smart class	
20	A. ARUNPANDIYAN	III rd year	good usefull.	
21	P. Robinson Xavier	III yr	good useful session.	
22.	S. Jkaviarasan	III yr	Useful to our Studies and Fabrication	
26.	m. kanagaraj	III yr	It's very useful in this class	
27.	K. kanagaraj	III yr	useful and teach is good	
28.	[illegible]	III yr	good lekchure, usefull Semina.	
29	N. Ajith kumar	III - yr	usefull and good teach	
30	S. Jayabarathi	III yr	more than information gathering	
31	R. Vignesh.	III yr	Learning advance technology It is very useful.	
32.	J. mohamed Aarif	III yr	It is useful & Delightful.	

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Guest Lecture Report on "Current practices in Industrial quality policy"

02.03.2018

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COMPILED BY
(Dr. T.M. Kannan)

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Students and Faculty members of the department activity of Guest lecture programme on "**Current practices in industrial quality policy**" at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 5.00 pm on 02.03.2018.

Venue: Seminar Hall

Resource Person:

Mr.M.Hakeem,
Tech lead-Quality policy system,
Synergy school of skills
Contonment
Tiruchirappalli - 620 001

Email: synergy try @ gmail.com

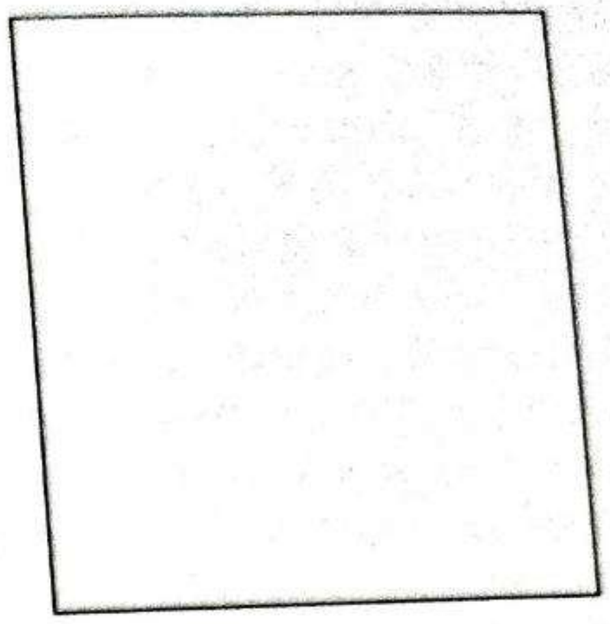
Mobile Number: 8144004903
0431-4345003

GUEST PROFILE

RESOURCE PERSON:

Mr.M.Hakeem,
Tech lead-Quality policy system,
Synergy school of skills
Contonment
Tiruchirappalli - 620 001

Email: Synergy try@gmail.com.
Mobile Number: 8144004907
0431 – 4345003.



PROGRAMME DETAILS

Mr.M.Hakeem, Tech Lead-Quality policy, gave a Guest lecture about "Current practices in Industrial quality policy" at M.A.M School of Engineering on 02.03.2018. He informed the details of six sigma, Lean manufacturing system, Just in time management, Quality policy of core companies and kanban system. He also covers ISO 9001 and ISO 14001 policies in Industries. Totally 42 students and 4 Faculty members are attended this program.

PROGRAM

- Introduction to Resource person
- Guest Lecture Topic on " Current practices in Industrial quality policy"
- Power point presentation Industrial quality policy
- Video session.
- 5 S principles
- Lean and Kanban system
- Feedback session
- Vote of Thanks

Course Content

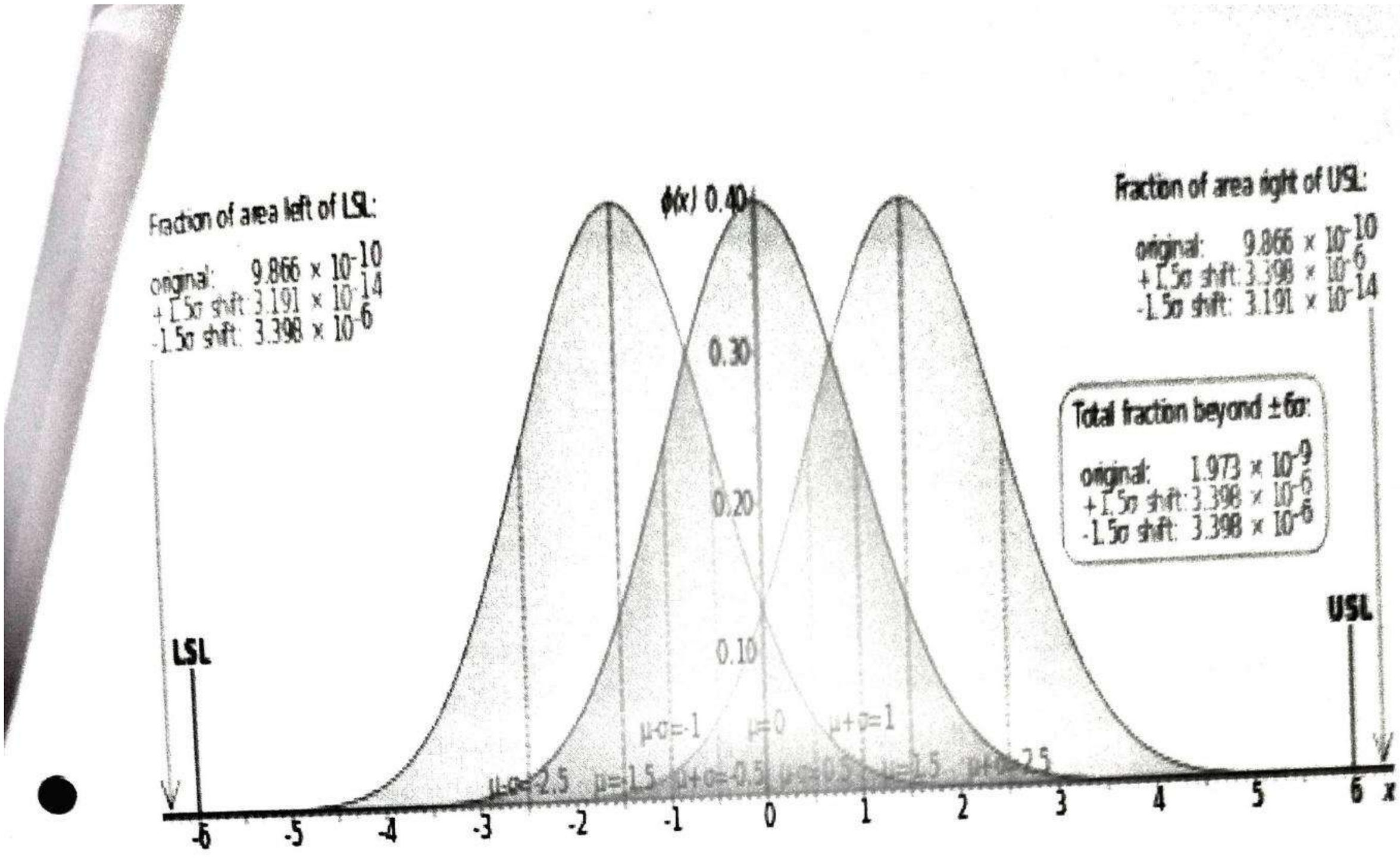
Lean Principle

One of the most critical principles of lean manufacturing is the elimination of waste (known as muda in the Toyota Production System). Many of the other principles revolve around this concept. There are 7 basic types of waste in manufacturing: Over Production ,Waste of Unnecessary Motion ,Waste of Inventory ,Production of Defects ,Waste of Waiting ,Waste of Transportation ,Waste of Over processing Although the above mentioned types of waste were originally geared toward manufacturing, they can be applied to many different types of business. The idea of waste elimination is to review all areas in your organization, determine where the non-value added work is and reduce or eliminate it.Continuous Improvement (commonly referred to by the Japanese word kaizen) is arguably the most critical principle of lean manufacturing. It should truly form the basis of your lean implementation. Without continuous improvement your progress will cease. As the name implies, Continuous Improvement promotes constant, necessary change toward achievement of a desired state. The changes can be big or small but must lend itself toward improvement (often many small changes are required to achieve the target). The process truly is continual as there is always room for improvement. Continuous Improvement should be a mind-set throughout your whole organization. Do not get caught up in only trying to find the big ideas. Small ideas will often times lead to big improvements.

Six sigma Principle

6 Sigma is a popular quality improvement methodology made famous by the likes of Motorola and GE. 6 Sigma focuses on reducing the variation within a process. The term 6 sigma itself, relates to a level of performance where only 3.4 defects are produced per million opportunities. This is achieved by using careful measurement and statistical analysis to understand which 'levers' to pull to create the desired output. Instead of the PDCA cycle, 6 Sigma relies on the DMAIC cycle which is used to fix problems with existing processes. The five stages of the DMAIC process are: Define the opportunity, Measure the baseline performance, Analyse the root causes, I[mprove the process, Control the improved process to prevent regression

There are many possible reasons for variation in a process. Examples include different operators, fatigue, different equipment, completing tasks in a different sequence, machine/tool wear, different raw materials, environmental changes (temperature, humidity, light etc). 6 Sigma aims to understand the influence of these variables so that they can be controlled to give more consistent, better quality outputs from the process.Where a lean event might only last for a week, a typical 6 sigma project can typically last for up to 6 months. They tend to be led by a project manager known as a 6 Sigma Black Belt. The project team will be comprised of subject matter experts from each department within the business.



Six sigma concepts

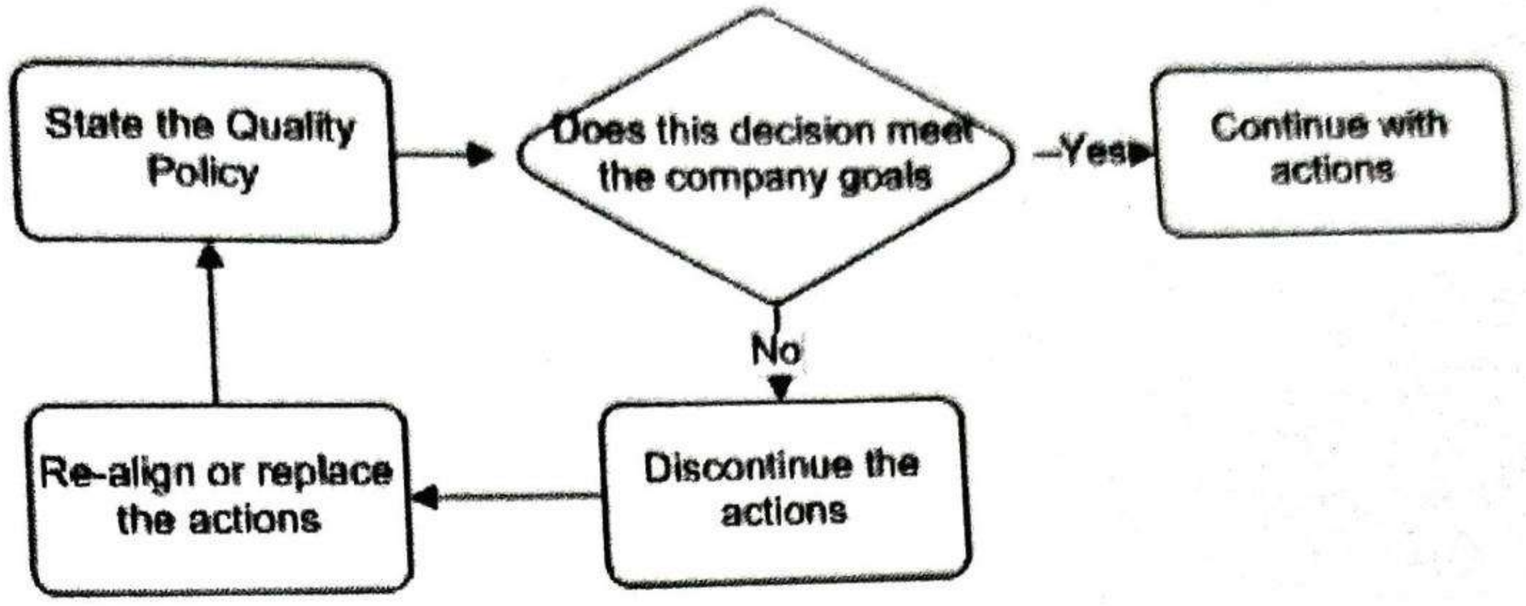
5 S principles

S is a set of techniques providing a standard approach to housekeeping within Lean **.** It is often promoted as being far more than simply housekeeping and some of the elements described below certainly have broader implications.It originated, as did most of the elements of JIT, within Toyota. **A cornerstone of 5S is that untidy, cluttered work areas are not productive.** As well as the physical implications of junk getting in everybody's way and dirt compromising quality, we are all are happier in a clean and tidy environment and hence more inclined to work hard and with due care and attention.Naturally enough, the elements of 5S are all Japanese words beginning with the letter S. Since their adoption within Western implementations of JIT, or Lean, various anglicised versions of the terms have been adopted by different writers and educators. These are listed below against the individual elements and it can be seen that none are entirely satisfactory.

Quality Policy

If the policy is a reflection of the goals of the organization it can be used as a filter for business decisions. If your policy is to "consistently deliver superior widgets while continually improving our processes and productivity," then a manager can look at how they are applying resources and ask, "Will making this resource allocation decision work toward meeting our commitments to superior widgets and improvement?" In cases where the answer is no, the decision should be to not continue with the project and find another that better leads to the goals of the company.

Decision-making using the Quality Policy

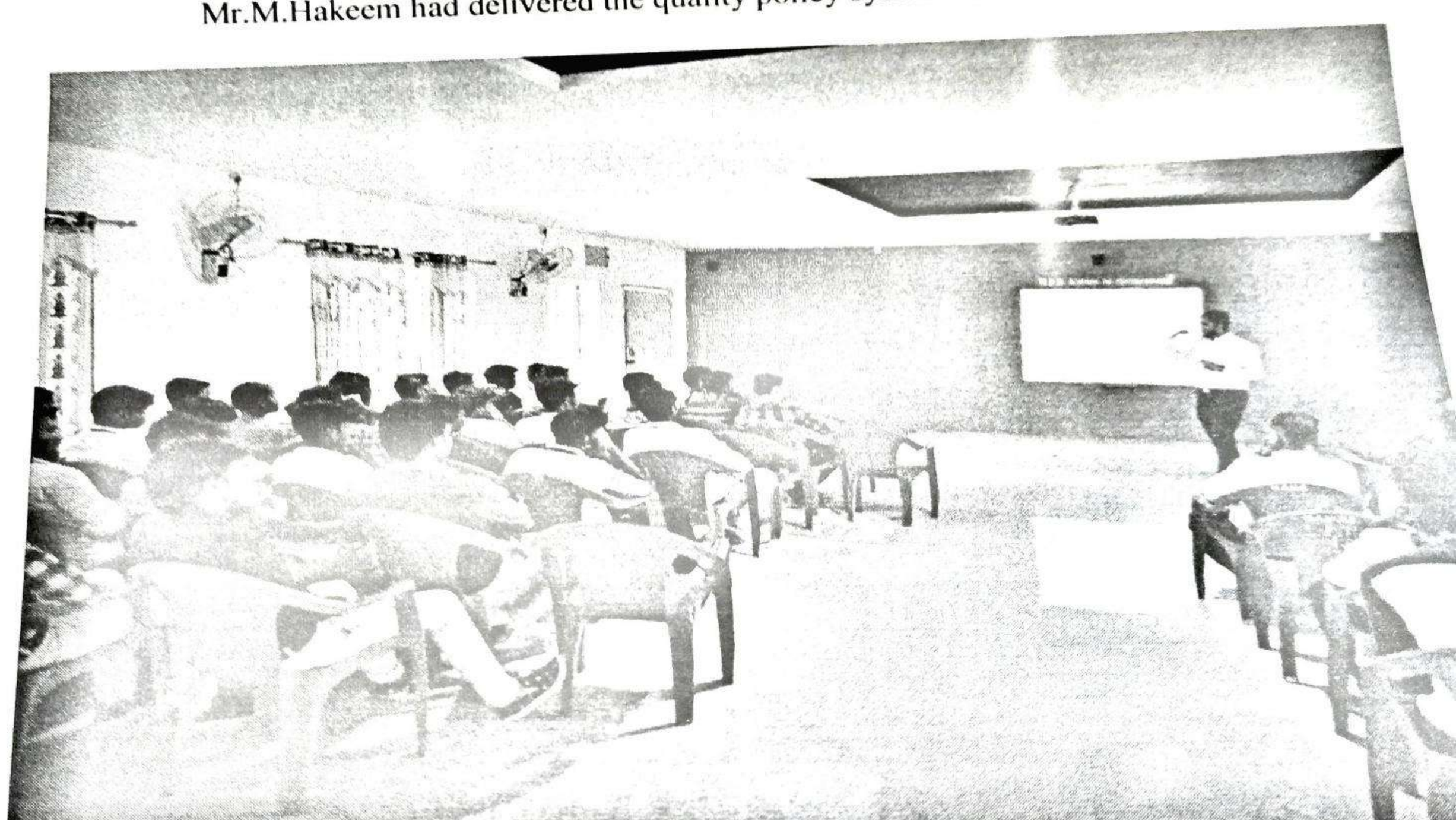


Start with Customer Requirements

The key to starting any Quality Management System is to make sure you understand the requirements of your customers. If you are to successfully drive your QMS toward improving customer satisfaction, it is critical to make sure you understand all the requirements you need to meet to attain this. These requirements may come directly from customer specification, through industry standards, or even through legal requirements regarding your products or services. You may need to meet tight customer on-time delivery requirements, have industry standard levels of cleanliness in food preparation, or even legal requirements on what materials can be used in your processes (thus limiting them). Ensuring that you have all these necessary inputs will help to make sure your Quality Policy focuses on the important elements to attain customer satisfaction.

PHOTO PROOF

Mr.M.Hakeem had delivered the quality policy system and Lean concepts



Department of Mechanical Engineering students are attended lecture prog

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Guest Lecture Report on "Industrial automation and planning using primavera"

23.02.2018

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INVITATION

The Department of Mechanical Engineering Cordially invites Students and Faculty members of the department activity of Guest lecture programme on "**Industrial Automation and planning using Primavera"** at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 5.00 pm on 23.02.2018.

Venue: Seminar Hall

Resource Person:

Miss.M.Libi
Certified trainer-Primavera
Synergy school of skills
Contonment
Tiruchirappalli - 620 001

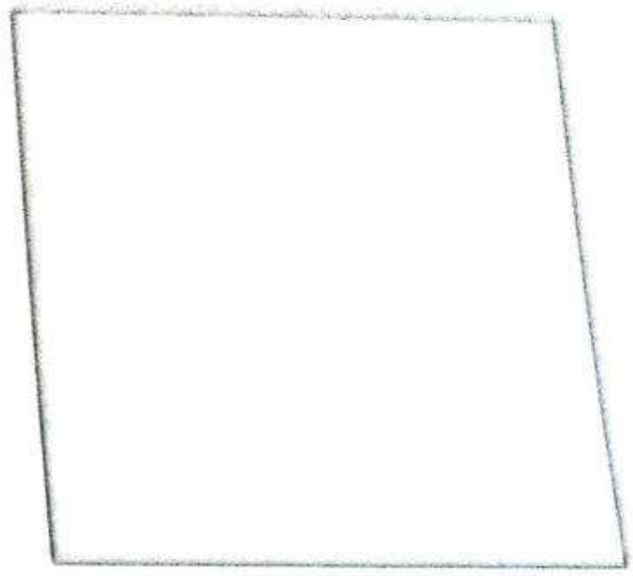
Email: synerytrichy@gmail.com

Mobile Number: 9894635903

GUEST PROFILE

RESOURCE PERSON:

Miss.M.Libi
Certified trainer-Primavera
Synergy school of skills
Contonment
Tiruchirappalli - 620 001
Email: synerytrichy@gmail.com
Mobile Number: 9894635903



PROGRAMME DETAILS

Miss.M.Libi, Certified trainer -primavera, gave a Guest lecture about "Industrial automation and planning using Primavera" at M.A.M School of Engineering on 23.02.2018. She informed the details of primavera, project management, management information system and Planning of industrial project. She gave the lecture about project principle, management principle, types of management, top level management, and critical path method, PERT method and SWORT Analysis. She also thought the total quality management system, 6 sigma concept and quality control chart for production system, prediction of error in production module. She also explains the details of strength, weakness, opportunity and threads of working environment of production system. Totally 45 students and 5 Faculty members are attended this program.

PROGRAM

- Introduction to Resource person
- Guest Lecture Topic on " Industrial automation and planning using primavera "
- Power point presentation of industrial automation

- Video session.
- Automation and planning process
- Feedback session
- Vote of Thanks

Course Content

Primavera is an enterprise project portfolio management software. It includes project management, product management, collaboration and control capabilities, and integrates with other enterprise software such as Oracle and SAP's ERP systems. Primavera was launched in 1983 by Primavera Systems Inc., which was acquired by Oracle Corporation in 2008.

Significance of Primavera

The P3 version to P6 version change is based in a move from DOS-type shortcut keys to mouse-based icons. Thus a software application that was once very fast to use but grounded in shortcut functions (which some users found difficult to master) moved to a mouse-based application that is quicker to learn, but once mastered never achieves the same speed of use. In 2012, Primavera P6 EPPM Upgrade Release 8.2 added capabilities for governance, project-team participation, and project visibility. Mobile PPM was introduced through Primavera's P6 Team Member for I Phone and Team Member Web Interface, to streamline communications between project team members in the field and in the office. In addition, Primavera P6 Analytics Release 2.0 gained new enterprise-reporting tools and dashboards for monitoring and analyzing performance data, including geospatial analysis. Organizations could also investigate comparative trends and cause-and-effect in multiple projects with Primavera Contract Management Release 14 as it included the report-writing capabilities of Oracle Business Intelligence Publisher.

Oracle Primavera services project-intensive industries such as engineering and construction, aerospace and defense, utilities, oil and gas, chemicals, industrial manufacturing, automotive, financial services, communications, travel and transportation, healthcare, and government.

Oracle Corporation's Primavera Global Business Unit (PGBU) focuses as of 2016 on providing web-based enterprise project-portfolio management software that encompasses resource allocation, cost reduction, supply-chain efficiency, and decision-making — using real-time data — for the enterprise market.[*citation needed*]

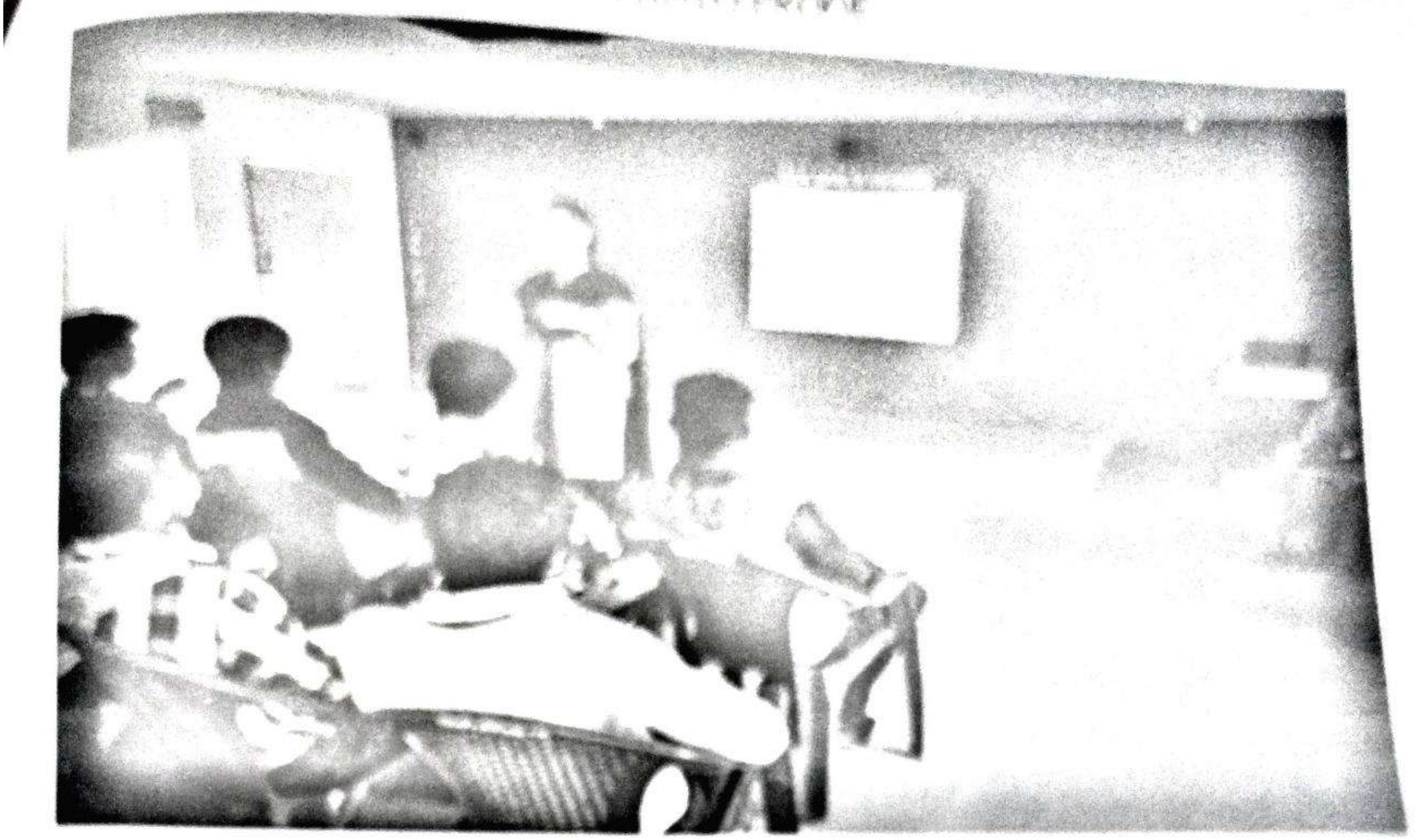
- Primavera P6 Enterprise Project Portfolio Management
- Primavera P6 Professional Project Management
- Primavera P6 Analytics
- Primavera Portfolio Management
- Primavera Contract Management
- Primavera Risk analysis
- Primavera Inspire for SAP
- Primavera Earned Value Management
- Primavera Contractor
- Primavera Unifier

Project Management

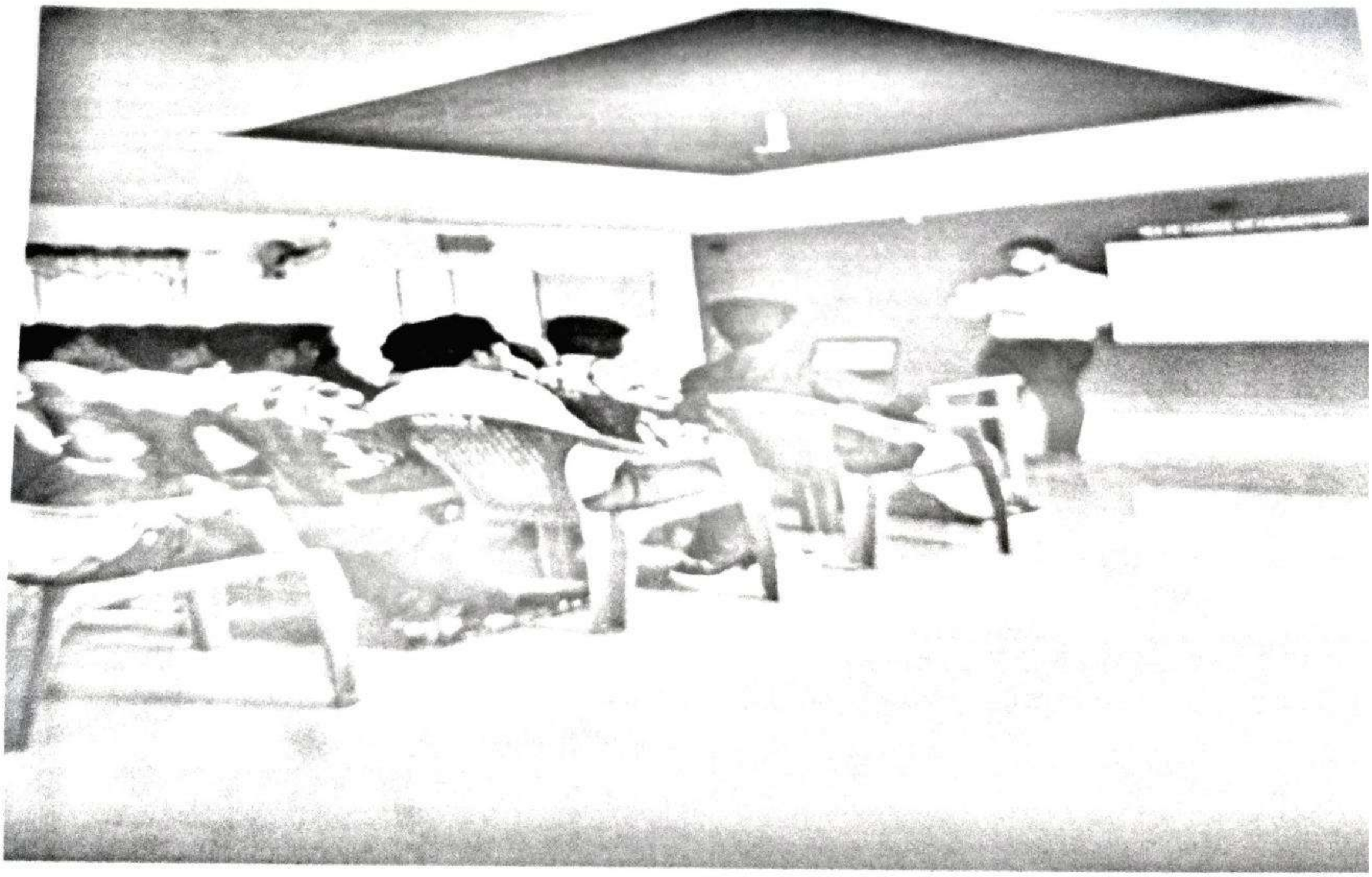
Project management is the practise of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria at the specified time. A project is a temporary endeavor designed to produce a unique product, service or result with a defined beginning and end (usually time-constrained, and often constrained by funding or staffing) undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value.[1][2] The temporary nature of projects stands in contrast with business as usual (or operations),[3] which are repetitive, permanent, or semi-permanent functional activities to produce products or services. In practice,

the management of such distinct production approaches requires the development of distinct technical skills and management strategies.[4]

The primary challenge of project management is to achieve all of the project goals within the given constraints.[5] This information is usually described in project documentation, created at the beginning of the development process. The primary constraints are scope, time, quality and budget.[6] The secondary — and more ambitious — challenge is to optimize the allocation of necessary inputs and apply them to meet pre-defined objectives. The object of project management is to produce a complete project which complies with the client's objectives. In many cases the object of project management is also to shape or reform the client's brief in order to feasibly be able to address the client's objectives. Once the client's objectives are clearly established they should impact on all decisions made by other people involved in the project - project managers, designers, contractors, sub-contractors, etc. If the project management objectives are ill-defined or too tightly prescribed it will have a detrimental effect on decision making.



Dr M Hava perumal delivered lecture on Creativity and Aesthetics in Mechanical Engineering



Department of Mechanical Engineering

Conclusion

M.A.M. School of Engineering, Department of Mechanical Engineering had organized Guest Lecture program on **"Industrial automation and planning using primavera"** totally 45 Mechanical students and 5 faculty members are participated in this program. Miss. M. Libi, Certified Trainer-Primavera had delivered lecture on "**Industrial automation and planning using primavera**" on 23.02.2018 at Seminar Hall, M.A.M. School of Engineering. In session - I cover the topics such as primavera, project management, management information system and Planning of industrial project. She gave the lecture about project principle, management principle, types of management, top level management, and critical path method, PERT method and SWORT Analysis. She also thought the total quality management system, 6 sigma concept and quality control chart for production system, prediction of error in production module. She also explains the details of strength, weakness, opportunity and threads of working environment of production system. At the outset of this program students and faculties are learned an idea about quality and planning methods of production system. Finally the student association coordinator conveys vote of Thanks.

L OF ENGINERING
R, TRICHY-621105
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Guest

ar/Workshop /Training Program

Title: Industry Automation & Planning **Date:** 23/2/18

Resource Person: Miss Libi
Synergy School of Skills **Time:** 2:00 TO 4:00

Sl.No	Name of Student	Feed back	Signature
1	A.Tabi Murugan (4025)	please conduct in every b...	A.Tabi
2	K. Kanagaraj (4026)	very usefull programme	K Kan
3	S. Jayabal (4022)	Intresting class	
4	ஜ.ஜெயபாலன் (4037)		
5	ஹ.ஜெயசூர்யா (4039)		
6	A. ARUN (4010)		
7	M. ARUN (4301)	more then information	
8	K. Sathish (4051)	very useful.	K. Sathish
9	S. Surya. (4063)	very useful	S. Surya.
10	K. Jeeva (4024)		K. Jeeva
11	M. Kanagaraj (4027)	please workshop conduct	M. Kanagaraj
12	M. Dinesh (4020)		M. Dinesh
13	V. Balasubramanian (4015)	useful that job opportunity	V. Bala
14	C. Rajasekaran. (4040)	Good Teaching	C. Raj
15	P. Gowsik (4502)	very used	Gow
16	S. Annadurai (4005)		S. Anna
17	A. Karthik Prabu (4028)		A. Karthik Pra
18	A. Arunpandiyan (4012)		A. Arun Pan
19	R. Vignesh. (4065)		R. Vig
20	T. Sasikumar (4048)	very useful class	T. Sas
21	A. Sadham Hussain (4044)	very usefull class	A. Sadham
22	T. Ajith kumar. (4004)		T. Ajithkumar.
23	K. Sivabharathi (4059)		Sivabharathi K
24	P. Ramu (4042)		P. Ramu
25	A. Mechery Ahmed (31)		A. Mechery Ahmed
26	A. Mohamed Ismail (33)		A. Mohamed Ismail
27	R. Sagaya Robinson (4045)		R. Sagaya Robinson
28	T. Deepan kumar (4018)	Nice.	T. Deepan kumar
29	V. Joseph Vikram (4504)		V. Joseph Vikram
30	J. mohamed Ariff (4030)		J. A p.
31	A. Annarajan (4007)		

M.A[illegible]L OF ENGINEERING
[illegible]R, TRICHY-621 [illegible]
([illegible] &NAAC – Accredited)

Guest L[illegible]inar/Workshop /Training Program

Title: Industry Automation & Robots Date: 23/2/11

Resource Person: Mr. Libi Time: 2:00 To 4:30pm

Stevens School of Skills

Sl No	Name of Student	Feed back	Signature
32	G. Ahamed Gani [illegible] ([illegible])	[illegible]	
33	F. Azharudeen ([illegible])		
33	C. S. Dayitharan ([illegible])		
34	[illegible] ([illegible])		
	[illegible] ([illegible])	very good lecture	
36	R. Siva ([illegible])	Good follow	
37	S. Saravanan ([illegible])		
38	S. Sathish Raj ([illegible])	very useful	
39	M. Poovarasathi ([illegible])		
40	D. SIVAMBARESAN ([illegible])		

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Guest Lecture / Seminar/Workshop /Training Program

Title: Industry & Automation & .. Planning **Date:** 21/2/18.

Resource Person: Miss. Libi / Trainer Green School of Skills **Time :** 2 → 4:30 pm

Sl.No	Name of Faculty Member	Department	Feed back	Signature
1	Dr. TTM. Kannan		Can be More Details	Seen
2	Mr. R. Praburaj		Cons	Seen
3	Mr. R. Ravichandran		Cood	
4	Mr. M. Manikandan		Very useful	MM.

Coordinator

Dr. TTM. Kannan

HOD 20/2

Principal

M.A.M SCHOOL OF ENGINEERING
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Siruganur,Tiruchirapalli-621 105.

Guest Lecture Report
On
"Creativity and Aesthetics in Mechanical design"

16.02.2018

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COMPILED BY
(Dr. TTM. kannan)

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution

Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai

Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Students and Faculty members of the department activity of Guest lecture programme on "**Creativity and Aesthetics in Mechanical design**" at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 5.00 pm on 16.02.2018.

Venue: Seminar Hall

Resource Person:

Er.M.Ilaya Perumal,
Senior Design Engineer,
C Cube Technologies,
Tiruchirappalli-620 018

Email: ccubetrichy@gmail.com

Mobile Number: 91591 99099

GUEST PROFILE

RESOURCE PERSON:

Er.M.Ilaya Perumal,
Senior Design Engineer,
C Cube Technologies,
Tiruchirappalli-620 018

Email: ccubetrichy@gmail.com

Mobile Number: 91591 99099

PROGRAMME DETAILS

Er.M.Ilaya perumal, Senior Design Engineer, gave a Guest lecture about "Advancement in Industrial Safety" at M.A.M School of Engineering on 09.02.2018. He discussed more information about the design procedure of mechanical component, Allowable stress, Transmitted forces, Material selection of mechanical component also thought shear stress, crushing stress and tearing stress acting on the bolt, nut and screws. Totally 45 students and 5 Faculty members are attended this program.

PROGRAM

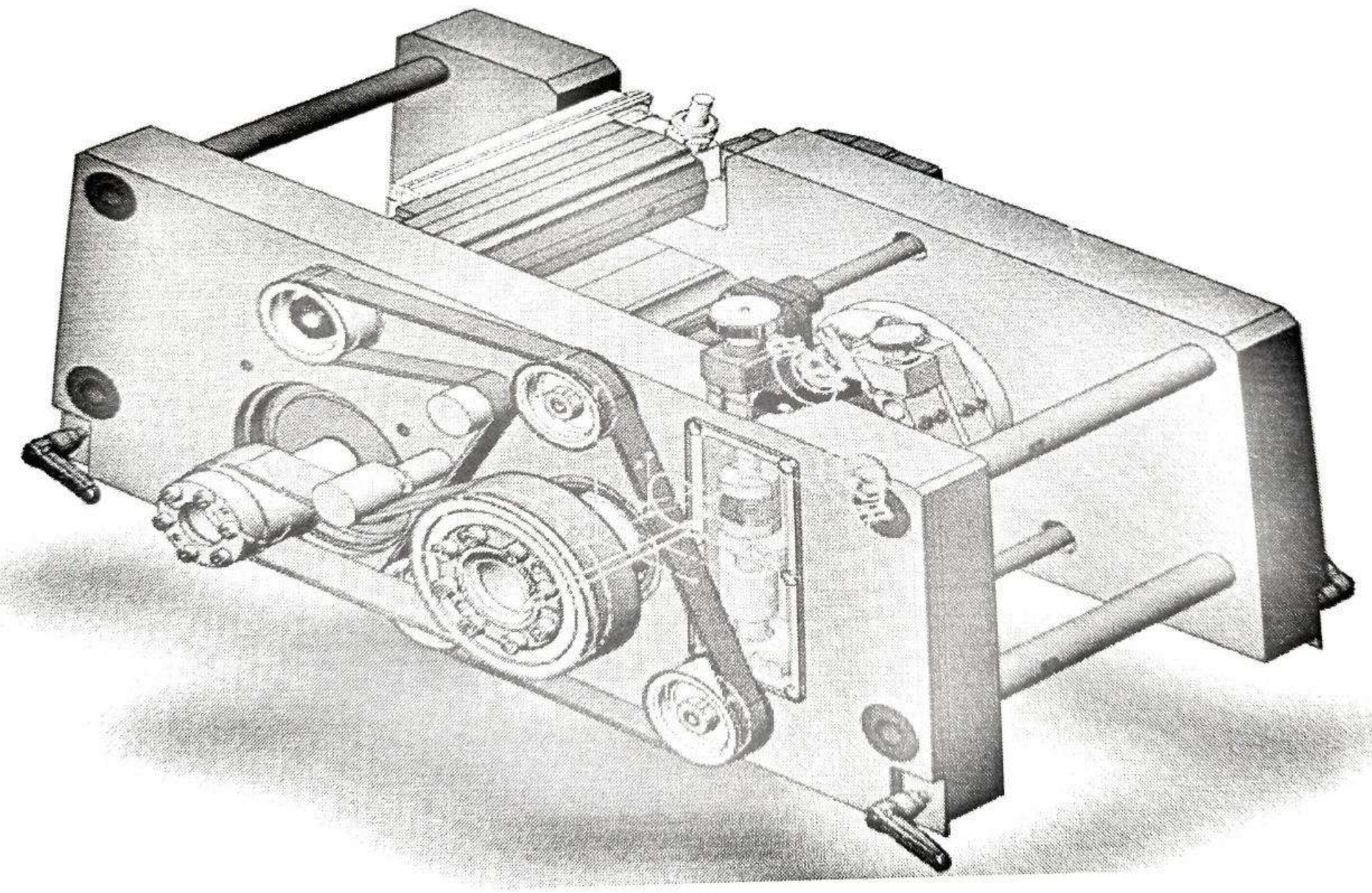
- Introduction to Resource person
- Guest Lecture Topic on " Creativity and Aesthetics of mechanical design "
- Power point presentation of Design of Machine elements
- Video session.
- Design process
- Feedback session
- Vote of Thanks

Course Content

Though the machine design procedure is not standard, there are some common steps to be followed; these can be followed as per the requirements wherever and whenever necessary. Here are some guidelines as to how the machine design engineer can proceed with the design:

1) **Making the written statement**: Make the written statement of what exactly is the problem for which the machine design has to be done. This statement should be very clear and as detailed as possible. If you want to develop the new produce write down the details about the project. This statement is sort of the list of the aims that are to be achieved from machine design.

2) **Consider the possible mechanisms**: When you designing the machine consider all the possible mechanisms which help desired motion or the group of motions in your proposed machine. From the various options the best can be selected whenever required.

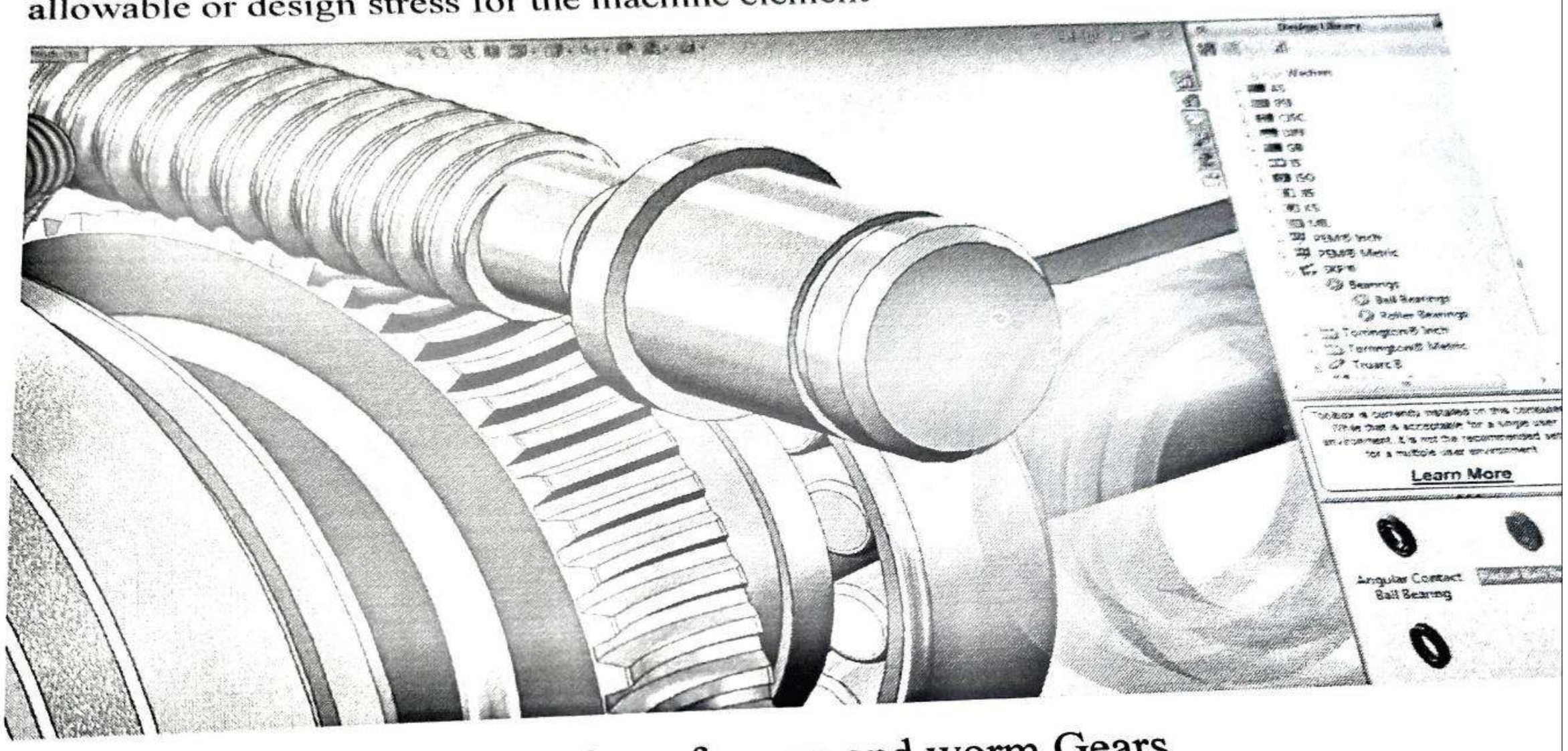


Design of machine elements in principle parts

3) **Transmitted forces**: Machine is made up of various machine elements on which various forces are applied. Calculate the forces acting on each of the element and energy transmitted by them.

4) **Material selection**: Select the appropriate materials for each element of the machine so that they can sustain all the forces and at the same time they have least possible cost.

- 5) **Find allowable stress**: All the machine elements are subjected to stress whether small or large. Considering the various forces acting on the machine elements, their material and other factors that affect the strength of the machine calculate the allowable or design stress for the machine element



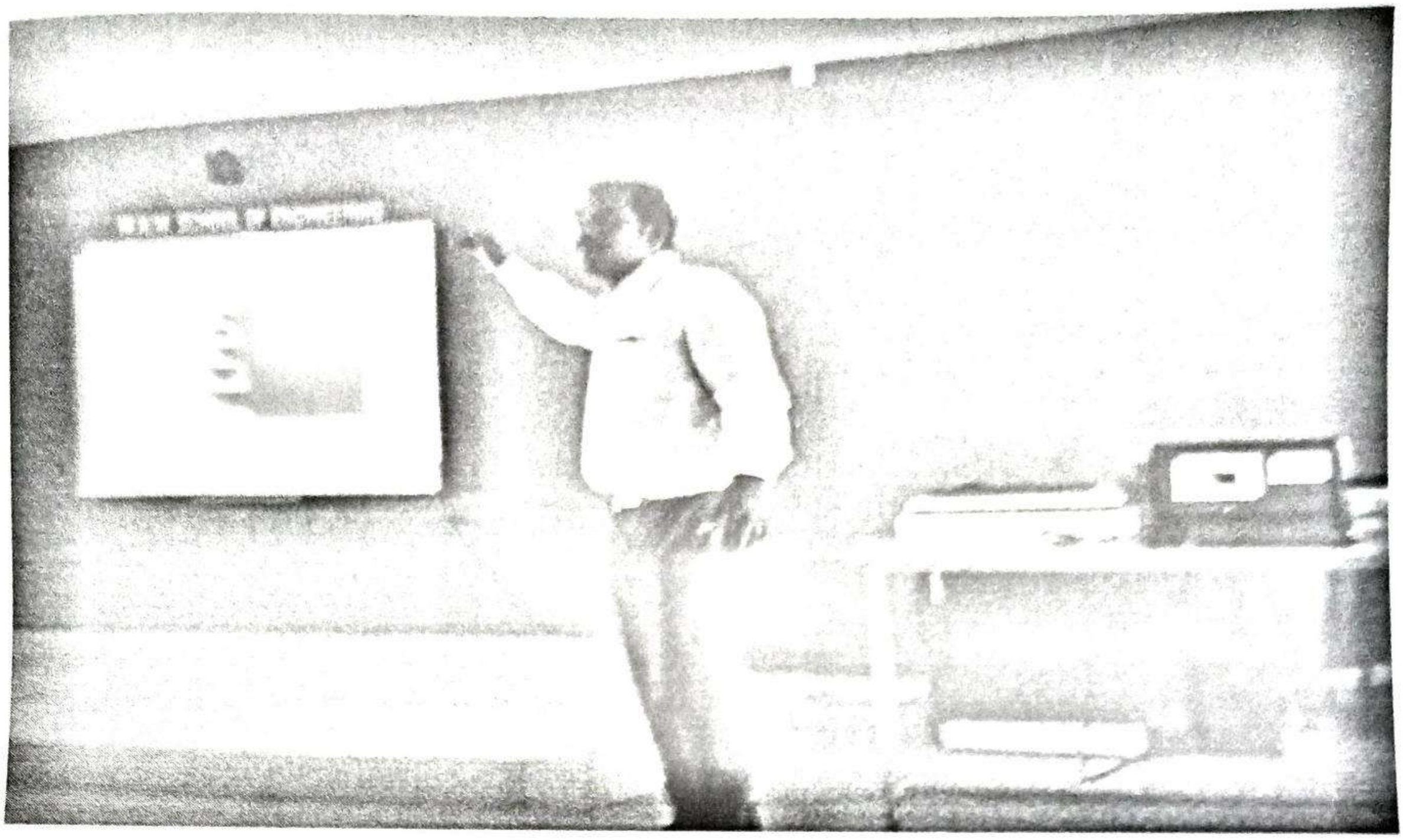
Design of worm and worm Gears

- Right Hand Worm Gears
- Left Hand Worm Gears
- Anti-Backlash Worm Gears
- Worm and Wheel Sets
- Miniature Worm Gears
- 303 Stainless Steel Worms
- Bronze Worm Gears

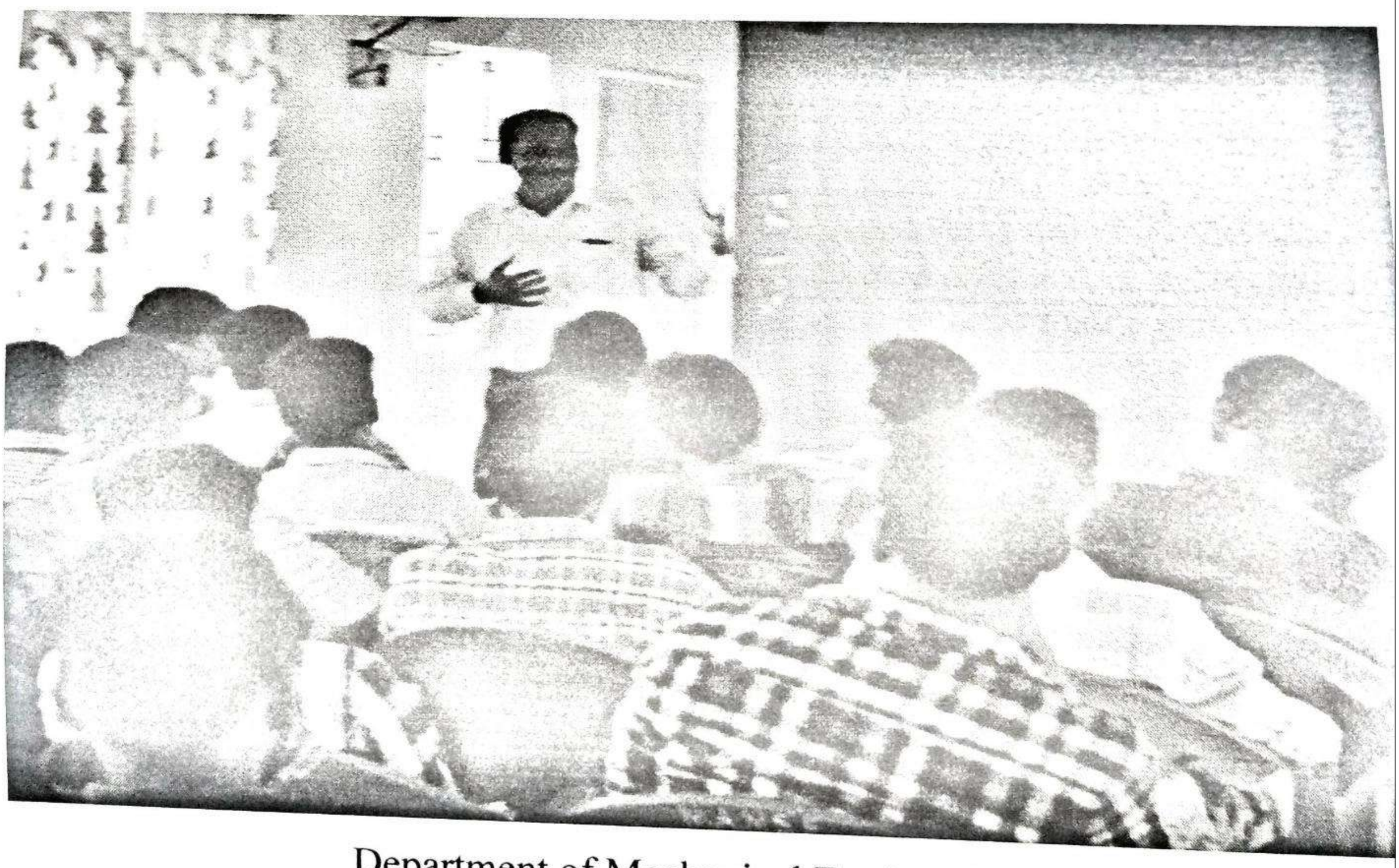
6) **Dimensions of the machine elements**: Find out the appropriate dimensions for the machine elements considering the forces acting on it, its material, and design stress. The size of the machine elements should be such that they should not distort or break when loads are applied.

7) **Consider the past experience**: If you have the past experience of designing the machine element or the previous records of the company, consider them and make the necessary changes in the design. Further, designer can also consider the personal judgment so as to facilitate the production of the machine and machine elements.

8) **Make drawings**: After designing the machine and machine elements make the assembly drawings of the whole machines and detailed drawings of all the elements of the machine. In the drawings clearly specify the dimensions of the assembly and the machine elements, their total number required, their material and method of their production. The designer should also specify the accuracy, surface finish and other related parameters for the machine elements.



Er.M.Ilaya perumal delivered lecture on Creativity and Aesthetics to Mechanical Engineering



Department of Mechanical Engineering

Conclusion

M.A.M. School of Engineering, Department of Mechanical Engineering had organized Guest Lecture program on **"Creativity & Aesthetics in Mechanical design"** totally 45 Mechanical students and 5 faculty members are participated in this program. In session - I cover the topics such as importance of Product Design and role of design engineer in core industries. He gave the idea about design procedure of mechanical component, Allowable stress, Transmitted forces, Material selection of mechanical component. In session –II cover the topics such as shear stress, crushing stress and tearing stress acting on the bolt, nut and screws. The failures of theory and von misses stresses of shaft and beams are explained .Finally he gave demonstration about small jigs and fixture design in mass production components. At the outset of this program students and faculties are learned basic idea about design of industrial components. Finally the student association coordinator conveys vote of Thanks.

M.A.M SCHOOL OF ENGINEERING
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Guest Lecture Report
On
"Advancement in Industrial safety"

09.02.2018

TABLE OF CONTENTS

COMPILED BY 12/2/18

(Dr. TTM. Kannan)

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Students and Faculty members of the department activity of Guest lecture programme on "Advancement in Industrial Safety" at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 5.00 pm on 09.02.2018.

Venue: Seminar Hall

Resource Person:

Er.S.Thirugnanam,
Safety Engineer,
Trichy Technical Training centre,
Tiruchirappalli

Email: stgnanam@gmail.com

Mobile Number: 9500459461

GUEST PROFILE

RESOURCE PERSON:

Er.S.Thirugnanam,
Safety Engineer,
Trichy Technical Training centre,
Tiruchirappalli

Email: stgnanam@gmail.com

Mobile Number: 9500459461

PROGRAMME DETAILS

Er. S.Thirugnanam, Safety Engineer, gave a Guest lecture about "Advancement in Industrial Safety " at M.A.M School of Engineering on 09.02.2018. He discussed more information about the Industrial safety, safety measures, handling of safety devices, fire extinguish methods, Placement opportunities and role of safety engineer in Industries. Totally 47 students and 5 Faculty members are attended this program.

PROGRAM

- Introduction to Resource person
- Guest Lecture Topic on " Advancement in Industrial safety "
- Power point presentation of Industrial safety
- Video session.
- Safety measures in Industry
- Feedback session
- Vote of Thanks

Fire safety

Fire safety is the set of practices intended to reduce the destruction caused by fire. Fire safety measures include those that are intended to prevent ignition of an uncontrolled fire, and those that are used to limit the development and effects of a fire after it starts. Fire safety measures include those that are planned during the construction of a building or implemented in structures that are already standing, and those that are taught to occupants of the building.

Threats to fire safety are commonly referred to as *fire hazards*. A fire hazard may include a situation that increases the likelihood of a fire or may impede escape in the event a fire occurs. Fire safety is often a component of building safety. Those who inspect buildings for violations of the Fire Code and go into schools to educate children on Fire Safety topics are fire department members known as *Fire Prevention Officers*. The Chief Fire Prevention Officer or Chief of Fire Prevention will normally train newcomers to the Fire Prevention Division and may also conduct inspections or make presentations.

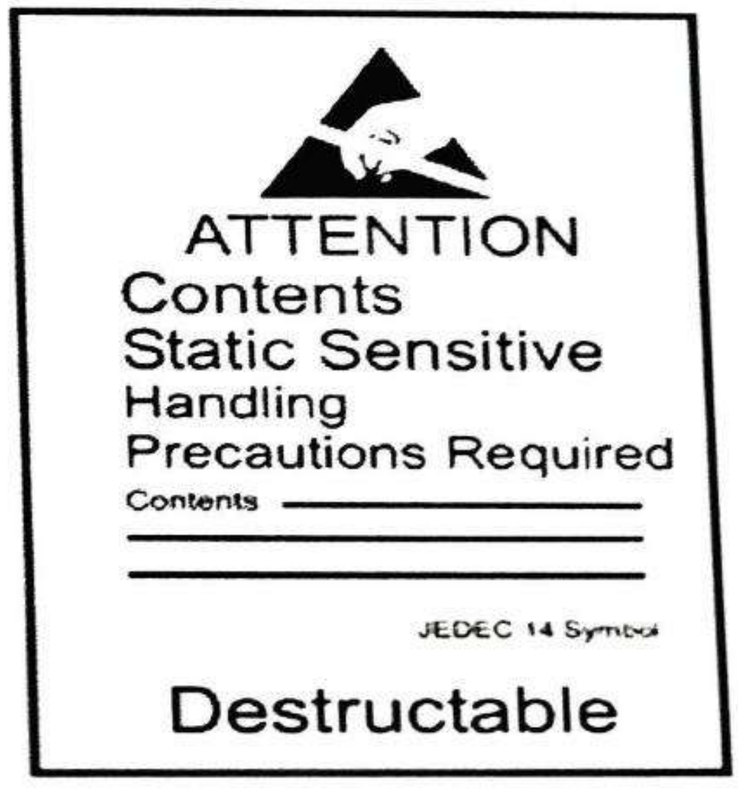
Fire safety measures

Measures for fire prevention are just as important as safety measures in the event of fire. The enforcing authority will require fire risk assessments and safety arrangements to cover fire precautions which prevent fire just as it will require coverage of fire precautions designed to protect people in the event of fire.

Fire prevention measures may need to include matters such as:

- Security provisions to help prevent wilful fire raising and arson;
- Prohibition on smoking;

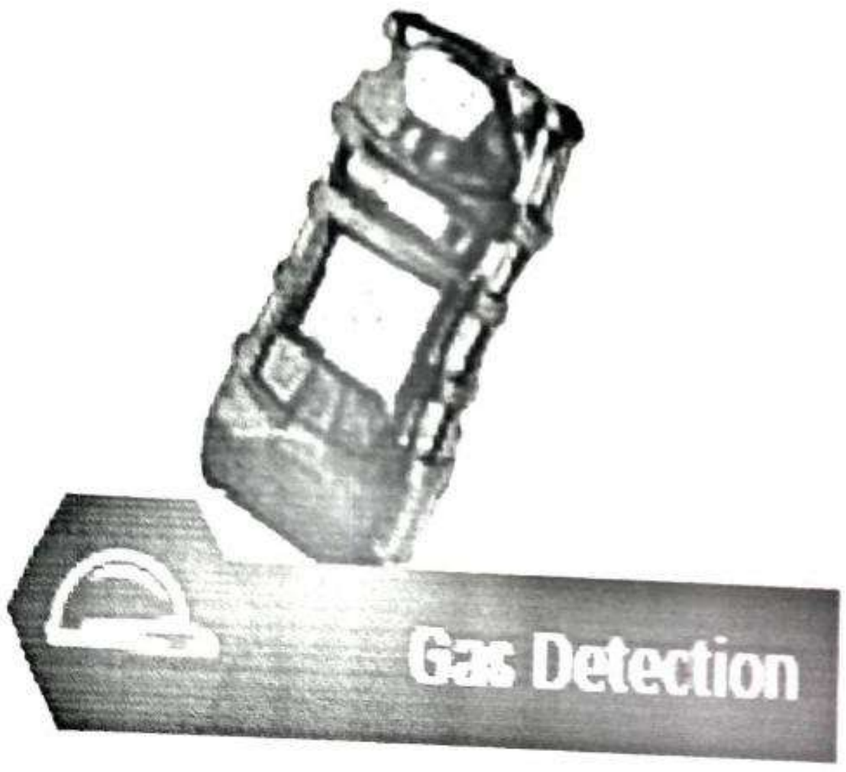
- Positioning of heat sources to prevent contact with combustible material;
- Systems of work to prevent accumulation of easily ignitable rubbish or paper;
- Control of contractors or employees using blowlamps, cutting or welding equipment;
- Risk assessment and control in the purchasing of articles and substances to avoid the introduction of fire hazards where possible;
- Risk assessment and control for the use of articles and substances which pose fire hazards to avoid the manifestation of fire risks;
- Maintenance programmes for electrical wiring and appliances;
- Temperature control that avoids need for portable heaters or coolers;
- Design or positioning of heaters, machinery or office equipment so that ventilators cannot be obstructed;
- Adequate cleaning of work areas;
- Adequate supervision of cooking facilities;
- Special engineering solutions, such as to make it impossible for a fire to begin or take hold by contolling the presence of oxygen, fuel or energy. These three components, the so-called 'fire triangle', are the three prerequisites for fire.



Industrial Safety

Industrial safety in the context of occupational safety and health refers to the management of all operations and events within an industry, for protecting its employees and assets by minimizing hazards, risks, accidents and near misses. The relevant laws, compliance and best practices in the industry have most of the issues addressed for the best protection possible. Employers are to make sure that these are strictly adhered to have maximum safety.

The enforcing authority will require fire risk assessments and safety arrangements to cover fire precautions which prevent fire just as it will require coverage of fire precautions



Fire safety symbols and equipment

Fire Fighting Technique

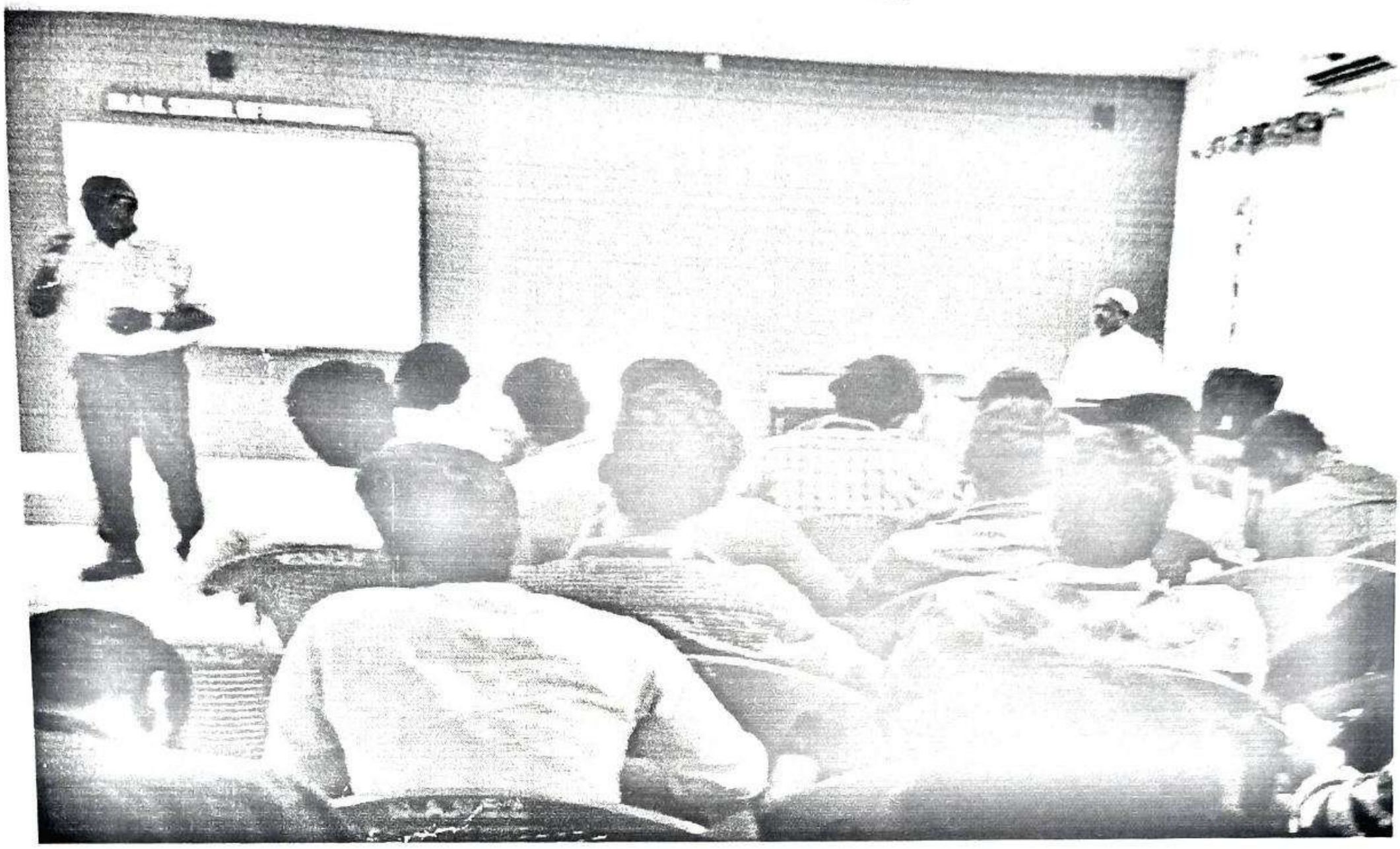
When attacking from the space above the following should be considered when conducting either a direct or indirect attack from the hot deck over the fire space. – Rotate personnel frequently to avoid heat strain. Emphasis should be on each person or team accomplishing a minor task rather than staying until exhausted. – Keep scene leader outside high heat area to prevent impaired judgment and increase endurance.

Avoid stationing personnel at local hot spots such as immediately above the fire. – Utilize support team personnel for indirect cooling and gaining access. These jobs are physically demanding and should not be performed by the primary attack team. – Using additional gloves for hot surfaces during access may prevent burned hands.

Relieve as a team or individually, Manage reliefs from a single control point Personnel standing by should minimize heat stress while waiting Personnel relieved should proceed to fresh air, cool off and replenish body fluids

Begin at perimeter and work to point of origin – Check for all possible areas of fire spread as well as clues for concealed fires Smoke creeping out of openings Bulkheads hot to touch NFTI inspection results

PHOTO PROOF



Er.S.Thirugnanam delivered Advancement in Industrial Safety

Conclusion

M.A.M. School of Engineering, Department of Mechanical Engineering has organized Guest Lecture program on "**Advancement of Industrial safety"** totally 47 Mechanical students and 5 faculty members are participated in this program. Er.S.Thirugnanam, Safety Engineer, had delivered lecture on "**Advancement of industrial Safety**" on 09.02.2018 at Seminar Hall, M.A.M. School of Engineering. In session I cover the topics such as importance of Safety precautions in Petroleum Industry, Power plant, Construction industry, Safety engineer role in industry, list of Safety devices and handling procedure. In session II covers the possibility fire accidents occur in industry and extinguish methods. He also thought the safety locks in electrical switches, Safety monitoring devices in power plants, Safety measures in petrochemical industry, safety devices handling methods and safety alarm signal in industry. Finally he gave demonstration about handle of gas fire extinguisher and powder extinguisher for various fire accidents occur in domestic and industry. Finally student association coordinator convey vote of Thanks to resource person.

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title : Advancement in Industrial Safety

Ressurce Person: K. Pakrisamy Safety Engineer

Date: 9/2/18

Time : 2:00 → 4:2

Sl.No	Name of Student	Year of study	Feed back	Signature
1	D. Senthil kumar	II nd "B"	Good class	
2	R Soorya Pragash	II nd 'B'	'good' useFull For me	R. Soorya
3	M. VIVEK	II nd B	good useful for us	M. Vivek
4	A. SASIKUMAR	II nd 'B'	" "	A Sasikumar
5	Santhosh. U	II nd (B)	Interesting and Useful how	
6	SARAVANA KUMAR. P	II nd (B)	Useful	P. Saravanakumar
7	P. SUNDAR	II (B)	very useful for Future	P. Sundar
8	K. YUKESH	II (B)	" "	K. Yukesh
9	S. Sanjili Pandian Suraj	II (B)	Very use full	
10	M. Sudarvanan	II (B)	useFull class	
11	M. Vasantharaja	II (B)	useFull	
12	R. Ranjith	II (B)	Interesting	
13	Vishva.	II (B)	Intresting Class	B. Vishva
14	D. VEERAKUMAR	II (B)	useFull class	D. Veerakumar
15	~~A. Sabarish~~			
16	A. Selva.	II (B)	Intaresting and useFull class	A. Selva
17	S. VASANTH KUMAR	II (B)	VERY useFull glass.	S. Vasanth kumar
18	M. VEERAIYA	II (B)	use full class.	M. Veeraiya
19	G. VELMOORTHI	II (B)	Use full	G. Velmoorthi
20	H. Shameer.	II (B)	use full &	Shameer. H
21	M. Sathish	"	use full	
22				
23				
24				
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29				
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21

M.A.M SCHOOL OF ENGINEERING
SIRUGANUR, TRICHY-621105
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Guest Lecture / Seminar/Workshop /Training Program

Title : Awareness on Industrial Safety Date: 7/2/18

Resource Person: Mr. K. Balasubramanian Safety Engineer Time : 2:00 → 4:30

Sl.No	Name of Student	Year of study	Feed back	Signature
1	Jeeva. K	Mech III	very good class	V. Jeeva
2	M. Deepak Kumar	Mech III	Good & useful	M. Deepak Kumar
3	M. Deepakkrishnan	"	nice	M. Deepakkrishnan
4	P. Hariraj	II	very useful class.	P. Hariraj
5	A. Mohamed Ismail	" "	useful class	A. Mohamed Ismail
6	M. Jayaprakash	Mech III	Very useful in Industry point of view	M. Jayaprakash
7	A. Mohamed Nasrudeen	Mech III	Nice teaching and very useful topic	A. Mohamed Nasrudeen
8	D. S. M. Mohammed	Mech III	Very Useful and Helpful	D. S. M. Mohammed
9	C. Sathish	"	Very useful	C. Sathish
10	B. Ramakrishnan	"	Very useful	B. Ramakrishnan
11	A. Arunprakash	Mech III	Very useful class & useful	A. Arunprakash
12	T. Deepan kumar	Mech III	Good	T. Deepan kumar
13	K. Saravanakumar	"	Very nice, excellent	K. Saravanakumar
14	K. Sathish	"	very useful class.	K. Sathish
15	M. Asim	"	Useful	M. Asim
16	S. Muthukrishnan	"	Very useful	S. Muthukrishnan
17	S. Sathish Raj	"	Very useful	S. Sathish Raj
18	A. Thangamanikandan	"	Useful	A. Thangamanikandan
19	S. Sathya	"	Very useful	S. Sathya
20	Aravind Babu	"	Very Informative	Aravind Babu
21	K. Ramesh Kumar	"	very Interesting class	K. Ramesh Kumar
22	S. Arulmurugavinoth	Mech II	very good Interesting	S. Arulmurugavinoth
23	S. Jayakumar	"	Informative Useful Learning	S. Jayakumar
24	K. Sathish	"	Nice class	K. Sathish
25	K. Karthick	Mech III	Very useful programme	K. Karthick

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

A Awareness of Industrial Safety

Person: K. Palaniswamy Safety Officer

Date: 9/2/2018

Time : 2 → 4:30 PM

S.	Name of Faculty Member	Department	Feed back	Signature
1.	Dr. TTM. Ioanan	Mech	Valuable Information	
2.	Dr. K. Chandrasekaran	"	Good	
3.	R. Rajeep	"	Fine & useful	
4.	K. Parthiban	"	useful	

9/3/20..

HOD

Principal

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Guest Lecture Report
On
"CNC Programming"

22.01.2018

TABLE OF CONTENTS

COMPILED BY

Dr-T.T.M.Kannan

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution

Approved by AICTE, New Delhi. Afflicated to Anna University, Chennai

Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Students and Faculty members of the department activity of Guest lecture programme on "CNC Programming " at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 5.00 pm on 05.01.2018.

Venue: Seminar Hall

Resource Person:

Dr.P. Hariharan,
Professor & Head
Department of Manufacturing Engineering,
Anna University,
Chennai- 25.

Email: hari@annauniv.edu

Mobile Number: 044-22357714

GUEST PROFILE

RESOURCE PERSON:

Dr.P. Hariharan,
Professor & Head
Department of Manufacturing Engineering,
Anna University,
Chennai- 25.

Email: hari@annauniv.edu
Mobile Number: 044-22357714

PROGRAMME DETAILS

Dr.P.Hariharan, Professor , gave a Guest lecture about " CNC Programming " at M.A.M School of Engineering on 22.01.2018.He discussed more information about the Basics of CNC Programming, CNC machine construction and Part programming. Totally 57 students and 7 Faculty members are attended this program.

PROGRAM

- Introduction to Resource person
- Guest Lecture on Topic " CNC Programming "
- Power point presentation of CNC Machine &CNC Programming
- Video session.
- CNC programming codes
- G codes and M codes
- Feedback session
- Vote of Thanks

Course Content

CNC stands for Computer Numerical Control and has been around since the early 1970's. Prior to this, it was called NC, for Numerical Control. While people in most walks of life have never heard of this term, CNC has touched almost every form of manufacturing process in one way or another. If you'll be working in manufacturing, it's likely that you'll be dealing with CNC on a regular basis.

G-code (also *RS-274*), which has many variants, is the common name for the most widely used numerical control (NC) programming language. It is used mainly in computer-aided manufacturing to control automated machine tools. G-code is sometimes called **G programming language**.

G-code is a language in which people tell computerized machine tools how to make something. The "how" is defined by g-code instructions provided to a machine controller (industrial computer) that tells the motors where to move, how fast to move, and what path to follow. The most common situation is that, within a machine tool, a cutting tool is moved according to these instructions through a tool path and cuts away material to leave only the finished workpiece. The same concept also extends to non cutting tools such as forming or burnishing tools, photo plotting, additive methods such as 3D printing, and measuring instruments.

G-codes, also called preparatory codes, are any word in a CNC program that begins with the letter G. Generally it is a code telling the machine tool what type of action to perform, such as:

- Rapid movement (transport the tool as quickly as possible in between cuts)
- Controlled feed in a straight line or arc
- Series of controlled feed movements that would result in a hole being bored, a workpiece cut (routed) to a specific dimension, or a profile (contour) shape added to the edge of a workpiece
- Set tool information such as offset
- Switch coordinate systems

There are other codes; the type codes can be thought of like registers in a computer.

Students and hobbyists have pointed out over the years that the term "G-code" is imprecise. It comes from the literal sense of the term, referring to one letter address and to the specific codes that can be formed with it (for example, G00, G01, G28). But every letter of the English alphabet is used somewhere in the language. Nevertheless, "G-code" is established as the common name of the language.

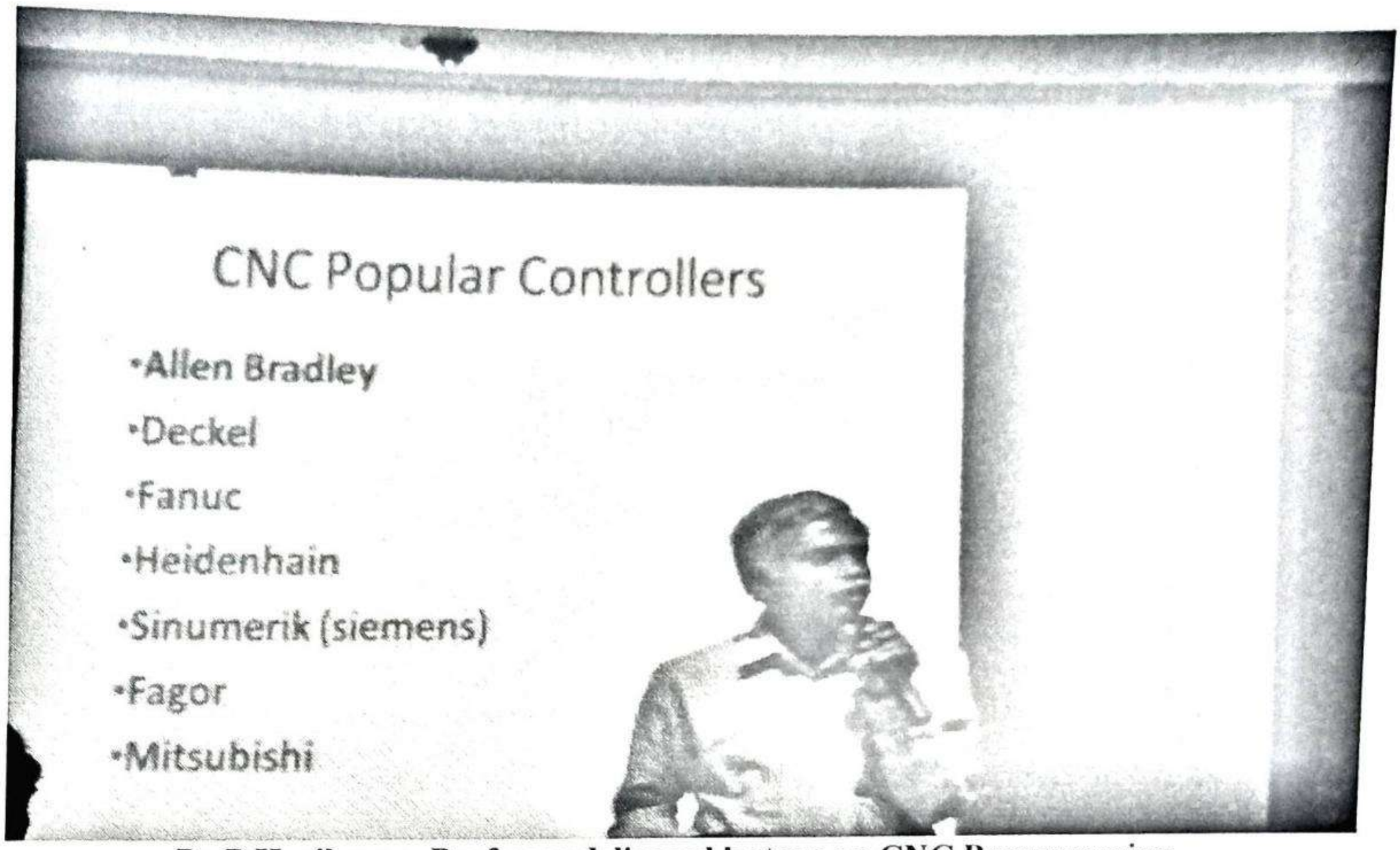
G00 - Positioning at rapid speed; Mill and Lathe
G01 - Linear interpolation (machining a straight line); Mill and Lathe
G02 - Circular interpolation clockwise (machining arcs); Mill and Lathe
G03 - Circular interpolation, counter clockwise; Mill and Lathe
G04 - Mill and Lathe, Dwell
G09 - Mill and Lathe, Exact stop
G10 - Setting offsets in the program; Mill and Lathe
G12 - Circular pocket milling, clockwise; Mill
G13 - Circular pocket milling, counterclockwise; Mill
G17 - X-Y plane for arc machining; Mill and Lathe with live tooling
G18 - Z-X plane for arc machining; Mill and Lathe with live tooling
G19 - Z-Y plane for arc machining; Mill and Lathe with live tooling
G20 - Inch units; Mill and Lathe
G21 - Metric units; Mill and Lathe
G27 - Reference return check; Mill and Lathe
G28 - Automatic return through reference point; Mill and Lathe
G29 - Move to location through reference point; Mill and Lathe (slightly different for each machine)
G31 - Skip function; Mill and Lathe
G32 - Thread cutting; Lathe
G33 - Thread cutting; Mill
G40 - Cancel diameter offset; Mill. Cancel tool nose offset; Lathe
G41 - Cutter compensation left; Mill. Tool nose radius compensation left; Lathe
G42 - Cutter compensation right; Mill. Tool nose radius compensation right; Lathe
G43 - Tool length compensation; Mill
G44 - Tool length compensation cancel; Mill (sometimes G49)
G50 - Set coordinate system and maximum RPM; Lathe
G52 - Local coordinate system setting; Mill and Lathe
G53 - Machine coordinate system setting; Mill and Lathe
G54~G59 - Workpiece coordinate system settings #1 t0 #6; Mill and Lathe
G61 - Exact stop check; Mill and Lathe
G65 - Custom macro call; Mill and Lathe
G70 - Finish cycle; Lathe
G71 - Rough turning cycle; Lathe
G72 - Rough facing cycle; Lathe
G73 - Irregular rough turning cycle; Lathe
G73 - Chip break drilling cycle; Mill
G74 - Left hand tapping; Mill
G74 - Face grooving or chip break drilling; Lathe
G75 - OD groove pecking; Lathe
G76 - Fine boring cycle; Mill
G76 - Threading cycle; Lathe
G80 - Cancel cycles; Mill and Lathe
G81 - Drill cycle; Mill and Lathe
G82 - Drill cycle with dwell; Mill
G83 - Peck drilling cycle; Mill
G84 - Tapping cycle; Mill and Lathe
G85 - Bore in, bore out; Mill and Lathe
G86 - Bore in, rapid out; Mill and Lathe
G87 - Back boring cycle; Mill
G90 - Absolute programming

G91 - Incremental programming
G92 - Reposition origin point; Mill
G92 - Thread cutting cycle; Lathe
G94 - Per minute feed; Mill
G95 - Per revolution feed; Mill
G96 - Constant surface speed control; Lathe
G97 - Constant surface speed cancel
G98 - Per minute feed; Lathe
G99 - Per revolution feed; Lathe

CNC M Codes

M00 - Program stop; Mill and Lathe
M01 - Optional program stop; Lathe and Mill
M02 - Program end; Lathe and Mill
M03 - Spindle on clockwise; Lathe and Mill
M04 - Spindle on counterclockwise; Lathe and Mill
M05 - Spindle off; Lathe and Mill
M06 - Toolchange; Mill
M08 - Coolant on; Lathe and Mill
M09 - Coolant off; Lathe and Mill
M10 - Chuck or rotary table clamp; Lathe and Mill
M11 - Chuck or rotary table clamp off; Lathe and Mill
M19 - Orient spindle; Lathe and Mill
M30 - Program end, return to start; Lathe and Mill
M97 - Local sub-routine call; Lathe and Mill
M98 - Sub-program call; Lathe and Mill
M99 - End of sub program; Lathe and Mill

PHOTO PROOF



Dr.P.Hariharan, Professor delivered lecture on CNC Programming

Conclusion

M.A.M. School of Engineering, Department of Mechanical Engineering has organized Guest Lecture on "**CNC Programming**" Totally 57 Mechanical students and 7 faculty members are participated this lecture. Dr.P.Hariharan, Professsor had delivered lecture on "CNC Programming" on 22.01.2018 at Seminar Hall, M.A.M. School of Engineering. In session I cover the topics such as importance of CNC machines, CNC machine constructional details and Types CNC Machines. In session II all the participants are trained to G Codes and M Codes practice in Turning and machining centre. He thought the Part Programming fundamentals, Micro machining through High speed machining process, Special features of CNC Machines, Automation of machines and Automatic tool Changers in CNC Machining centers.

M.A.M SCHOOL OF ENGINERING
SIRUGANUR, TRICHY-621105
(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

~~Title:~~ Dr. D. Hariharan HOD | AUC **Date:** 22/01/18

Resource Person: Guest lecture on CNC Programming

Time : 1:30 → 5:00 pm

Sl.No 34	Name of Student	Year of study	Feed back	Signature
32	—	—	—	—
33	D. VEERAKUMAR	II nd MECH-B	Very useful	D.
34	R. SooryaPragash	II nd MECH-B	Good practical class	R. Sooryа
35	J. Saran	II nd mech-B	useful of the class	J.
36	V. Ramanan	II nd Mech-B	Nice, good	V.
37	A. Selva	II nd Mech-B	good	A. Selva
38	K. Suriya	II nd Mech-B	Very useful	K. Suriya.
39	E. Paul Raj	II nd Mech-A	useful of this class	E. Paul Raj
40	R. VishnuKumar	II nd Mech-B	very use full class	R. Vishnukumar.
41	P. Jenith	II nd Mech A.	very useful	
42	C. Neethidevan	II nd mech A	useful	
43	N. Manimaran	II nd "A"	Good	N.
44	B. Vishva	II nd Mech-B	useful class time	B. Vishva
45	Santhosh. V	II nd Mech 'B'	Useful	
46	C. Praveen	II nd mech (B)	Very useful	C.
47	M. VEERAIYA	II nd MECH(B)	Very use full	M.
48	Vivek. M	II nd Mech (B)	~~super~~ wonderful class	M. Vivek
49	SENTHILKUMAR	II nd mech (B)	Needful class	D. Senthilkumar
50.	M. Poharzhanthi	II nd mech (B)	Very useful	M. Pha
51	M. Sridarvanan	II nd mech (B)	very useful	M. Sridarvanan
52.	H. Shameer.	II nd mech (B)	Very useful	Shameer. H
53.	K. Muthu Raj	II nd mech (A)	Very useful	
54	N. MOHAMED MUZZAMMIL	II nd MECH (A)	Need more topics	
55	J. KARTHEESWARAN	II nd Mech (A)	Good	J. K.
56.	K. Naveenkumar	II nd Mech (A)		K. Naveen.
57	Sarath kumar. k	II nd mech (A)	very useful practical	
58	K. KARUNAKARAN	II nd mech A	very useful class	K. Karuna.
59	A. ANEES AHAMED	II nd mech (A)	Need more limits	A. Anees
/	/	/	/	/

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title: Guest Lecture on "CNC Programming"

Date: 20/1/18.

Resource Person: Dr. D. Hariharan HOD / AUC

Time : 1:30 → 5:00 pm

Sl.No	Name of Student	Year of study	Feed back	Signature
1	H. ABDUL DASHEED	II year 'A'	very useful	H. Abdul D.
2	S. AKASH	II year 'A'	useful class.	S. Akash
3	R. JEEVARASAN	II year 'A'	interesting class	R. Jeevarasan
4	J. ARAVINDH	II YEAR 'A'	Useful of Lecture	J. Aravindh
5	K. KANAGARAJ	II YEAR 'A'	Useful	K. Kanagaraj
6	C. NAVEEN	II years 'A'	Good teach	C. Naveen.
7	R. Gokul	II Year 'A'	Useful for study	R. Gokul.
8	M. Thirumalai.	II year 'B'	very usefull	M. Thirumalai
9	M. Barathiraja	II Year 'A'	Useful Class	M. Barathiraja.
10	A. Aravindhan	II year 'A'	very Good class	A. Aravindhan
11	M. Riyaz Ahamed	II Year 'A'	Useful	M. Riyaz Ahamed
12	S. Mathivanan	II year 'A'	Very useful	S. Mathivanan
13	B. PRAVEEN	II Years 'B'	Use full class.	B. Praveen.
14	A. ALPHAN	II year 'A'	Useful for cnc programing.	A. Alphan
15	T. G. Anbuselvan	II year 'A'	very use full Unit	T. G. Anbuselvan
16	K. Gopakrishna	II year 'A'	Use full class	K. Gopakrishna.
17	M. BOOBALAN	II YEAR 'A'	Very Useful class.	M. Boobalan.
18	M. Manikandan	II years 'A'	Very use full	M. Manikandan
19	G. VELMOORTHI	II year 'B'	use ful.	G. Velmoorthi.
20	P. RAJA DURAI	II year 'B'	use full	P. Raja durai
21	A. SASI KUMAR	II year 'B'	use full Class	A. Sasikumar
22	V. RAMKUMAR	II years B	very nice class.	V. Ramkumar
23	VASANTH KUMAR. S	II YEAR-B	use full lecture	S. Vasanth Kumar
24	B. Sangilipandian Suraj	II year-B	very full lecture	B. Sangilipandian Suraj
25	R. RANJITH	II year "B"	Use full of lecture	R. Ranjith
26	B. Akshaya Bala	II year-A'	use full lecture	B. Akshaya Bala
27	Killian Chakravarthy	II Year A	Useful for Class	K. B.
28	K. Dava Deekshitha	II year 'A'	very useful engineering	K. Dava Deekshitha
29	R. MADHAN	II year B	Use full	R. Madhan
30	M. Mooorthi.	II yer A	use full	M. Moorthi
31	M. Muthukumar	II year-A	use full	M. Muthukumar

59

M.A.M SCHOOL OF ENGINEERING
Accredited by NAAC
Approved by AICTE, Affiliated to Anna university
Siruganur,Tiruchirapalli-621 105.

One day workshop Report
On
"Modern NDT Techniques"

19.01.2018

TABLE OF CONTENTS

COMPILED BY 20/1/18.

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution
Approved by AICTE, New Delhi. Afflicated to Anna University, Chennai
Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites students and Faculty members of the department activity of One day workshop on "**Modern NDT Techniques"** at Seminar Hall, M.A.M School of Engineering between 9.00 pm – 5.00 pm on 19.01.2018.

Venue: Seminar Hall

Resource Person:

Er.D.Shangar Ganesh,
Level –II NDT Engineer
Evershine Institute of Testing and Training,
Trichy-620018

Email: evershineitt@gmail.com
Website ; evershineitt.com

Mobile Number : 9688690282
Contact number : 0431 - 4060282

M.A.M SCHOOL OF ENGINEERING
Accredited by NAAC
Approved by AICTE, Affiliated to Anna university
Siruganur, Tiruchirapalli-621 105.

One day workshop Report
On
"Modern NDT Techniques"

19.01.2018

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H.O.D/Mechanical

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M.A.M. SCHOOL OF ENGINEERING

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Venue: Seminar Hall

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Email: evershineitt@gmail.com

Website ; evershineitt.com

Mobile Number : 9688690282

Contact number : 0431 - 4060282

GUEST PROFILE

RESOURCE PERSON:

Er.D.Shangar Ganesh,
Level –II NDT Engineer
Evershine Institute of Testing and Training,
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Website : evershineitt.com

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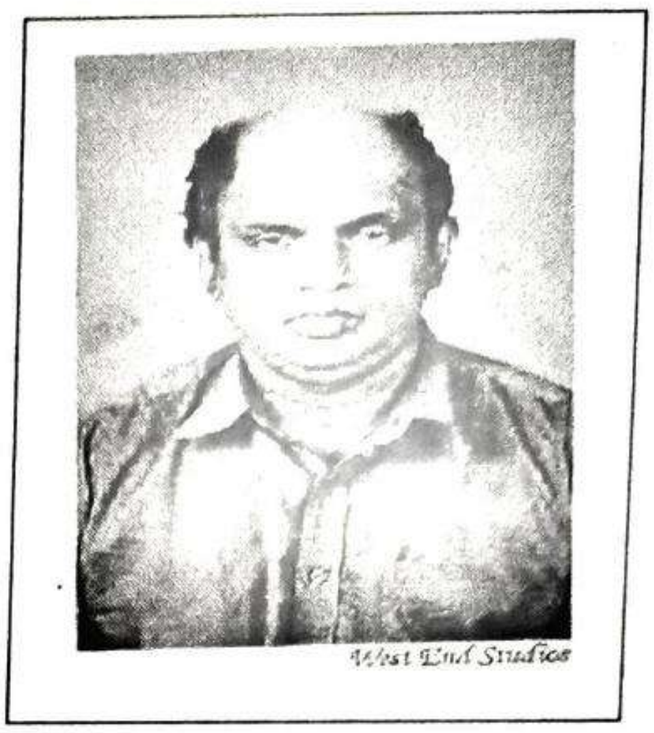


PROGRAMME DETAILS

Er.D.Shangar ganesh, Level-II-NDT Engineer, gave lecture about " **Modern NDT Techniques"** at M.A.M School of Engineering on 19.01.2018. He had delivered lecture on "Modern NDT Techniques" and cover the topics such as importance of NDT techniques, Radiograph test (RT), Ultrasonic test (UT) , magnetic particle test (MT), Dye penetrant test(DPT) , eddy current test and X ray reading of testing reports. Totally 120 students and 12 Faculty members are attended this program.

PROGRAM

- Introduction to Resource person
- One day workshop on " Modern NDT Techniques"
- Power point presentation of NDT Techniques
- Video presentation of NDT Techniques
- Hands on training of NDT
- Feedback session
- Certificate distribution
- Vote of Thanks

Non destructive testing

- **ASTM's** nondestructive testing standards provide guides for the appropriate methods and techniques used to detect and evaluate flaws in materials and objects without destroying the specimen at hand. Such tests include radiographic, ultrasonic, electromagnetic (eddy-current), X-ray, acoustic, and topographic techniques. Detected flaws are evaluated for possible rejection due to nonconformance to set acceptance acriteria. These nondestructive testing standards are instrumental to laboratories and a wide variety of industrial plants for examining a material's quality and, consequently, suitability for intended use
- **Liquid (Dye) penetrate method**: Liquid penetrates inspection (LPI) is one of the most widely used nondestructive evaluation (NDE) methods. Its popularity can be attributed to two main factors, which are its relative ease of use and its flexibility. The technique is based on the ability of a liquid to be drawn into a "clean" surface breaking flaw by capillary action. . This method is an inexpensive and convenient technique for surface defect inspection. The limitations of the liquid penetrate technique include the inability to inspect subsurface flaws and a loss of resolution on porous materials. Liquid penetrate testing is largely used on nonmagnetic materials for which magnetic particle inspection is not possible. Materials that are commonly inspected using LPI include the following; metals (aluminum, copper, steel, titanium, etc.), glass, many ceramic materials, rubber, plastics. Liquid penetrate inspection is used to inspect of flaws that break the surface of the sample. Some of these flaws are listed below; fatigue cracks, quench cracks grinding cracks, overload and impact fractures, porosity, laps seams, pin holes in welds, lack of fusion or braising along the edge of the bond line.
- **Magnetic particle inspection** is one of the simple, fast and traditional nondestructive testing methods widely used because of its convenience and low cost. This method uses magnetic fields and small magnetic particles, such as iron filings to detect flaws in components. The only requirement from an inspect ability standpoint is that the component being inspected must be made of a ferromagnetic material such iron, nickel, cobalt, or some of their alloys, since these materials are materials that can be magnetized to a level that will allow the inspection to be effective. On the other hand, an enormous volume of structural steels used in engineering is magnetic. In its simplest application, an electromagnet yoke is placed on the surface of the part to be examined, a kerosene-iron filling suspension is poured on the surface and the electromagnet is energized. If there is a discontinuity such as a crack or a flaw on the surface of the part, magnetic flux will be broken and a new south and north pole will form at each edge of the discontinuity. Then just like if iron particles are scattered on a cracked magnet, the particles will be attracted to and cluster at the pole ends of the magnet, the iron particles will also be attracted at the edges of the crack behaving poles of the magnet. This cluster of particles is much easier to see than the actual crack and this is the basis for magnetic particle inspection. For the best sensitivity, the lines of magnetic force should be perpendicular to the defect.

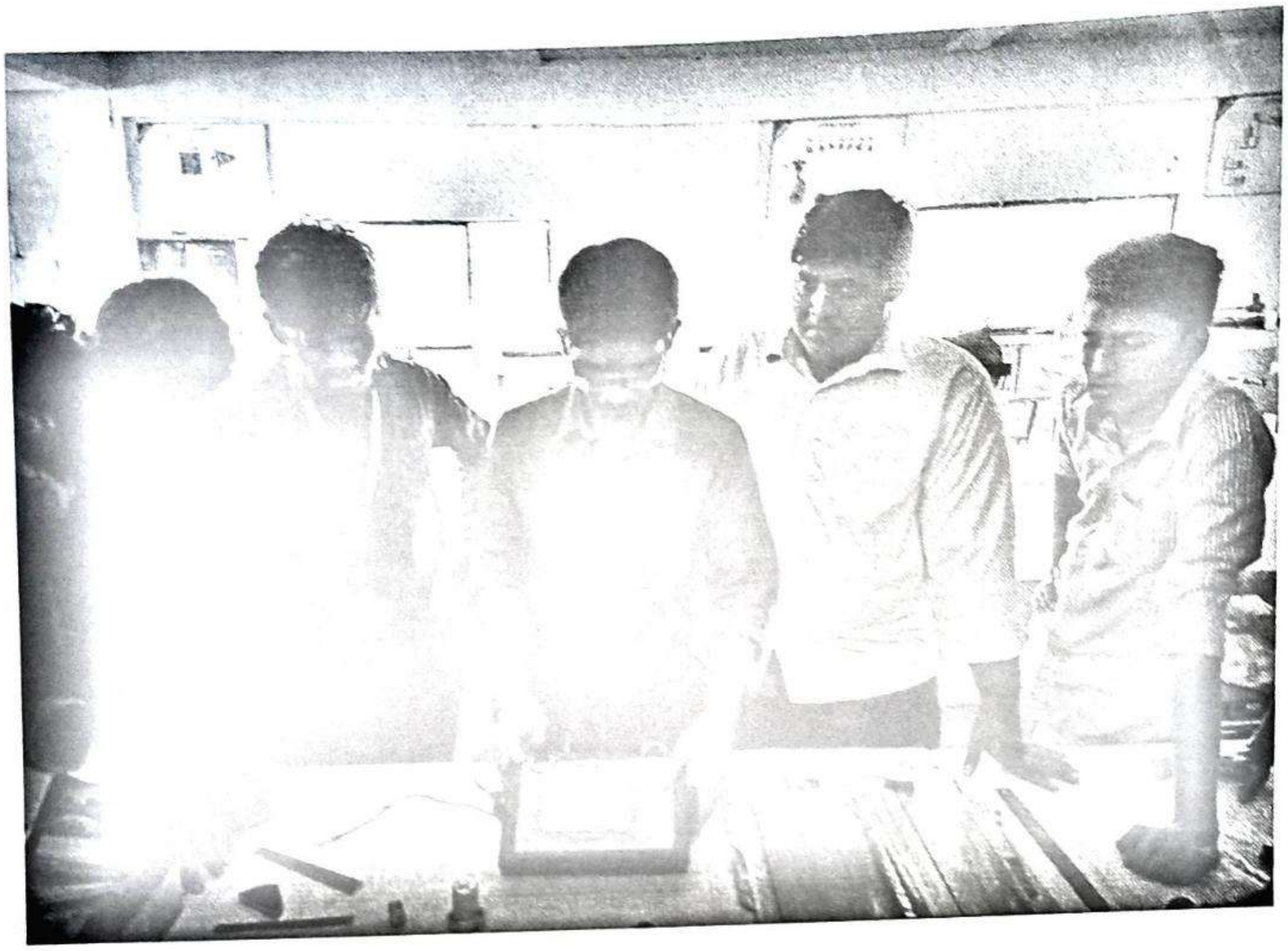
Ultrasonic testing inspection

In ultrasonic evaluation one is frequently able to come near to the true reflector size as long as the discontinuity is large compared to the diameter of the sound field. The discontinuity then reflects the complete impacting energy back, By scanning the boundaries of the discontinuity, reliable information can be obtained about its extension. The ultrasonic operator normally observes the height of the discontinuity echo. The probe

PHOTO PROOF

Er.D.Shangar Ganesh had delivered lecture on **Modern NDT Techniques**

Hands on Training on **Liquid penetrant test & Magnetic particle test** to Mechanical Student



Hands on training on Ultrasonic test to Mechanical Students

Hands on training on Radiographic test to Mechanical Student

Conclusion

M.A.M. School of Engineering, Department of Mechanical Engineering has organized One day workshop on "**Modern NDT Techniques**" in association with Evershine institute of Testing and Training. Totally 120 Mechanical students and 12 faculty members are participated from various Engineering colleges. Er.D.Shangar ganesh, level–II NDT Engineer had delivered lecture on "Modern NDT Techniques" on 19.01.2018 at Seminar Hall, M.A.M. School of Engineering. In session I covers the topics such as importance of NDT techniques, Radiograph test (RT), Ultrasonic test (UT) , magnetic particle test (MT), Dye penetrant test(DPT) , eddy current test and X ray reading of testing reports. In session II all the participants are took hands on training in welded joints and casting ingots using magnetic particle test, radiographic test, Dye penetrant test and eddy current test. The pipelines and non magnetic casting specimens are inspected using Ultrasonic test. The various defects such as porosity, slag inclusions, Honey comb, Crush, blow holes, pin holes, fins, flash, misrun, Scabs and warpage are found in casting blocks and present method of identification of defects. The participants are allowed to test the casting blocks and welded joints using yoke apparatus and found the defect spots. In session III power point presentation and video presentation on NDT test procedures, standards and identification methods are explained.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture Report
On
"Rapid Prototyping and Additive manufacturing"

05.01.2018

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COMPILED BY
(Dr. TTM. Kannan)

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution

Approved by AICTE, New Delhi. Affliated to Anna University, Chennai

Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity of Guest lecture programme on **"Rapid prototyping and Additive manufacturing"** at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.00 pm on 05.01.2018.

Venue: Seminar Hall

Resource Person:

Er.M.Ilaya perumal,
Senor Engineer/RPT,
Tekla academy,
Madurai-01.

Email: mducadd@gmail.com

Mobile Number: 9842948259 & 9942781728

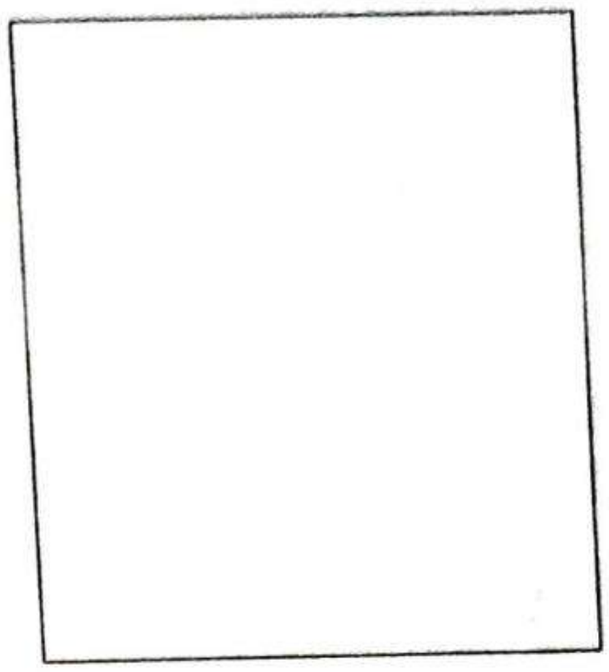
GUEST PROFILE

RESOURCE PERSON:

Er.M.Ilaya perumal,
Senor Engineer/RPT,
Tekla academy,
Madurai-01.

Email: mducadd@gmail.com

Mobile Number: 9842948259 & 9942781728



PROGRAMME DETAILS

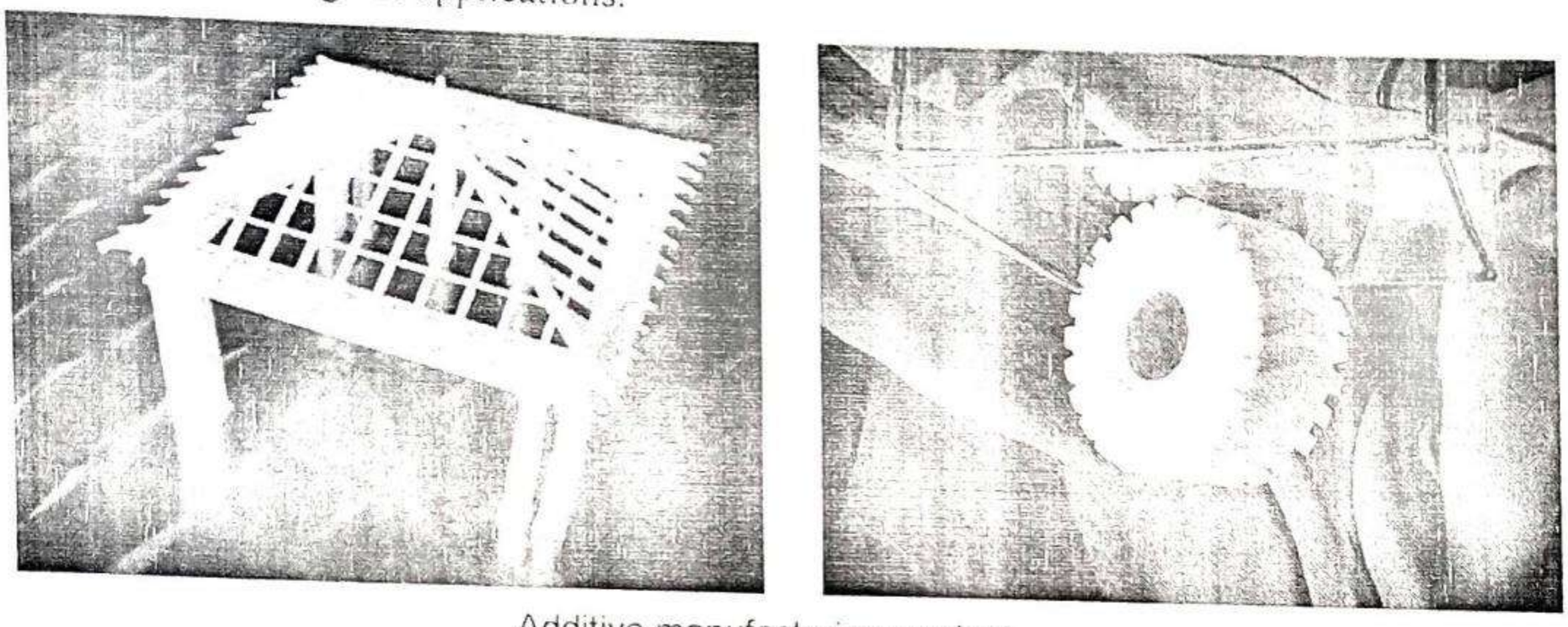
Er.M.Ilaya perumal,Senor Engineer/RPT, gave a Guest lecture about **"Rapid prototyping and Additive manufacturing"** at M.A.M School of Engineering on 05.01.2018.He discussed more information about the Basics of Additive manufacturing,3D printing of Engineering Component and Bio fabrication of Human bones and Rapid prototyping. Totally 43 students and 4 Faculty members are attended this program.

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Rapid prototyping and Additive manufacturing "
- Power point presentation of Bio fabrication of Human implants
- Power point presentation of Engineering product by additive manufacturing
- Video session.
- Interaction session
- Feedback session
- Vote of Thanks

Selective Laser Sintering (SLS) Prototype

SLS: is a 3D Printing technology similar to SLA but works by fusing or sintering a powdered material together via a highly accurate computer controlled laser and mirror system. Selective Laser Sintering is a fast and accurate prototyping technology producing durable parts quickly and cheaply. Using a laser as the power source to sinter powdered material it binds the material together to create a solid structure. It is a convenient as well as a cost-effective way to make prototypes as well as finished products. The parts need little post process finishing and are suitable for a wide range of applications.



Additive manufacturing product

AdditiveManufacturing

3D printing, also known as additive manufacturing (AM), refers to various innovative processes that are used to manufacture three-dimensional products. In additive manufacturing, successive layers of material are formed under computer control to create an object. These objects can be of almost any shape or geometry and are produced from a digital 3D model or other electronic data source. Great attention has been given to this subject recently since it offers new opportunities for polymers in factories of the future.

Additive manufacturing may be a more appropriate term to use than 3D printing because it includes all processes that are "**additive**". The term "3D printing" applies more specifically to **additive manufacturing processes** that use a printer-like head for deposition of the material (e.g., material jetting), and 3D printing is now only one of the processes that is part of the additive manufacturing universe. Technical articles and standards generally use the term "additive manufacturing" to emphasize this broader meaning.

The best factory applications for 3D printed parts, including machine set up, fixturing and line optimization.

Er.M.Hayaperumal lecture about of Rapid prototyping and Additive manufacturing

Conclusion

Er.M.Ilaya perumal had delivered the topic "Rapid prototyping and Additive manufacturing" to department of Mechanical Engineering students on 05.01.2018 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics such as Rapid prototyping, Modeling, Stereo lithography, Additive manufacturing and 3D printing. He also explains about importance Additive manufacturing and 3D printing. Finally teach the procedure of design and develop the engineering models and Bio fabrication of human implants through point presentation. It was very useful to Student and Faculty members to get the knowledge of advances in manufacturing system.

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title: Additive manufacturing **Date:** 05-01-18.

Resource Person: EY. Jyalabharathi tekla academy **Time :** 2:00 → 4:00PM.

Sl.No	Name of Student	Year of study	Feed back	Signature
1	A. Prabhakaran.	IIIrd	very Good	A. Prabhakaran
2	Jeeva. K	IIIrd	very used	K. Jeeva
3	C. Raja. Sekaran	IIIrd year	very used 3D print	C. Raj
4	V. Balasubramanian	IIIrd yr.	very useful in my job	V. Bal
5	S. Surya.	IIIrd Year	Useful for the 3D print	S. Surya.
6	S. Sakthivel	IIIrd year	more information gather	S. Sakthivel.
7	A. Kalai Mougan	"	used for project	A. Kalai
8	M. SRIRAM.	IIIrd year	useful for job	Ram.
9	M. DINESH	IIIrd year	very good information	M. Dinesh.
10	T. Aravelu Babu	IIIrd year	useful for Project	T. Aravelu
11	A. Karthik Prabu	IIIrd yr	very good	A. Karthik Prabu
12.	S. Jaya Arasan	III year	useful to do. future	S. Jaya Arasan
13.	M. kanagaraj	III year	very good	M. Kanagaraj
14.	S. Suthish raj	III year	used for project	S. Suthish raj
15.	P. Ramu	III year	more information.	P. Ramu
16.	S. Jayabal	III year	useful for project work	S. Jayabal
17.	R. SIVA	"	more useful of this program.	R. Siva
18.	B. Praveen Kumar	"	useful this Program	B. Praveen Kumar
19.	D. SILAMBARASAN	"	useful for future	D. Silambarasan
20	A. Sathiyamoorthi	"	useful & good Information	A. Sathiyamoorthi
21.	K. Kanagaraj	"	very useful program	K. Kanagaraj
22.	S. ANTONY PRINCE	IIIrd year	interesting, useful	S. Antony Prince
23	B. PRABAKARAN	"	interesting useful	B. Prabakaran
24.	S. Amarnath	III year	more information required	S. Amarnath.
25.	S. Anupandi	III year	more useful.	S. Anupandi.
26.	C. G. Pavithran	III year	useful	C. G. Pavithran
27.	M. Pasupathi Bose	IIIrd year	Interesting, Useful.	M. Pasupathi Bose
28	S. UKESHKUMAR	III YEAR.	use full	S. Ukeshkumar
29	Gowsik P	"	more useful	Gowsik P
30.	M. Deepak Ruban	"	useful	M. Deepak Ruban

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title: Additive manufacturing **Date:** 5-01-18

Resource Person: Er. Idaya bharathy

Time : 2:00 → 4:30 pm

Sl.No	Name of Student	Year of study	Feed back	Signature
31	A-Annarajan	III	VERY USEFUCL	A. Anna
32.	C. Sathish.	III	useful Processing	C. Sathish
33.	K. Sathish	III	useful	K. Sathish
34	T. Sarath kumar	III	Verde related class	T. Sarath
35.	R. Sagaya Robinson	III	Very Nice	R. Sagaya Robinson
36.	B. Shanmugam	III	Very Nice	B. Shanmugam
37.	T. Deepan kumar	III	very nice	T. Deepan kumar
38.	P.H Nithin	IIII	useful	P.H Nithin
39	V. Joseph vineram	III	very useful	V. Joseph vineram
40	K. Vignesh	III	Better food	K. Vignesh

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.
(ISO 9001:2000 certified Institution)
NAAC accredited

Guest Lecture Report
On
"Pressure vessel design for Mechanical equipment"

28.12.2017

TABLE OF CONTENTS

COMPILED BY
(Dr. TTM. Kannan)

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution
Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai
Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity of Guest leeture programme on **"Pressure vessel design for mechanical equipment"** at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.00 pm on 28.12.2017.

Venue: Seminar Hall

Resource Person:

Er.S.Kanthimathinathan,
Structural Engineering consultant,
Chartered Engineer,
1/A - Nariyan street,
Srirnagam,
Tiruchirappalli – 620 006

Email: kanthistru@gmail.com

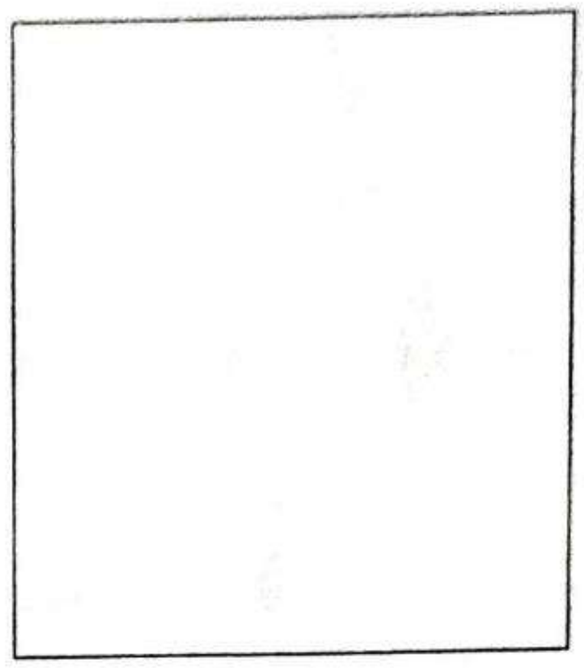
techkanthi@outlook.com

Mobile Number: 9345111990,8610871046

GUEST PROFILE

RESOURCE PERSON:

Er.S.Kanthimathinathan,
Structural Engineering consultant,
Chartered Engineer,
1/A –Nariyan street,
Srirnagam,
Tiruchirappalli – 620 006



Email: kanthistru@gmail.com

techkanthi@outlook.com

Mobile Number: 9345111990, 8610871046

PROGRAMME DETAILS

Er.S.Kanthimathinathan, *Structural Engineering consultant,* gave a Guest lecture about "**Pressure vessel design for mechanical equipment**" at M.A.M School of Engineering on 28.12.2017. He discussed more information about the Basics of mechanical equipment design, Mechanical design of pressure vessels, heat transfer analysis through software package, drawing office practice for pressure vessels and steel structure as per ASME standards. Totally 51 students and 4 Faculty members are attended this program.

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Pressure vessel design for mechanical equipment "
- Power point presentation of Steel structure as per ASME
- Video session.
- Vote of Thanks

1. Boiler and pressure vessels

Before construction or installation of a boiler or pressure vessel commences, the design of the boiler or pressure vessel shall be registered unless otherwise provided in the regulations. The submissions for registration shall include.

- Design drawings and calculations
- Proof of registration in another Canadian jurisdiction (if applicable); and drawings, specifications, and other information submitted shall show:

1. the design pressure and temperature (including MDMT if applicable);
2. details of the arrangement and dimensions of all component parts (including the specified minimum thickness after forming for formed heads);
3. the ASME specification numbers of all materials (including grades, types, etc.) for which an ASME specification number is required by the applicable code or standard;
4. details of the proposed construction and welded joint configurations;
5. the section and paragraph number of the ASME code under which it is to be constructed;
6. the extent of code required and other non-destructive examination;
7. heat treatment (holding temperature and holding time) if applicable;
8. impact testing if applicable;
9. hydrostatic or pneumatic test pressure;
10. flange ratings;
11. identification of any Code Cases intended to be applied to the design;
12. a report of any physical tests conducted for the purpose of establishing the maximum allowable working pressure of the boiler, pressure vessel, or any part thereof; and
13. any other information that the design reviewer may require to ascertain that the design is suitable for registration (as authorized by the chief inspector).

2. Thermal Pressure tank

A&P Technology developed the design and manufacturing process for braided pressure vessels, achieving failure modes that exceed expectations. The perform allows contouring materials over the tank end-domes, application of hoop fibers through the cylindrical tank portions, and proprietary technology for the placement and application of materials. With this approach the process cycle time is reduced to 30 minutes per cycle, significantly faster than alternate technologies.

3. Steel structure analysis of Boiler plates

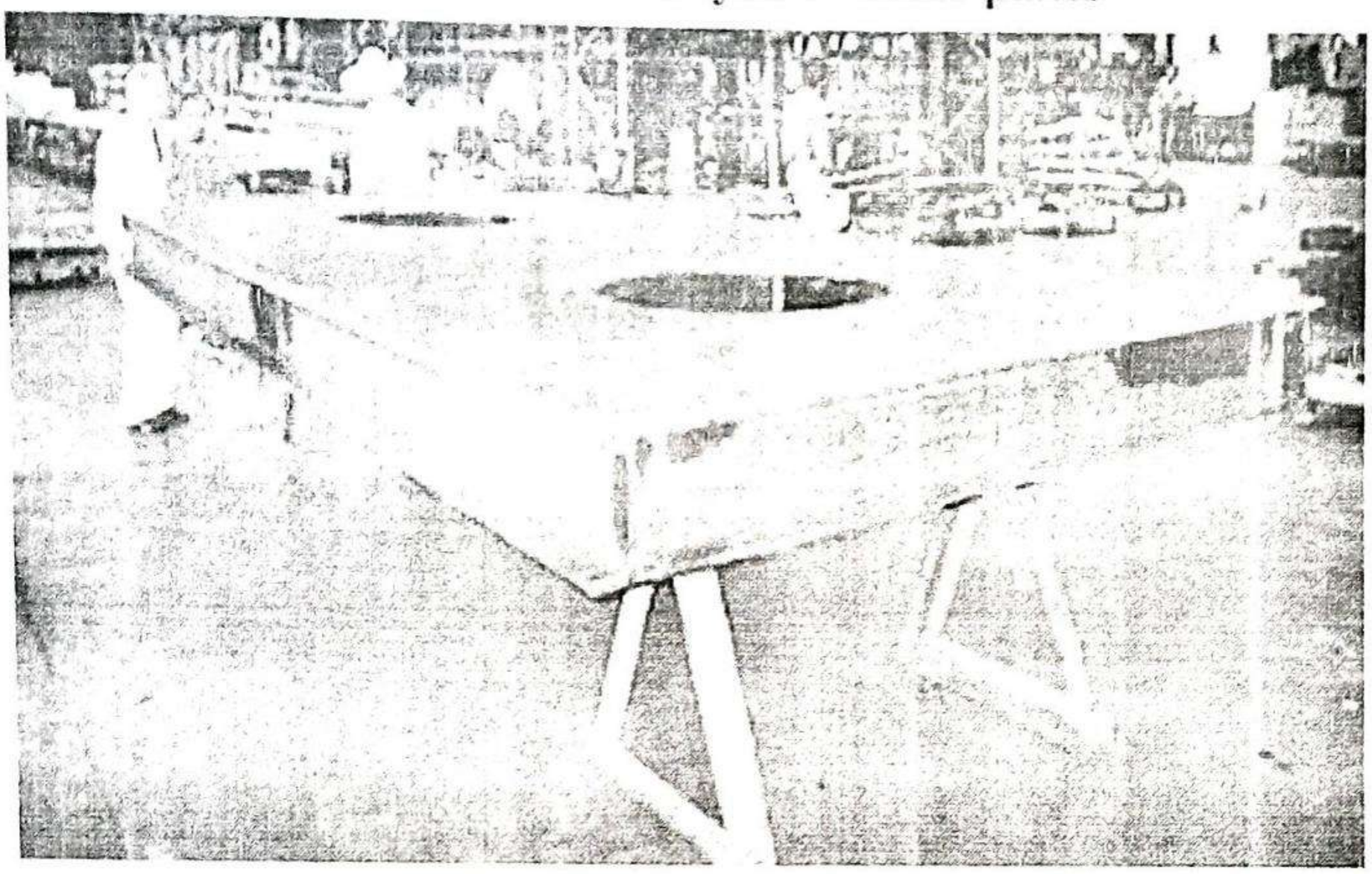


Fig 1 Steel structure of Boiler plates

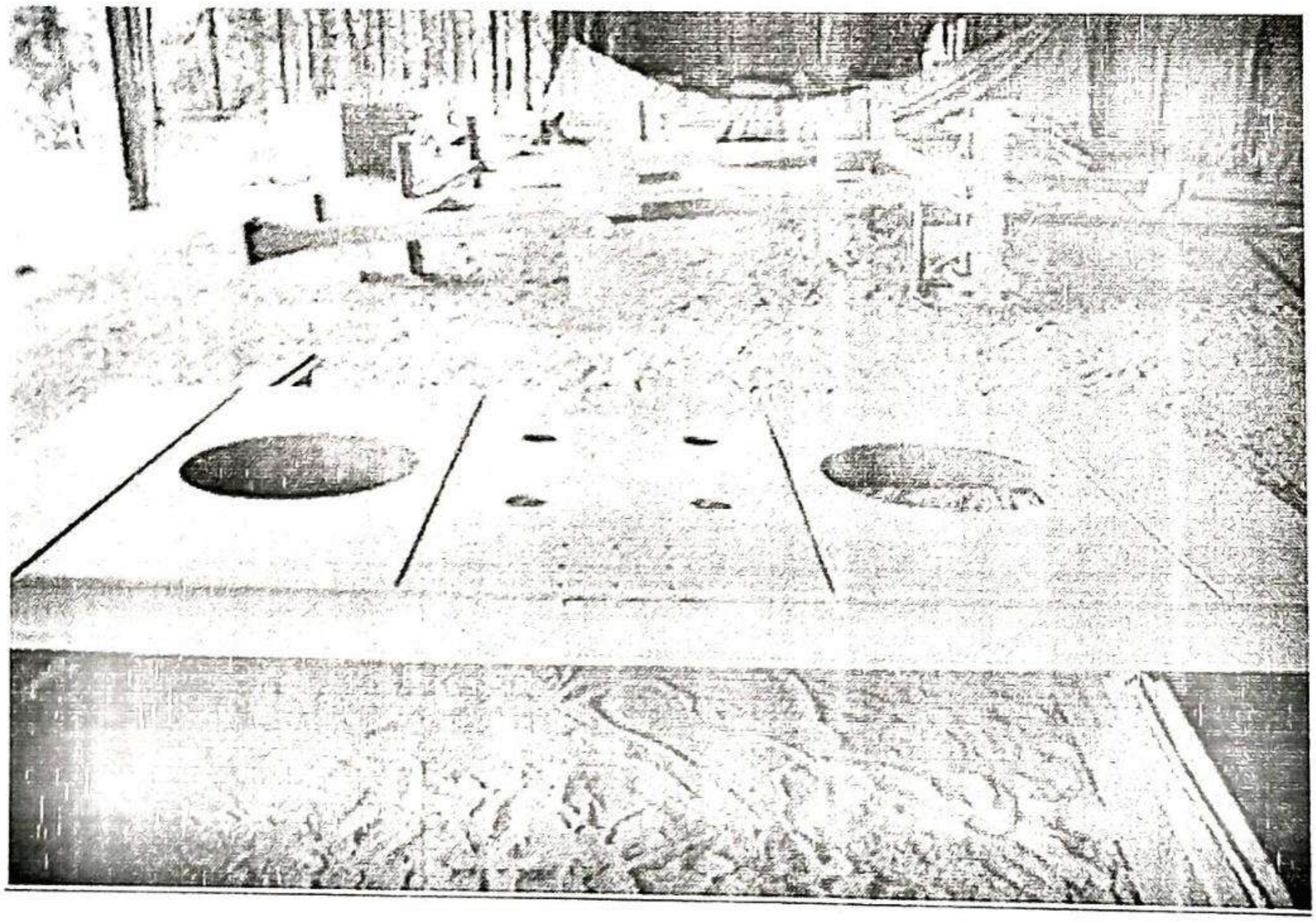
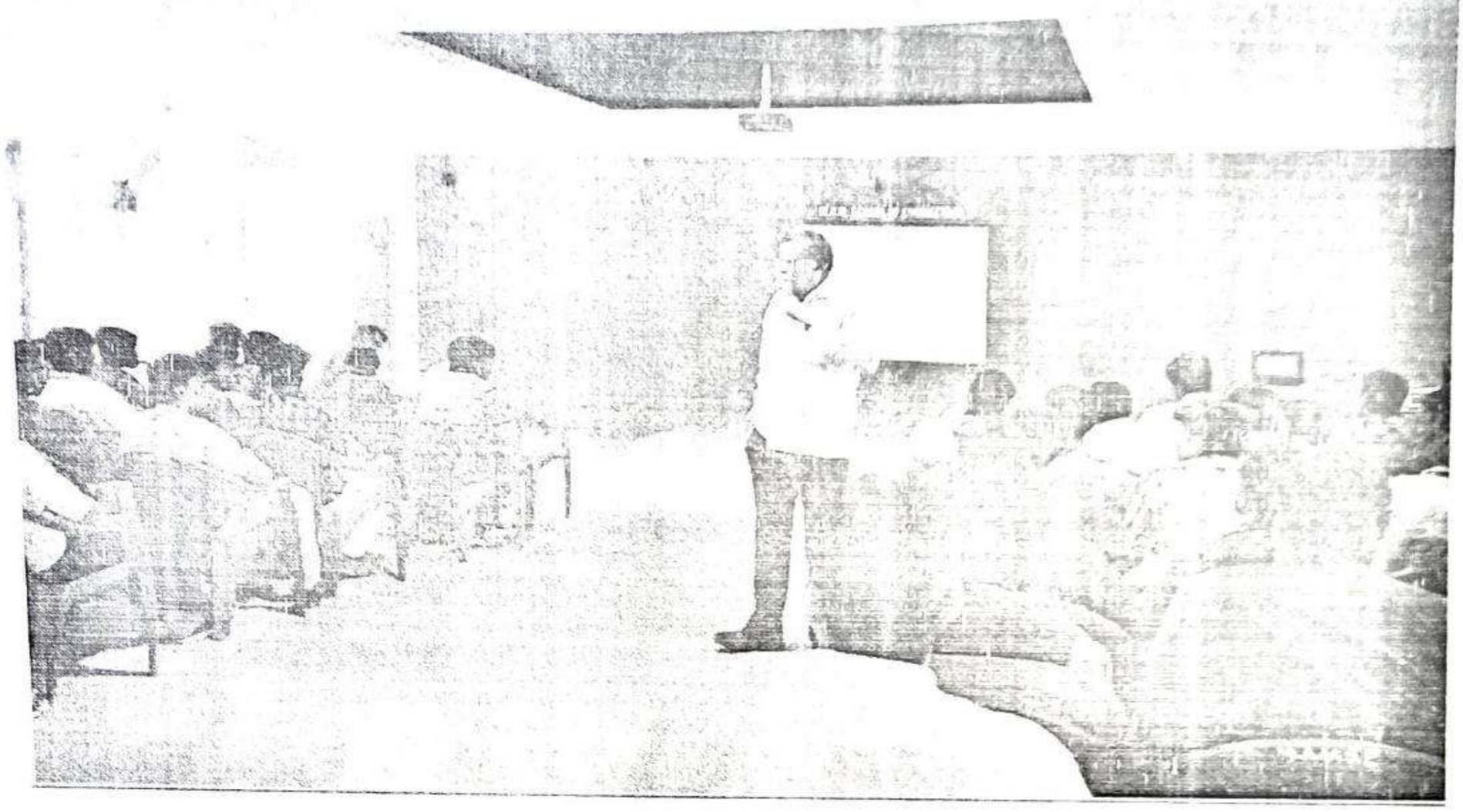


Fig 2 Wind box steel structure

PHOTO PROOF



Guest lecture on Pressure vessel design for mechanical equipment

Conclusion

Er.S.Kanthimathinathan had delivered the topic "Pressure vessel design for mechanical equipment" to department of Mechanical Engineering students on 28.012.2017 at Smart class, M.A.M. School of Engineering, Trichy. He covers the topics such as Mechanical design of Pressure vessels as per ASME, Drawing office practice for steel structure, Analysis and design of steel structure using software package. He also thought Fundamentals of steel specification, ASTM standard and Analysis of boiler structure. Finally teach the procedure of design of steel structure through power point presentation. It was very useful to Student and Faculty members to apply design procedure of steel structure as per ASME.

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title: Mechanical Design of Pressure vessels" **Date:** 28/12/17

Resource Person: Er. S. Kanthimathinathan **Time:** 2:00 PM → 4:00

Sl.No	Name of Student	Year of study	Feed back	Signature
32	S. Amarnath	III	very good information about design	S. Amarnath
33.	N. Ajithkumar.	III	very good information	N. Ajithkumar
34.	A Aron	III	very useful	
35.	T. Deepan kumar	III	Good information	T. Deepan kumar
36.	Aslam Shareef	III	Very useful	Aslam Shareef
37	A. Sathyanarayana	III	very good Information & useful	A. Sathyanarayana
38	C.S. Pavithran	III	Very good information	C.S. Pavithran
39	F. Azfardeen	III	very useful	F. Azfardeen
40	M. Sriram.	III	very useful for this class	M. Sriram
41	T. Arundale Babu	III	Good Information.	T. Arundale Babu
42	Ajith Kumar. D.K	III	useful information for this class.	Ajith Kumar. D.K
43	S Suthrish Raj	III	Good Information	S Suthrish Raj
44	M Dinesh	III	Very useful for the class	M. Dinesh
45	M. Bhavanesh	III	Good information	M. Bhavanesh
46	S. Raviarasan	III	very useful	S. Raviarasan
47.	A. Karthik Prabu	III	It is very useful to me	A. Karthik Prabu
48	M. Aron	III	very useful	M. Aron
49.	G. Dinesh Kumar	III	Useful to General Knowledge	G. Dinesh Kumar
50	S. Sayeebul	III	Design information gathering	S. Sayeebul
51	A M. Arthif	III	Not Best better	A M. Arthif

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / ~~Seminar/Workshop~~ /~~Training Program~~

Title: Mechanical Design of Pressure Vessels. **Date:** 28-12-17

Resource Person: Er. S. Kanthimathinathan. **Time :** 2:00PM: 4:00PM

Sl.No	Name of Student	Year of study	Feed back	Signature
1	BSHANMUGAM	II.	Very useful design oriented	B. Shanmugam
2	R.Sagaya Robinson	III	Very usefull	R. Sagaya Robinson
3	J. mohamed Asrig.	II	very very yeful	J. Mohamed Asrig
4.	A-Annarajan	III	VERY USEFUL	A. Annarajan
5.	R. Siva	III	very useful in Design oriented	R. Siva
6.	S. Surya.	III	more information Gethering	
7	K.kanagaraj	III	good information design gathering	K. Kanagaraj
8.	C. Sathish	III	Good Information & very useful	C. Sathish
9	T. Sarathkumar	III	Very Good Useful class & Design	T. Sarath
10	V. Joseph Vijayan	III	Very useful for Information's	V. Joseph Vijayan
11	NITHIN-PH	III	GOOD INFORMATION	
12.	M. Pasupathi Bose	III	nice Information	M. Pasupathi Bose
13	C. Rajasekaran	III	Good information pressure vessel	C. Rajasekaran
14.	B. Praveenkumar	III	excelent words to Speakers	
15.	A. Prabhakaran.	III	good information, useful in my future	A. Prabhakaran
16	G. Shanmugam	III	Good Information	
17.	M. Jayakumar	III	Use full in feature.	M. Jayakumar
18	S. UKESHKUMAR	III	Good information	S. Ukesh
19	Gowsik-P	III	very Useful Class & Information's	
20	P. Ramu	III	VERY USEFUL	Ramu
21	A. Mohamed Azeerdeen	III	nice explination in Designing	A. Mohamed Azeerdeen
22.	A. Mohamed Ismail	III rd	Very useful	
23	A. Sadham Hussain	III rd year	very useful	A. Sadham
24.	D. Silambarasan.	III rd yr	Good	
25.	S. Sakthivel	III rd yr	Good Information	S. Sakthivel
26	V. Balasubramanian	III rd yr	very use full of the my job for design	V. Bala
27	A. Kalimurugan	III rd mech	Speech was very Good. I will understand	
28.	R. Vignesh.	III rd mech	Good Information, very useful.	R. Vignesh
29	K. Jesu	III mech	Excelent class, good teaching	K. Jesu
30	M. KANAVIARAJ	III yr	very use full	M. Kanaviaraj
31.	M. Deepak Ruban	III - year main	good Information & useful	M. Deepak

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Guest Lecture / ~~Seminar/Workshop /Training Program~~

Title: "Mechanical Design of Pressure vessels" **Date:** 28/12/17

Resource Person: Er. S. Ganthimathinathan **Time :** 2:00 PM - 4:00 PM

Sl.No	Name of Faculty Member	Department	Feed back	Signature
1.	R. PRADEEPRAJ	Mechanical	useful information	
2	D. S. Vidhya Sagar	Mechanical	helpful topic	
3.	K. PARTHIBAN	Mechanical	Useful topic	
4	P. SELVAKUMAR	Mechanical	Additional topics from syllabus	28/12/17

Coordinator 29/12/17 **HOD** 29/12 **Principal**

M.A.M SCHOOL OF ENGINEERING
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(ISO 9001:2000 accredited)

Guest Lecture Report
On
"Applications of Engineering Thermodynamics"

11.09.2017

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COMPILED BY

H.O.D/Mechanical

Head of the Department
Mechanical Engineering
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PRINCIPAL

PRINCIPAL
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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Second Year students and Faculty members of the department activity of Guest lecture programme on "**Applications of Engineering Thermodynamics**" at Seminar Hall, M.A.M School of Engineering between 9.00 pm – 1.00 pm on 11.09.2017.

Venue: Seminar Hall

Resource Person:

Mr.N.Ramasubbu,
Assistant Professor.
Department of Mechanical Engineering,
Government College of Engineering,
Srirangam,
Tiruchirappalli.

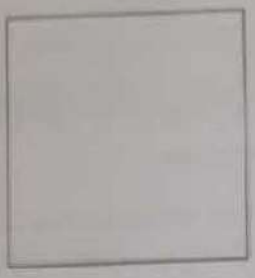
Email:

Phone No: 0431 2906635
Mobile Number: 9994480478

GUEST PROFILE

RESOURCE PERSON:

Mr.N.Ramasubbu,
Assistant Professor,
Department of Mechanical Engineering,
Government College of Engineering,
Srirangam,
Tiruchirappalli.



Email:

Phone No: 0431 2906635

Mobile Number: 9994480478

PROGRAMME DETAILS

Mr.N.Ramasubbu, *Assistant Professor, Government college of Engineering* gave a Guest lecture about **"Applications of Engineering Thermodynamics"** at M.A.M School of Engineering on 11.09.2017. He discussed more information about the Basics of Thermodynamics, Applications of Thermodynamics, Thermodynamic laws, Enthalpy , Entropy changes and Heat engines 53 students and 4 Faculty members are attended.

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Applications of Engineering Thermodynamics "
- Power point presentation of Applications of Thermodynamics
- Video session.
- Vote of Thanks

3

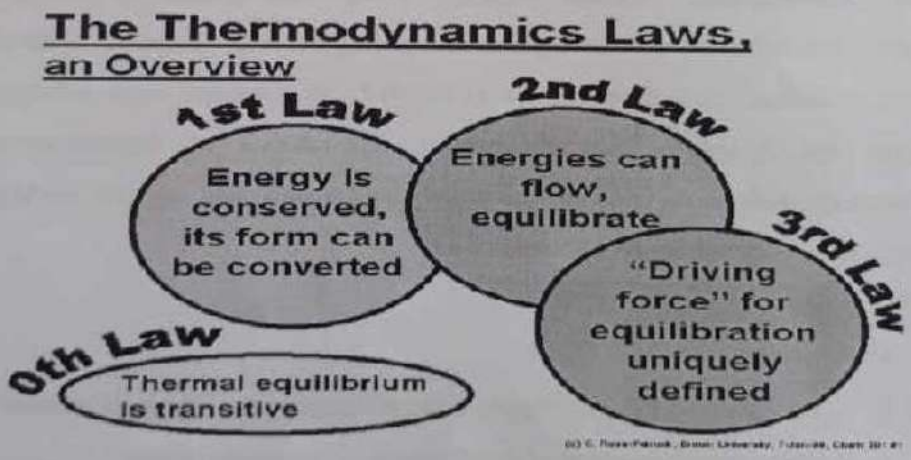
1. LAWS OF THERMODYNAMICS

The four **laws of thermodynamics** define fundamental physical quantities (temperature, energy, and entropy) that characterize thermodynamic systems at thermal equilibrium. The laws describe how these quantities behave under various circumstances, and forbid certain phenomena (such as perpetual motion).

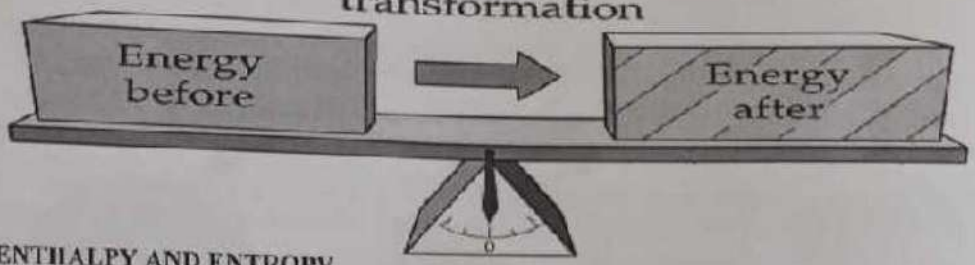
The four laws of thermodynamics are

Zeroth law of thermodynamics: If two systems are in thermal equilibrium with a third system, they are in thermal equilibrium with each other. This law helps define the notion of temperature.

- First law of thermodynamics: When energy passes, as work, as heat, or with matter, into or out from a system, the system's internal energy changes in accord with the law of conservation of energy. Equivalently, perpetual motion machines of the first kind(machines that produce work without the input of energy) are impossible.
- Second law of thermodynamics: In a natural thermodynamic process, the sum of the entropies of the interacting thermodynamic systems increases. Equivalently, perpetual motion machines of the second kind (machines that spontaneously convert thermal energy into mechanical work) are impossible.
- Third law of thermodynamics: The entropy of a system approaches a constant value as the temperature approaches absolute zero. With the exception of non-crystalline solids (glasses) the entropy of a system at absolute zero is typically close to zero, and is equal to the natural logarithm of the product of the quantum ground states.



(a) The First Law of Thermodynamics



2. ENTHALPY AND ENTROPY

Enthalpy, H , is the sum of internal energy U of a system and the product of the pressure and change in volume of the system at a constant pressure. **Entropy**, S , is a measure of the disorder or randomness of a system. As it happens, **enthalpy** and **entropy** changes in a reaction are partly **related** to each other. The reason for this relationship is that if energy is added to or released from the system, it has to be partitioned into new states. Thus, an **enthalpy** change can also have an effect on **entropy**

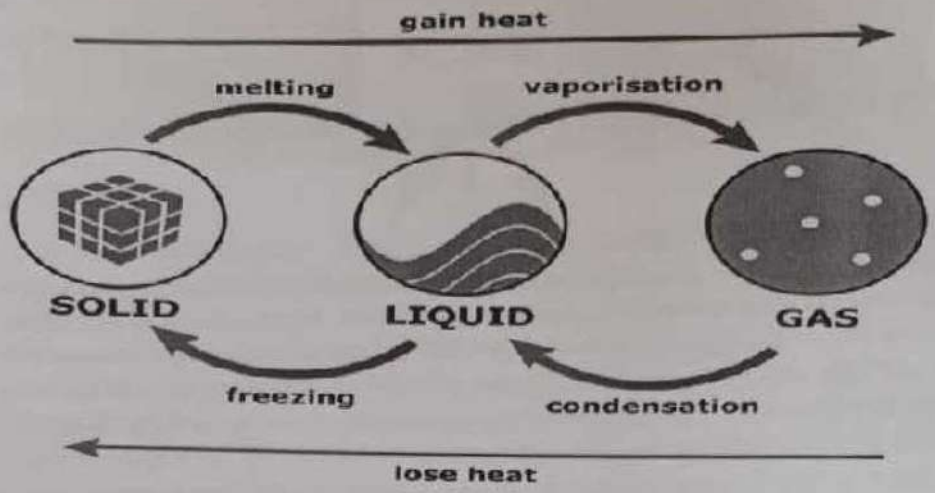
Enthalpy is defined as a state function that depends only on the prevailing equilibrium state identified by the system's internal energy, pressure, and volume. It is an extensive quantity. The unit of measurement for enthalpy in the International System of Units (SI) is the joule, but other historical, conventional units are still in use, such as the British thermal unit and the calorie.

Enthalpy is the preferred expression of system energy changes in many chemical, biological, and physical measurements at constant pressure, because it simplifies the description of energy transfer. At constant pressure, the enthalpy change equals the energy transferred from the environment through heating or work other than expansion work.

The total enthalpy, H, of a system cannot be measured directly. The same situation exists in classical mechanics: only a change or difference in energy carries physical meaning. Enthalpy itself is a thermodynamic potential, so in order to measure the enthalpy of a system, we must refer to a defined reference point; therefore what we measure is the change in enthalpy, ΔH. The ΔH is a positive change in endothermic reactions, and negative in heat-releasing exothermic processes.

For processes under constant pressure, ΔH is equal to the change in the internal energy of the system, plus the pressure-volume workthat the system has done on its surroundings.[3] This means that the change in enthalpy under such conditions is the heat absorbed (or released) by the material through a chemical reaction or by external heat transfer. Enthalpies for chemical substances at constant pressure assume standard state: most commonly 1 bar pressure. Standard state does not, strictly speaking, specify a temperature (see standard state), but expressions for enthalpy generally reference the standard heat of formation at 25 °C.

Enthalpy of ideal gases and incompressible solids and liquids does not depend on pressure, unlike entropy and Gibbs energy. Real materials at common temperatures and pressures usually closely approximate this behavior, which greatly simplifies enthalpy calculation and use in practical designs and analyses.



In thermodynamics, a **heat engine** is a system that converts**heat** or thermal energy—and chemical energy—to mechanical energy, which can then be used to do mechanical work. It does this by bringing a working substance from a higher state temperature to a lower state temperature. A **heat engine** is a system that converts heat or thermal energy—and chemical energy—to mechanical energy, which can then be used to do mechanical work.[1][2] It does this by bringing a working substance from a higher state temperature to a lower state temperature. A heat "source" generates thermal energy that brings the working substance to the high temperature state. The working substance generates work in the "working body" of the engine while transferring heat to the colder "sink" until it reaches a low temperature state. During this process some of the thermal energy is converted into work by exploiting the properties of the working substance. The working substance can be any system with a non-zero heat capacity, but it usually is a gas or liquid. During this process, a lot of heat is lost to the surroundings, i.e. it cannot be used.

In general an engine converts energy to mechanical work. Heat engines distinguish themselves from other types of engines by the fact that their efficiency is fundamentally limited by Carnot's theorem.[3] Although this efficiency limitation can be a drawback, an advantage of heat engines is that most forms of energy can be easily converted to heat by processes like exothermic reactions (such as combustion), absorption of light or energetic particles, friction, dissipation and resistance. Since the heat source that supplies thermal energy to the engine can thus be powered by virtually any kind of energy, heat engines are very versatile and have a wide range of applicability.Heat engines are often confused with the cycles they attempt to implement. Typically, the term "engine" is used for a physical device and "cycle" for the model.

3.AIR CONDITIONING

Air conditioning (often referred to as AC, A.C., or A/C) is the process of removing or adding heat from/to a space, thus coolingor heating the space's average temperature.Air conditioning can be used in both domestic and commercial environments. This process is most commonly used to achieve a more comfortable interior environment, typically for humans or animals; however, air conditioning is also used to cool/dehumidify rooms filled with heat-producing electronic devices, such as computer servers, power amplifiers, and even to display and store artwork.

Air conditioners often use a fan to distribute the conditioned air to an occupied space such as a building or a car to improve thermal comfort and indoor air quality. Electric refrigerant-based AC units range from small units that can cool a small bedroom, which can be carried by a single adult, to massive units installed on the roof of office towers that can cool an entire building. The cooling is typically achieved through a refrigeration cycle, but sometimes evaporation or free cooling is used. Air conditioning systems can also be made based on desiccants (chemicals which remove moisture from the air) and subterraneous pipes that can distribute the heated refrigerant to the ground for cooling.

PHOTO PROOF

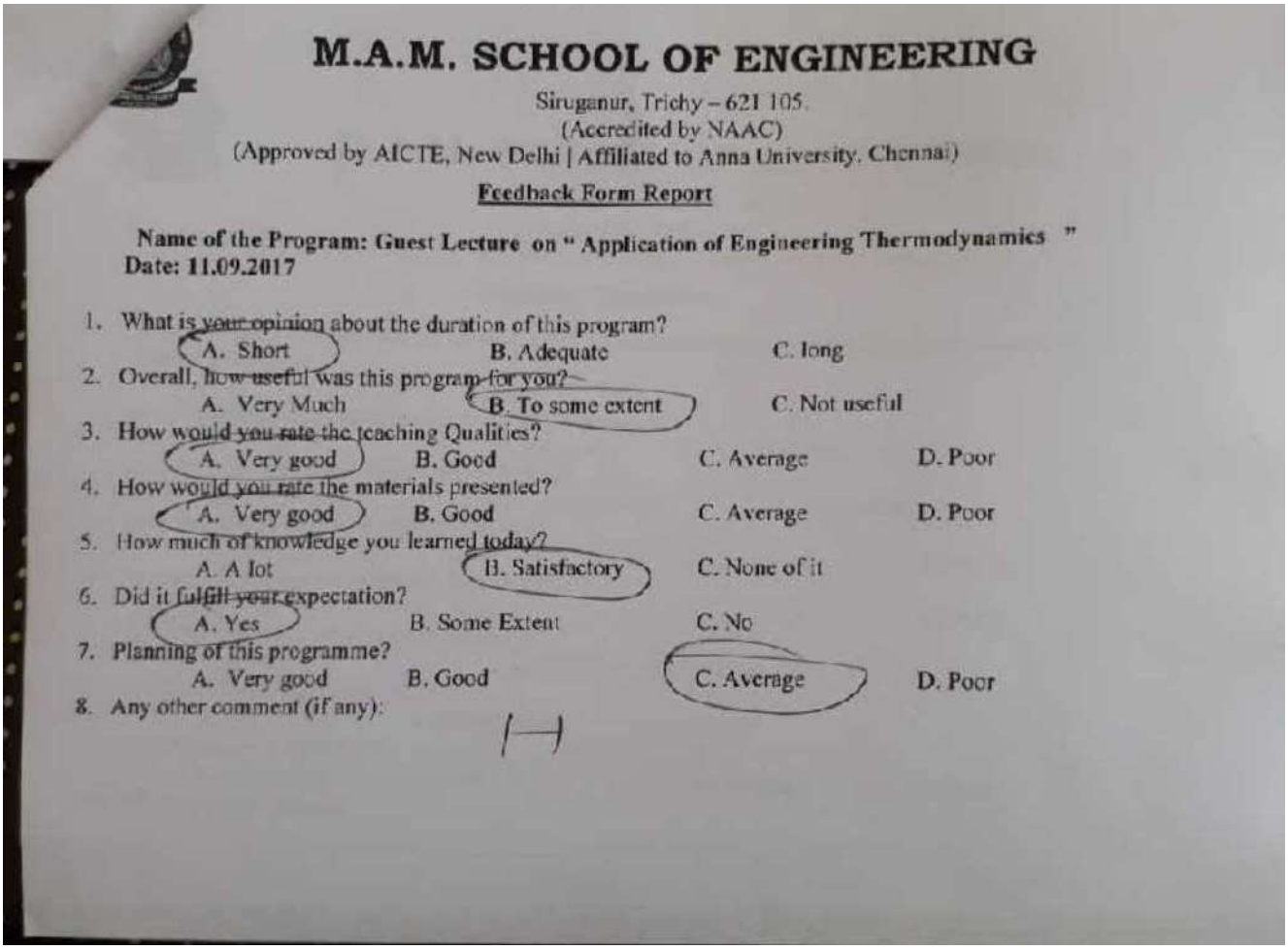
Guest Lecture on Applications of Engineering Thermodynamics

Presentation of Applications Thermodynamics By Prof S.Ramasubbu

8

Conclusion

Mr.S.Rama subbu, Assistant Professor, Government College of Engineering, had delivered the topic **"Applications of Engineering Thermodynamics"** to Department of Mechanical Engineering students on 11.09.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He covers all the topics such as Introduction to Engineering Thermodynamics, Thermodynamic laws, Enthalpy, Entropy and Heat Engines. He also delivers the principles and Examples of thermodynamic laws and Heat transfer modes. Finally Video sessions are presented for corresponding thermodynamic process.



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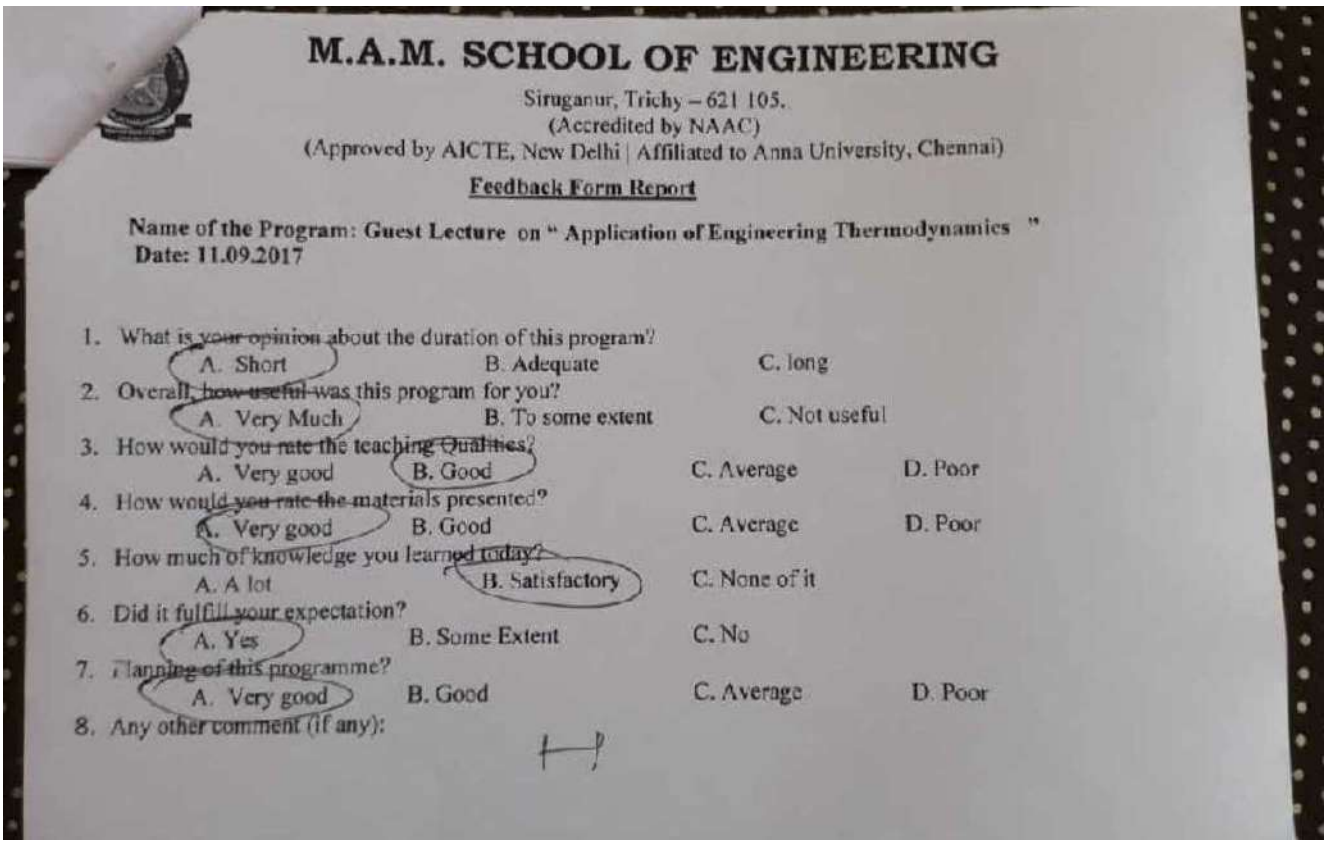
Feedback Form Report

Name of the Program: Guest Lecture on " Application of Engineering Thermodynamics "
Date: 11.09.2017

1. What is your opinion about the duration of this program?
   A. Short B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory C. None of it
6. Did it fulfil your expectation?
   A. Yes B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good C. Average D. Poor
8. Any other comment (if any):



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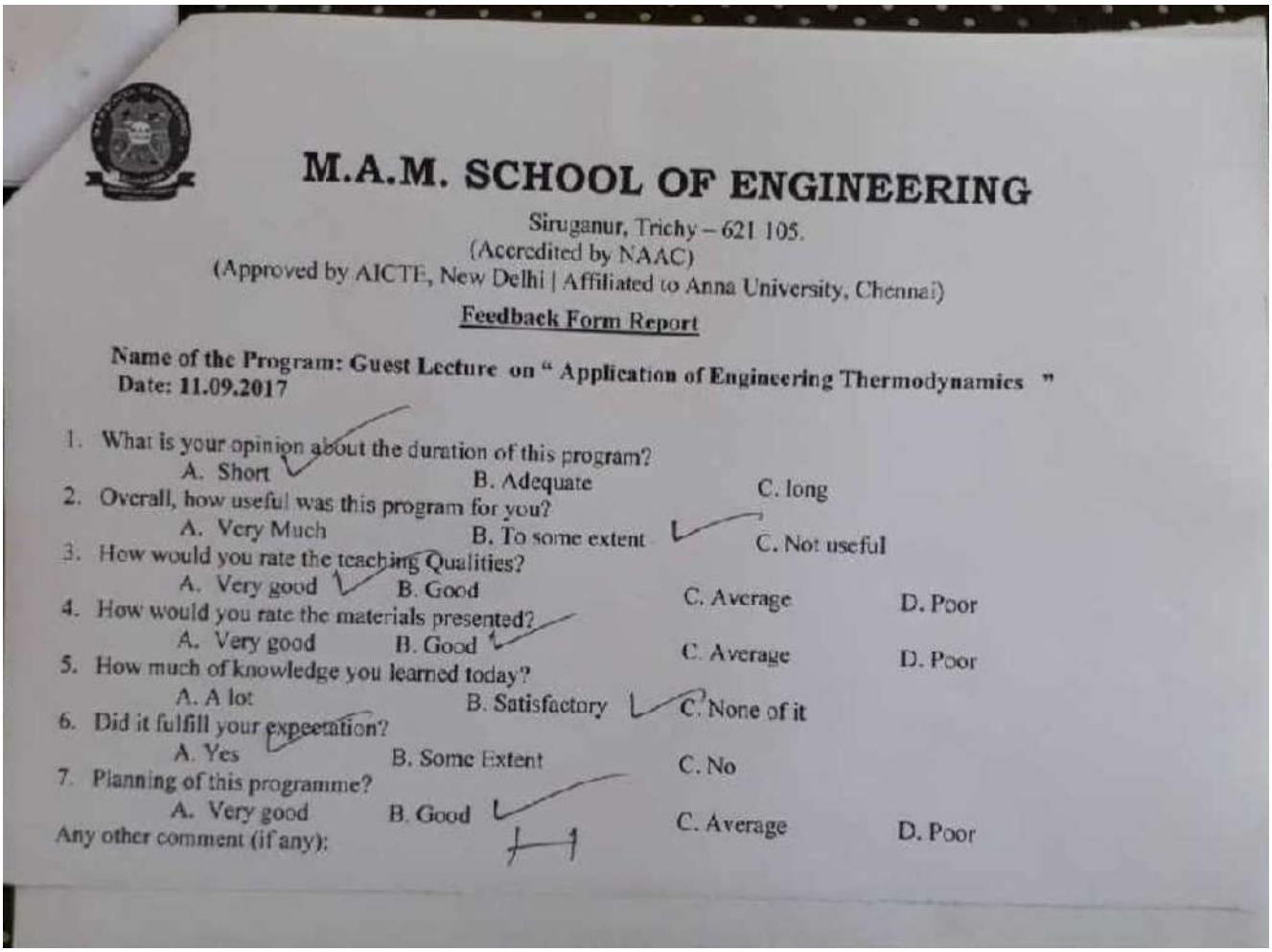
Any other comment (if any):



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Feedback Form Report

Name of the Program: Guest Lecture on " Application of Engineering Thermodynamics "
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Any other comment (if any):

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.
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Guest Lecture Report
On
"Advances in Non Destructive Testing"

04.09.2017

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COMPILED BY

H.O.D/Mechanical

Head of the Department
Mechanical Engineering
M.A.M. School of Engineering
Siruganur, Trichy-621 105.

PRINCIPAL

PRINCIPAL
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SIRUGANUR, TIRUCHIRAPPALLI-621 105.

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INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity of Guest lecture programme on **"Advances in Non Destructive Testing"** at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.30 pm on 04.09.2017.

Venue: Seminar Hall

Resource Person:

Er.C.Ramasamy,
Senior Engineer – NDT,
A Plus NDT Services,
Chatram Bus, stand
Trichy 621 002.

Email: info.aplusndt@gmail.com

Phone No: 0431-4010666
Mobile Number: 8220053888
www.aplusndt.com

2

GUEST PROFILE

RESOURCE PERSON:

Er.C.Ramasamy,

Senior Engineer – NDT,
A Plus NDT Services,
Chatram Bus, stand
Trichy 621 002.

Email: info.aplusndt@gmail.com

Phone No: 0431-4010666

Mobile Number: 8220053888

www.aplusndt.com

PROGRAMME DETAILS

Er.C.Ramasamy, *Senior Service Engineer-NDT service, A plus NDT,* gave a brief lecture about "**Advances in Non Destructive Test** " at M.A.M School of Engineering on 04.09.2017. He discussed more information about the Basics of Materials Test, Need of Non Destructive test, Types of Non Destructive test, Methods of NDT, Job Opportunity of NDT, Totally 40 students and 3 Faculty members are attended.

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Advances in Non Destructive "
- Demonstration of Non Destructive Testing.
- Power point presentation of Non Destructive Testing.
- Video session.
- Vote of Thanks

PHOTO PROOF

Guest Lecture on Advances in NDT Techniques

Presentation of Advances in NDT by Er.C.Ramaasmy

4

1. Basics of material Testing

Mechanical testing reveals the properties of a material when force is applied dynamically or statically. A mechanical test shows whether a material or part is suitable for its intended application by measuring properties such as elasticity, tensile strength, elongation, hardness, fracture toughness, impact resistance, stress rupture and the fatigue limit. experts use a wide range of methods and devices to run comprehensive mechanical testing programs for our clients in Aerospace, Automotive, Biomedical, Commercial, Oil & Gas, Primary metals, Construction, as well as other industry sectors. The instruments and machinery you'll find in an Element mechanical testing lab include universal test machines, microhardness testing and hardness testing machines, bend and fatigue machines, as well computers featuring programmable software. Mechanical testing measures the strength and ductility of materials under various conditions, such as temperature, tension, compression and load. LTI performs the testing and can prepare test specimens for all types of mechanical testing including proof load, stress rupture, charpy impact, yield, bend, hardness, and much more.

2. Need for material Testing

Materials Testing is a highly precise and reliable set of processes that measure material characteristics, such as properties, structure and composition, against specified criteria. The data and test results determine whether materials, fasteners and treatments meet the requirements of design engineers and regulatory agencies, and are suitable for their intended application. At Laboratory Testing Inc., material testing and inspection includes our destructive testing methods – mechanical, chemical, metallurgical and fracture mechanics testing. Although **Metal and Alloy Testing is our specialty**, Laboratory Testing Inc. also offers some material testing services for polymers and ceramics.

3. Methods Material Testing

Tensile Test: Tensile testing is also known as tension testing. It is a fundamental materials science test in which a sample is subjected to a controlled tension until failure. The results from the test are commonly used to select a material for an application, for quality control, and to predict how a material will react under normal forces. Properties that are directly measured via a tensile test are ultimate tensile strength, maximum elongation and reduction in area. From these measurements the following properties can also be determined: Young's modulus, Poisson's ratio, yield strength, and strain-hardening characteristics. Uniaxial tensile testing is the most commonly used for obtaining the mechanical characteristics of isotropic materials. For anisotropic materials, such as composite materials and textiles, biaxial tensile testing is required. Tensile Tests are performed for several reasons. The results of tensile tests are used in selecting materials for engineering applications. Tensile properties frequently are included in material specifications to ensure quality. Tensile properties often are measured during development of new materials and processes, so that different materials and processes can be compared. Finally, tensile properties often are used to predict the behavior of a material under forms of loading other than uniaxial tension. The strength of a material often is the primary concern. The strength of interest may be

measured in terms of either the stress necessary to cause appreciable plastic deformation or the maximum stress that the material can withstand. These measures of strength are used, with appropriate caution (in the form of safety factors), in engineering design. Also of interest is the material's ductility, which is a measure of how much it can be deformed before it fractures. Rarely is ductility incorporated directly in design; rather, it is included in material specifications to ensure quality and toughness. Low ductility in a tensile test often is accompanied by low resistance to fracture under other forms of loading. Elastic properties also may be of interest, but special techniques must be used to measure these properties during tensile testing, and more accurate measurements can be made by ultrasonic techniques. This chapter provides a brief overview of some of the more important topics associated with tensile testing.

During metal tension tests, we subject your metal or alloy sample to uniaxial tension until the point of failure. This metal strength testing is used to assess:

Ultimate tensile strength
Peak stress
Yield strength
Reduction of area
Elongation
Ductility

Compression Test: Compression strength is the capacity of a material or structure to withstand loads tending to reduce size, as opposed to tensile strength, which withstands loads tending to elongate. In other words, compressive strength resists compression (being pushed together), whereas tensile strength resists tension (being pulled apart). In the study of strength of materials, tensile strength, compressive strength, and shear strength can be analyzed independently.Some materials fracture at their compressive strength limit; others deform irreversibly, so a given amount of deformation may be considered as the limit for compressive load. Compressive strength is a key value for design of structures. Compressive strength is often measured on a universal testing machine; these range from very small table-top systems to ones with over capacity Measurements of compressive strength are affected by the specific test method and conditions of measurement. Compressive strengths are usually reported in relationship to a specific technical standard.

4. Material Testing standards

ASTM's nondestructive testing standards provide guides for the appropriate methods and techniques used to detect and evaluate flaws in materials and objects without destroying the specimen at hand. Such tests include radiographic, ultrasonic, electromagnetic (eddy-current), X-ray, acoustic, and topographic techniques. Detected flaws are evaluated for possible rejection due to nonconformance to set acceptance criteria. These nondestructive testing standards are instrumental to laboratories and a wide variety of industrial plants for examining a material's quality and, consequently, suitability for intended use

Liquid (Dye) penetrate method: Liquid penetrates inspection (LPI) is one of the most widely used nondestructive evaluation (NDE) methods. Its popularity can be attributed to

two main factors, which are its relative ease of use and its flexibility. The technique is based on the ability of a liquid to be drawn into a "clean" surface breaking flaw by capillary action. . This method is an inexpensive and convenient technique for surface defect inspection. The limitations of the liquid penetrate technique include the inability to inspect subsurface flaws and a loss of resolution on porous materials. Liquid penetrate testing is largely used on nonmagnetic materials for which magnetic particle inspection is not possible. Materials that are commonly inspected using LPI include the following; metals (aluminum, copper, steel, titanium, etc.), glass, many ceramic materials, rubber, plastics. Liquid penetrate inspection is used to inspect of flaws that break the surface of the sample. Some of these flaws are listed below; fatigue cracks, quench cracks grinding cracks, overload and impact fractures, porosity, laps seams, pin holes in welds, lack of fusion or braising along the edge of the bond line.

Magnetic particle inspection is one of the simple, fast and traditional nondestructive testing methods widely used because of its convenience and low cost. This method uses magnetic fields and small magnetic particles, such as iron filings to detect flaws in components. The only requirement from an inspect ability standpoint is that the component being inspected must be made of a ferromagnetic material such iron, nickel, cobalt, or some of their alloys, since these materials are materials that can be magnetized to a level that will allow the inspection to be effective. On the other hand, an enormous volume of structural steels used in engineering is magnetic. In its simplest application, an electromagnet yoke is placed on the surface of the part to be examined, a kerosene-iron filling suspension is poured on the surface and the electromagnet is energized. If there is a discontinuity such as a crack or a flaw on the surface of the part, magnetic flux will be broken and a new south and north pole will form at each edge of the discontinuity. Then just like if iron particles are scattered on a cracked magnet, the particles will be attracted to and cluster at the pole ends of the magnet, the iron particles will also be attracted at the edges of the crack behaving poles of the magnet. This cluster of particles is much easier to see than the actual crack and this is the basis for magnetic particle inspection. For the best sensitivity, the lines of magnetic force should be perpendicular to the defect.

Conclusion

Er.C.Ramasamy,Engineer, had delivered the topic "Advances in Non Destructive Testing " to Department of Mechanical Engineering students on 04.09.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He covers all the topics such as Introduction to Material Testing, Methods of Materials testing, Need for Material Testing, Material Testing Procedure, Various types of material Testing, Magnetic Particles Test and Dye Penetrating Test. He also thought testing procedures and ISO testing methods, ASME, ASTM methods and various Inspection techniques. He demonstrates the method of Dye penetrating and Magnetic Particles test procedure. It was very useful to students and faculty members of Mechanical Engineering department. Finally power point and Videos presentation show to the student to describe the working principle and testing Procedure of NDT test.

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Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Lecture on " Advances in Non Destructive Testing "
Date: 04.09.2017

1. What is your opinion about the duration of this program?
   A. Short B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
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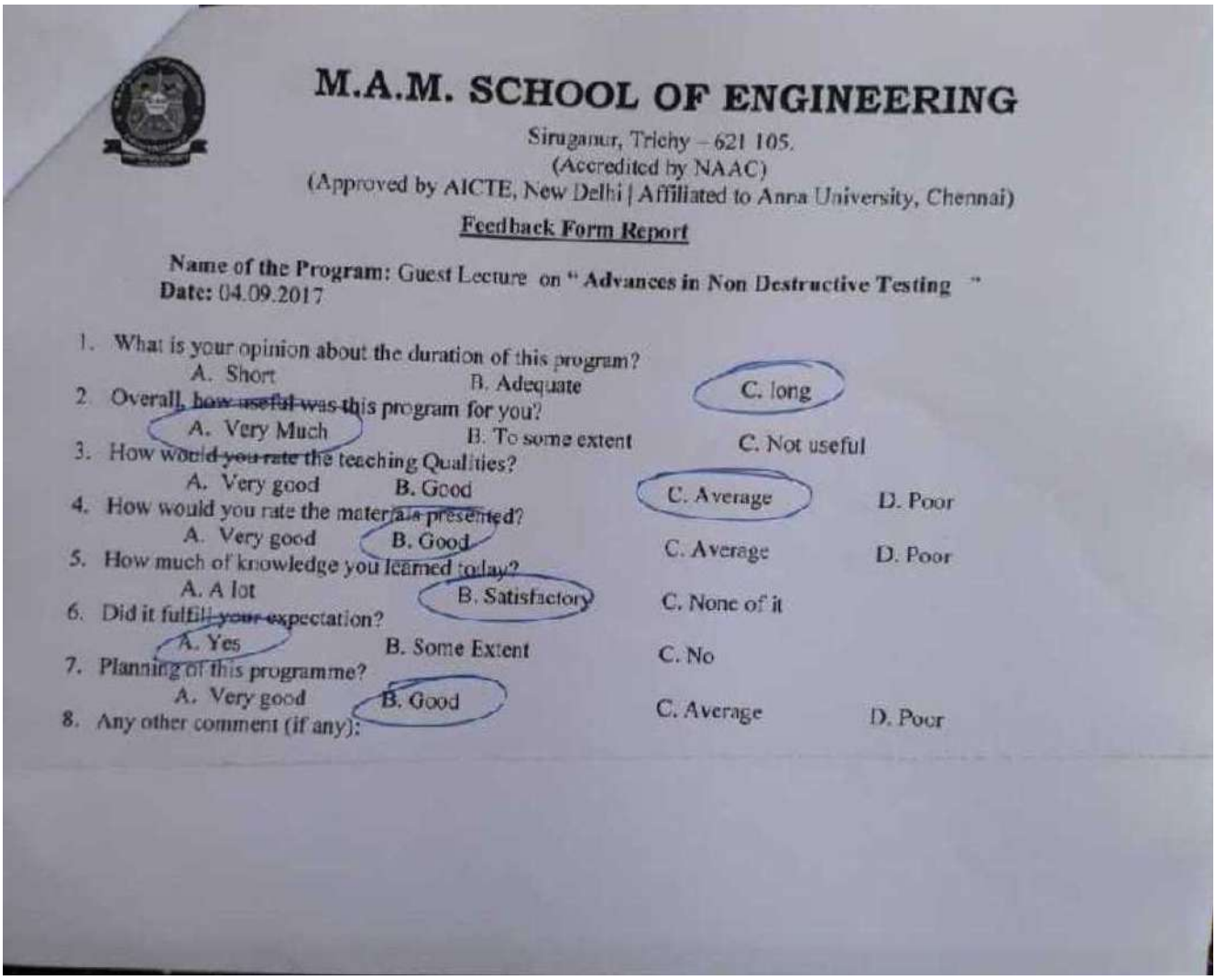
Any other comment (if any):



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Siruganur, Trichy – 621 105.
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M.A.M. SCHOOL OF ENGINEERING

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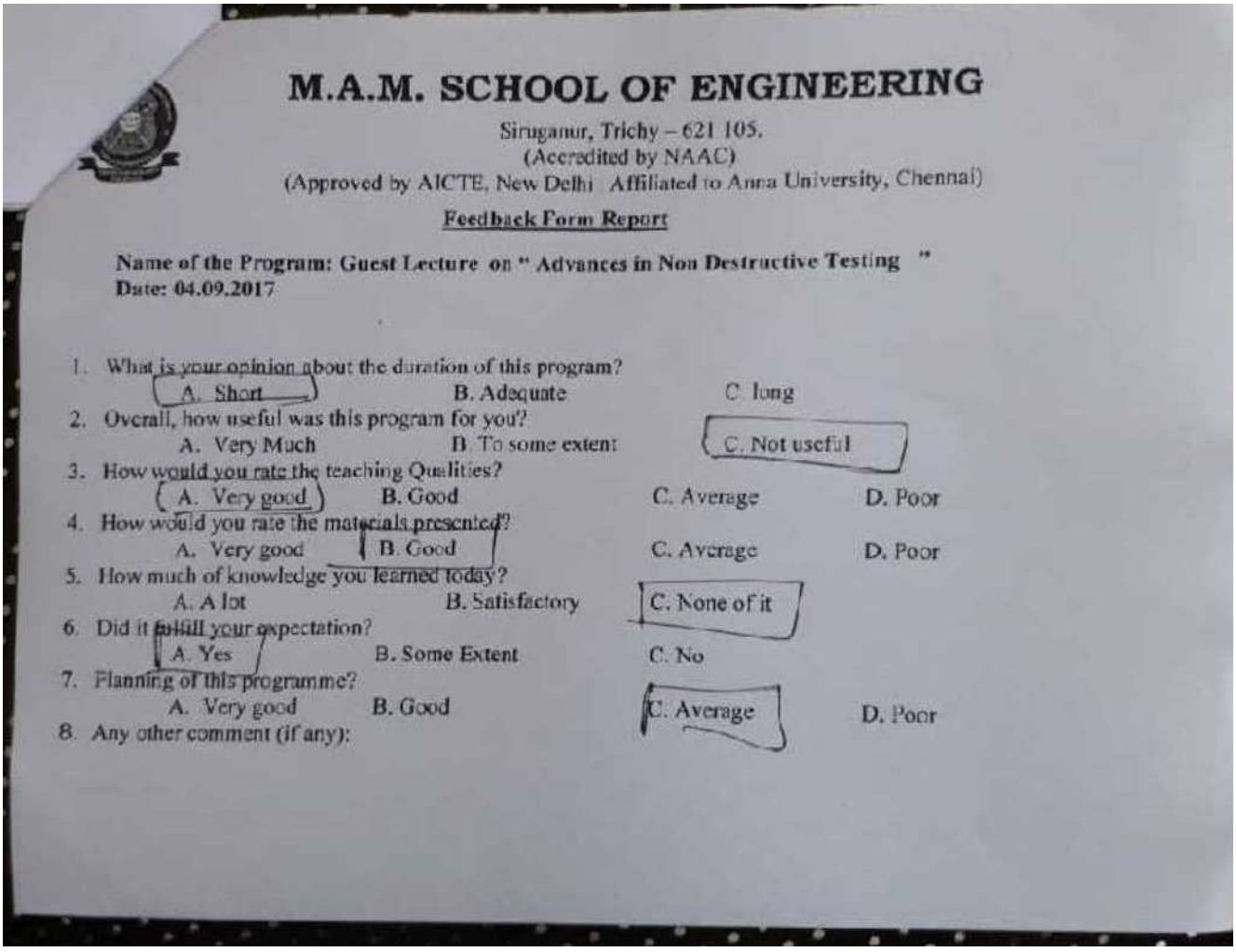

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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8. Any other comment (if any):

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.
(ISO 9001:2000 accredited)

Guest Lecture Report
On
"Introduction to Automotive Technology"

28.08.2017

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COMPILED BY

Head of the Department
Mechanical Engineering
M.A.M. School of Engineering
Siruganur, Trichy-621 105.

PRINCIPAL
M.A.M. SCHOOL OF ENGINEERING

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution
Approved by AICTE, New Delhi Affiliated to Anna University, Chennai
Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invitesThird Year students and Faculty members of the department activity of Guest lecture programme on **"Introduction to Automotive Technology"** at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.30 pm on 28.08.2017.

Venue: Seminar Hall

Resource Person:

Er.Xavier Jaganathan
General Manager,
Goodwin Motors,
Padappai,
Chennai - 601 301.

Email: goodwinmotors@gmail.com

Phone No: ----------

Mobile Number: 9884904374

GUEST PROFILE

RESOURCE PERSON:

Er.Xavier Jaganathan
General Manager,
Goodwin Motors,
Padappai,
Chennai - 601 301.

Email: goodwinmotors@gmail.com

Phone No: ----------

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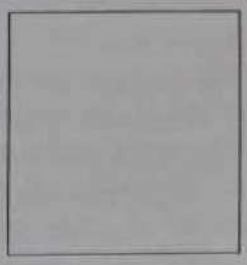


PROGRAMME DETAILS

Er.Xavier Jaganathan, *General Manager, Goodwin Motors* gave a brief lecture about **"Introduction to Automotive Technology"** at M.A.M School of Engineering on 28.08.2017. He discussed more information about the Basics of Automotive Engineering, Need of Automotive system, Types automobile engines, Service methods of Automobile engines, Importance of two where and 4 wheeler service, Job opportunities for Automobile engineers, Totally 46 students and 3 Faculty members had attended this Program .

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Introduction to Automotive Technology"
- Demonstration of Automobile system and Engines.
- Power point presentation of Automotive technology
- Video session.
- Vote of Thanks

Automobile Engineering: Automobile engineering, along with aerospace engineering and marine engineering, is a branch of vehicle engineering, incorporating elements of mechanical, electrical, electronic, software and safety engineering as applied to the design, manufacture and operation of motorcycles, automobiles and trucks and their respective engineering subsystems. It also includes modification of vehicles. Manufacturing domain deals with the creation and assembling the whole parts of automobiles is also included in it. The automotive engineering field is research -intensive and involves direct application of mathematical models and formulas. The study of automotive engineering is to design, develop, fabricate, and testing vehicles or vehicle components from the concept stage to production stage. Production, development, and manufacturing are the three major functions in this field. Automobile Engineering is mainly divided into three streams such as production or design engineering focuses on design components, testing of parts, coordinating tests, and system of a vehicle

Service method of Automobile Engineering

Engine Noise: use a mechanic's stethoscope or chassis ears to identify where the noise is coming from. If the noise is coming from the top of the engine, for example, if a repetitive tapping noise is heard, this usually signifies a problem with the valve train. If the sound seems to be coming from the middle of the engine, perhaps making a light knocking noise, this can be due to piston carbon buildup. If the sound is coming from the bottom of the engine, and makes a very deep knocking noise. this signifies problems inside the engine block i.e. broken piston, thrown rod, spun bearing, and so on. If the sound is coming from the rear of the engine, it may be the flex plate has cracked. The noise is hard to hear at idle, but gets more noticeable the more load is put on the engine. Engine Vibration: Good engine mounts are meant to isolate engine vibrations from the rest of the vehicle. If any of these mounts are damaged. these engine vibrations can usually be felt by the driver and/or passengers.

Excessive Oil Consumption: this can be diagnosed by running shop air through the spark plug hole with the piston at Top Dead Center (TDC). If air sounds like it is escaping back through the intake manifold, then the most likely culprit is a bad intake valve. If air sounds like it is escaping through the exhaust manifold, then the most likely culprit is the exhaust valve. If air sounds like it is getting past the piston, it may be the rings are bad, or the piston itself has a hole in it, or the

cylinder wall has a hole in it. Any of these conditions have the potential to create an excessive oil consumption scenario.

Excessive Coolant Consumption: a tailpipe spewing plumes of white smoke is a sure sign of excessive coolant consumption. Check your coolant level at the radiator. If it is low, this does not necessarily indicate a coolant consumption issue, but is a good first step. If a milky substance is found in the coolant, this is often a sign of oil mixing with the coolant and is usually caused by a crack somewhere in the engine or may indicate a blown head gasket. External coolant leaks are easily identifiable due to the distinct coloration of today's coolants.

Exhaust Color: plumes of white smoke coming from the tailpipe indicate coolant is being burned in the combustion chamber. Blue-grey smoke indicates oil is being consumed in the combustion chamber. .

Development Engineer

A development engineer has the responsibility for coordinating delivery of the engineering attributes of a complete automobile (bus, car, truck, van, SUV, motorcycle etc. as dictated by the automobile manufacturer, governmental regulations, and the customer who buys the product. Much like the Systems Engineer, the development engineer is concerned with the interactions of all systems in the complete automobile. While there are multiple components and systems in an automobile that have to function as designed, they must also work in harmony with the complete automobile. As an example, the brake system's main function is to provide braking functionality to the automobile. Along with this, it must also provide an acceptable level of: pedal feel (spongy, stiff), brake system "noise" (squeal, shudder, etc.), and interaction with the ABS (anti-lock braking system)

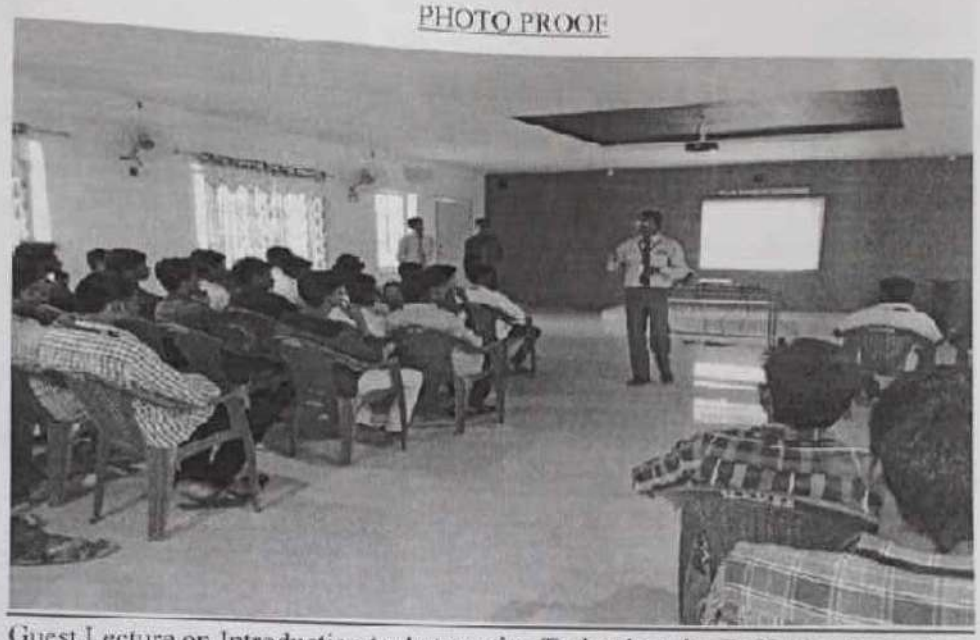
Another aspect of the development engineer's job is a trade-off process required to deliver all of the automobile attributes at a certain acceptable level. An example of this is the trade-off between engine performance and fuel economy. While some customers are looking for maximum power from their engine, the automobile is still required to deliver an acceptable level of fuel economy. From the engine's perspective, these are opposing requirements. Engine performance is looking for maximum displacement (bigger, more power), while fuel economy is looking for a smaller displacement engine (ex: 1.4 L vs. 5.4 L). The engine size however, is not the only contributing factor to fuel economy and automobile performance. Different values come into play. Other attributes that involve trade-offs include:

automobile weight, aerodynamic drag, transmission gearing, emission control devices, handling/road holding, ride quality, and tires. The development engineer is also responsible for organizing automobile level testing, validation, and certification. Components and systems are designed and tested individually by the Product Engineer. The final evaluation is to be conducted at the automobile level to evaluate system to system interactions. As an example, the audio system (radio) needs to be evaluated at the automobile level. Interaction with other electronic components can cause interference. Heat dissipation of the system and ergonomic placement of the controls need to be evaluated. Sound quality in all seating positions needs to be provided at acceptable levels.

Manufacturing Engineer

Manufacturing Engineers are responsible for ensuring proper production of the automotive components or complete vehicles. While the development engineers are responsible for the function of the vehicle, manufacturing engineers are responsible for the safe and effective production of the vehicle. This group of engineers consists of Process Engineers, Logistic Coordinators, Tooling Engineers, Robotics Engineers, and Assembly Planners. In the automotive industry manufacturers are playing a larger role in the development stages of automotive components to ensure that the products are easy to manufacture. Design for Manufacturability in the automotive world is crucial to make certain whichever design is developed in the Research and Development Stage of automotive design. Once the design is established, the manufacturing engineers take over. They design the machinery and tooling necessary to build the automotive components or vehicle and establish the methods of how to mass-produce the product. It is the manufacturing engineers job to increase the efficiency of the automotive plant.

PHOTO PROOF



Guest Lecture on Introduction to Automotive Technology by Er.Xavier Jaganathan

Presentation of Automobile Engines services by Er.Xavier Jaganathan

7

Conclusion

Er.Xavier Jaganathan, General Manager, had delivered the topic "**Introduction to Automotive Technology**" to Department of Mechanical Engineering students on 28.08.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He covers all the topics such as Introduction to Automotive Technology, Basic principle of Automobile Engines, Service Methods of 2 Wheel and 4 Wheeler vehicles, Chassis and Transmission system and Job Opportunities of Automotive Engineers. Finally power point and Videos presentation show to the student to describe the working principle and testing Procedure of Automotive Engines.

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
(Accredited by NAAC)
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Feedback Form Report

Name of the Program: Guest Lecture on " Introduction to Automotive Technology "
Date: 28.08.2017

1. What is your opinion about the duration of this program?
   A. Short B. Adequate ✓ C. long
2. Overall, how useful was this program for you?
   A. Very Much ✓ B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good B. Good ✓ C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good C. Average ✓ D. Poor
5. How much of knowledge you learned today?
   A. A lot ✓ B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent ✓ C. No
7. Planning of this programme?
   A. Very good B. Good ✓ C. Average D. Poor

Any other comment (if any):
Good.

M.A.M. SCHOOL OF ENGINEERING

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6. Did it fulfill your expectation?
   A. Yes B. Some Extent C. No ✓
7. Planning of this programme?
   A. Very good B. Good ✓ C. Average D. Poor
8. Any other comment (if any): Good.

Very Great

M.A.M. SCHOOL OF ENGINEERING

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8. Any other comment (if any):

- Good -

M.A.M. SCHOOL OF ENGINEERING

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8. Any other comment (if any):

very Good

(16)

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.
(IS0 9001:2000 &NAAC accredited)

Guest Lecture Report
On
"Advances in material Testing"

21.08.2017

TABLE OF CONTENTS

COMPILED BY
(Dr. TTM. Kannan)

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution

Approved by AICTE, New Delhi. Afflicated to Anna University, Chennai

Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites second Year students and Faculty members of the department activity of Guest lecture programme on "**Advances in Material Testing**" at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.30 pm on 21.08.2017.

Venue: Seminar Hall

Resource Person:

Er.C.Ramasamy

Engineer-NDT Services,

A Plus NDT,

S.V.V.Complex,

Trichirappalli -620 002

Email: info.aplusndt@gmail.com

Phone No: 0431- 4010666

Mobile Number: 8220053888

GUEST PROFILE

RESOURCE PERSON:

Er.C.Ramasamy.

Engineer-NDT Services,

A Plus NDT,

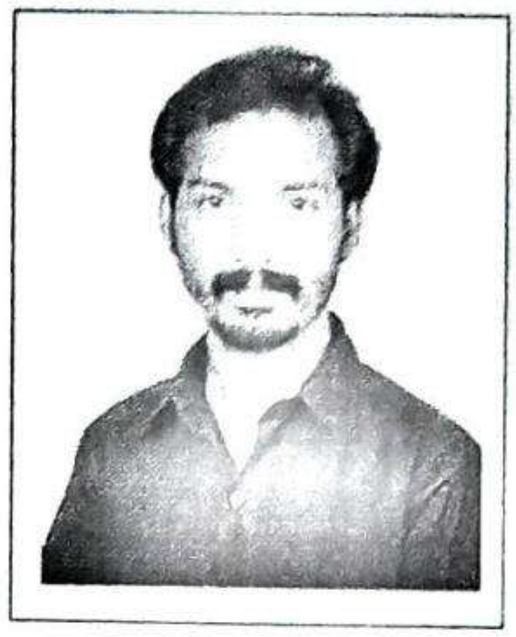
S.V.V. Complex,

Trichirappalli -620 018.

Email: info.aplusndt@gmailcom

Phone No: 0431- 4010666

Mobile Number: 8220053888



PROGRAMME DETAILS

Er.C.Ramasamy, *Engineer-NDT services,A Plus NDT Centre* gave a brief lecture about " **Advances in Material Testing** " at M.A.M School of Engineering on 21.08.2017. He discussed more information about the Basics of Material Testing, Need of Material Testing, Methods of Material Testing, Latest Material Testing standard, Radiographic Test, Magnetic particle test, Liquid Penetrating Test Totally 62 students and 3 Faculty members had attended this Program .

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Advances in Material Tesing"
- Demonstration of Testing methods and Testing Procedures
- Power point presentation of Advanced Material Testing Techniques.
- Video session.
- Vote of Thanks

1. Basics of material Testing

Mechanical testing reveals the properties of a material when force is applied dynamically or statically. A mechanical test shows whether a material or part is suitable for its intended application by measuring properties such as elasticity, tensile strength, elongation, hardness, fracture toughness, impact resistance, stress rupture and the fatigue limit. experts use a wide range of methods and devices to run comprehensive mechanical testing programs for our clients in Aerospace, Automotive, Biomedical, Commercial, Oil & Gas, Primary metals, Construction, as well as other industry sectors. The instruments and machinery you'll find in an Element mechanical testing lab include universal test machines, microhardness testing and hardness testing machines, bend and fatigue machines, as well computers featuring programmable software. Mechanical testing measures the strength and ductility of materials under various conditions, such as temperature, tension, compression and load. LTI performs the testing and can prepare test specimens for all types of mechanical testing including proof load, stress rupture, charpy impact, yield, bend, hardness, and much more.

2. Need for material Testing

Materials Testing is a highly precise and reliable set of processes that measure material characteristics, such as properties, structure and composition, against specified criteria. The data and test results determine whether materials, fasteners and treatments meet the requirements of design engineers and regulatory agencies, and are suitable for their intended application. At Laboratory Testing Inc., material testing and inspection includes our destructive testing methods – mechanical, chemical, metallurgical and fracture mechanics testing. Although **Metal and Alloy Testing is our specialty**, Laboratory Testing Inc. also offers some material testing services for polymers and ceramics.

3. Methods Material Testing

Tensile Test: Tensile testing is also known as tension testing, It is a fundamental materials science test in which a sample is subjected to a controlled tension until failure. The results from the test are commonly used to select a material for an application, for quality control, and to predict how a material will react under normal forces. Properties that are directly measured via a tensile test are ultimate tensile strength, maximum elongation and reduction in area. From these measurements the following properties can also be determined: Young's modulus, Poisson's ratio, yield strength, and strain-hardening characteristics. Uniaxial tensile testing is the most commonly used for obtaining the mechanical characteristics of isotropic materials. For anisotropic materials, such as composite materials and textiles, biaxial tensile testing is required. Tensile Tests are performed for several reasons. The results of tensile tests are used in selecting materials for engineering applications. Tensile properties frequently are included in material specifications to ensure quality. Tensile properties often are measured during development of new materials and processes, so that different materials and processes can be compared. Finally, tensile properties often are used to predict the behavior of a material under forms of loading other than uniaxial tension. The strength of a material often is the primary concern. The strength of interest may be

measured in terms of either the stress necessary to cause appreciable plastic deformation or the maximum stress that the material can withstand. These measures of strength are used, with appropriate caution (in the form of safety factors), in engineering design. Also of interest is the material's ductility, which is a measure of how much it can be deformed before it fractures. Rarely is ductility incorporated directly in design; rather, it is included in material specifications to ensure quality and toughness. Low ductility in a tensile test often is accompanied by low resistance to fracture under other forms of loading. Elastic properties also may be of interest, but special techniques must be used to measure these properties during tensile testing, and more accurate measurements can be made by ultrasonic techniques. This chapter provides a brief overview of some of the more important topics associated with tensile testing.

During metal tension tests, we subject your metal or alloy sample to uniaxial tension until the point of failure. This metal strength testing is used to assess:

Ultimate tensile strength
Peak stress
Yield strength
Reduction of area
Elongation
Ductility

Compression Test: Compression strength is the capacity of a material or structure to withstand loads tending to reduce size, as opposed to tensile strength, which withstands loads tending to elongate. In other words, compressive strength resists compression (being pushed together), whereas tensile strength resists tension (being pulled apart). In the study of strength of materials, tensile strength, compressive strength, and shear strength can be analyzed independently.Some materials fracture at their compressive strength limit; others deform irreversibly, so a given amount of deformation may be considered as the limit for compressive load. Compressive strength is a key value for design of structures. Compressive strength is often measured on a universal testing machine; these range from very small table-top systems to ones with over capacity Measurements of compressive strength are affected by the specific test method and conditions of measurement. Compressive strengths are usually reported in relationship to a specific technical standard.

4. Material Testing standards

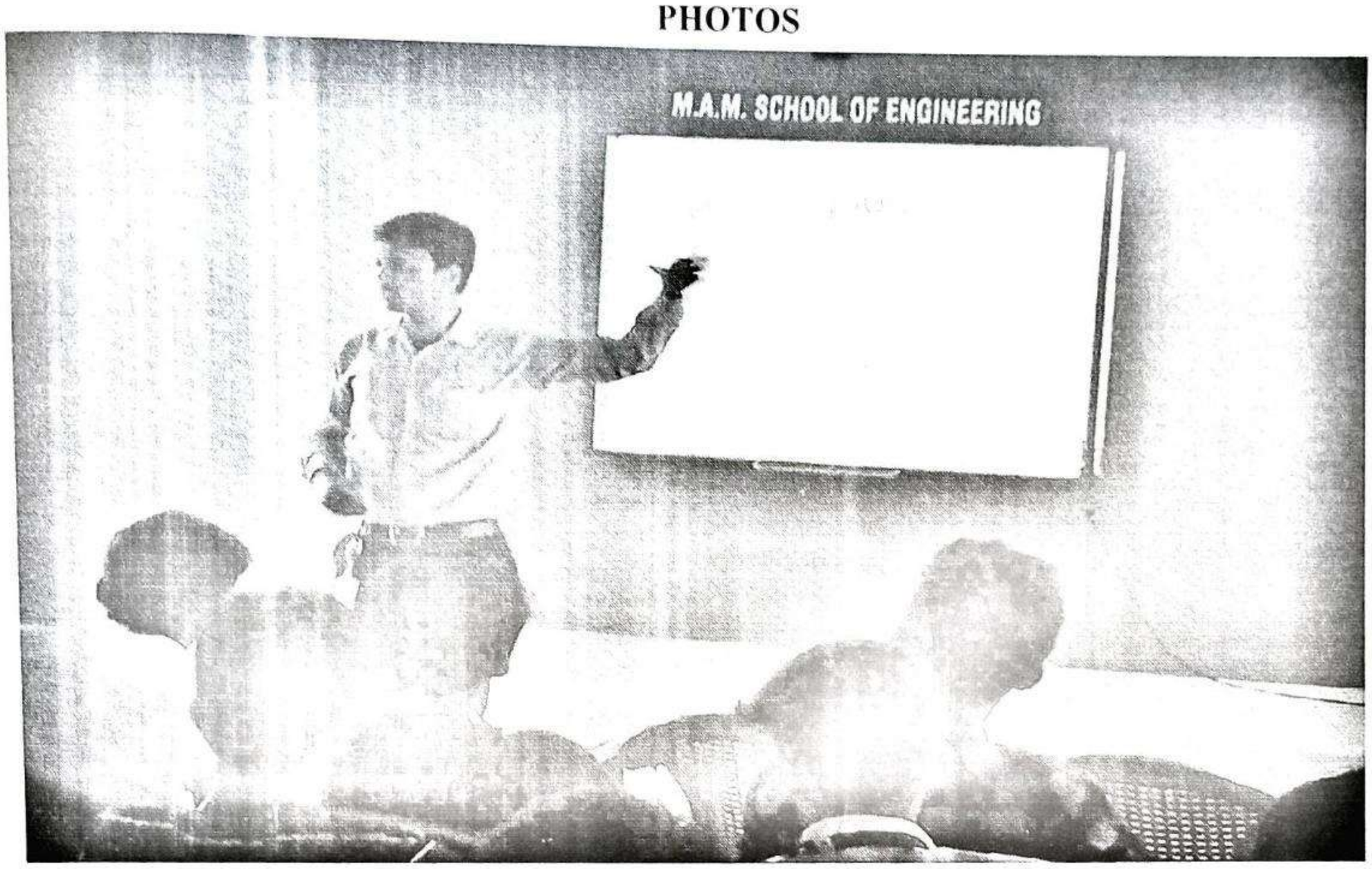
ASTM's nondestructive testing standards provide guides for the appropriate methods and techniques used to detect and evaluate flaws in materials and objects without destroying the specimen at hand. Such tests include radiographic, ultrasonic, electromagnetic (eddy-current), X-ray, acoustic, and topographic techniques. Detected flaws are evaluated for possible rejection due to nonconformance to set acceptance criteria. These nondestructive testing standards are instrumental to laboratories and a wide variety of industrial plants for examining a material's quality and, consequently, suitability for intended use

Liquid (Dye) penetrate method: Liquid penetrates inspection (LPI) is one of the most widely used nondestructive evaluation (NDE) methods. Its popularity can be attributed to

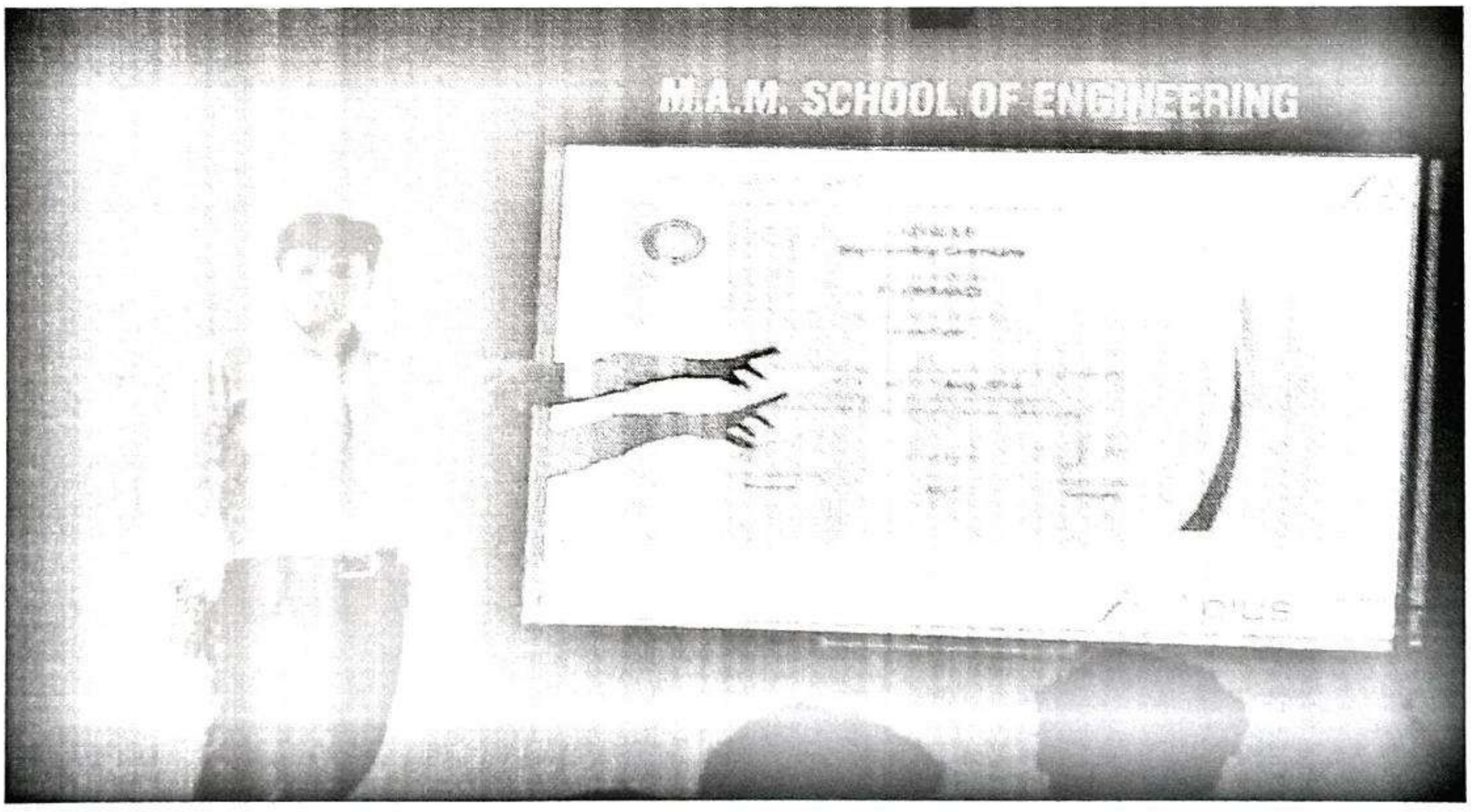
two main factors, which are its relative ease of use and its flexibility. The technique is based on the ability of a liquid to be drawn into a "clean" surface breaking flaw by capillary action. . This method is an inexpensive and convenient technique for surface defect inspection. The limitations of the liquid penetrate technique include the inability to inspect subsurface flaws and a loss of resolution on porous materials. Liquid penetrate testing is largely used on nonmagnetic materials for which magnetic particle inspection is not possible. Materials that are commonly inspected using LPI include the following; metals (aluminum, copper, steel, titanium, etc.), glass, many ceramic materials, rubber, plastics. Liquid penetrate inspection is used to inspect of flaws that break the surface of the sample. Some of these flaws are listed below; fatigue cracks, quench cracks grinding cracks, overload and impact fractures, porosity, laps seams, pin holes in welds, lack of fusion or braising along the edge of the bond line.

Magnetic particle inspection is one of the simple, fast and traditional nondestructive testing methods widely used because of its convenience and low cost. This method uses magnetic fields and small magnetic particles, such as iron filings to detect flaws in components. The only requirement from an inspect ability standpoint is that the component being inspected must be made of a ferromagnetic material such iron, nickel, cobalt, or some of their alloys, since these materials are materials that can be magnetized to a level that will allow the inspection to be effective. On the other hand, an enormous volume of structural steels used in engineering is magnetic. In its simplest application, an electromagnet yoke is placed on the surface of the part to be examined, a kerosene-iron filling suspension is poured on the surface and the electromagnet is energized. If there is a discontinuity such as a crack or a flaw on the surface of the part, magnetic flux will be broken and a new south and north pole will form at each edge of the discontinuity. Then just like if iron particles are scattered on a cracked magnet, the particles will be attracted to and cluster at the pole ends of the magnet, the iron particles will also be attracted at the edges of the crack behaving poles of the magnet. This cluster of particles is much easier to see than the actual crack and this is the basis for magnetic particle inspection. For the best sensitivity, the lines of magnetic force should be perpendicular to the defect.

PHOTOS



Guest Lecture on advances in Material Testing is delivered by Er.C.Ramasamy



Presentation of Advances in Material Testing for Various material

Conclusion

Er.C.Ramasamy,Engineer, had delivered the topic "Advances in Material Testing " to Department of Mechanical Engineering students on 21.08.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He covers all the topics such as Introduction to Material Testing, Methods of Materials testing, Need for Material Testing, Material Testing Procedure, Various types of material Testing, Magnetic Particles Test and Dye Penetrating Test. He also thought testing procedures and ISO testing methods, ASME, ASTM methods and various Inspection techniques. He demonstrates the method of Dye penetrating and Magnetic Particles test procedure. It was very useful to students and faculty members of Mechanical Engineering department. Finally power point and Videos presentation show to the student to describe the working principle and testing Procedure of NDT test.

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title: NDT (Advances in Material testing) **Date:** 21.08.17

Resource Person: C. Rasrasamy. **Time :** 2.00Pm to 4PM

Sl.No	Name of Student		Year of study	Signature
1.	Naveen kumar. K	4029	II – A sec	K. Naveen
2.	Muthukumar. M	4025	II – A	M. Muthukumar
3	Maanthi. M	4024	II – A	M. Maanthi
4.	Mathivanan. S	4021	II – A	S. Mathi
5.	B. Akshaya Bala	4003	II A	B. Akshaya
6	K. KARUNAKARAN	4018	II – A	K. Karuna.
7.	A. Anees Ahamed	4006	II – A	A. Aneesh.
8	S. AKASH	4002	II – A	S. Akash.
9.	M. Barathiraja	4010	II – A	M. Barathiraja
10.	A. Aravindhan	4003	II – A	A. Aravindh
11	R. JEEVARASAN	4015	II – A	R. Jeevarasan
12.	J. ARAVINDH	4007	II – A	J. Aravindh
13.	M. Faizel Hameed		II – B	
14	R. MADHAN		II – B	R. Madhan
15.	K. Gopalakrishnan	4014	II – A	K Gopi
16.	T. G. Anbuselvan	4005	II – A	T. G. Anbu
17	H. ABDUL RASHEED	4001	II – A	H. Abdul Rasheed
18	M. Vasantha Raja	4057	II – B	M. Vasanth
19	M. N. Sudarvanan	4054	II – B	M. Sudarvanan
20.	R. Gogul	4013	II – A	R. Gogul.
21.	S. Aari Govindhan	4009	II – A	S. Aari
22.	P. Jenith	4016	II – A	P. Jenith
23.	Santhosh Kumar. U	4044	II – 'B'	
24	S. Sangili Pandian Suraj	4043	II – 'B'	
25.	M. Riyaaz Ahamed		II – 'A'	M. Riyaaz
26	M. Manikandan		II 'A'	M. Manikandan
27	M. Boobalan		II 'A'	M. Boobalan
28.	R. Vishnu kumar	4066	II – B	R. Vishnu
29.	K. SURIYA LE		II – B	Suriya K
30	A. SELVA	4056	II – B	A. Selva
31.	M. VEERAIYA	4060	II – B	M. Veeraiya

Co-ordinator
(Dr. T.M. Kannan)

HOD / Mech 21/8

PRINCIPAL

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105

(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title: NDT **Date:** 21.08.2017

Resource Person: C. Ramasamy. **Time :** 2.00 Pm to 4:00 Pm

Sl.No	Name of Student		Year of study	Signature
32	RAJADURAI.P	4038	IInd MECH-B	
33	V.RAMANAN	4039	IInd MECH-B	
34.	A. SASIKUMAR	4048	IInd MECH-B	
35.	B. Vishva	4067	IInd Mech-B	
36.	P.SARAVANA KUMAR	4047	IInd MECH-B	
37	A.RANJITH	4041	IInd MECH-B	
38.	M. THIRUMALAI	4056	IInd mech-B	
39	J. Saran	4045	IInd mech-B	
40.	N. MOHAMED MUZAMMIL	4023	IInd MEA-A	
41.	C. PRAVEEN		IInd Mech-B	
42.	VIVEK.M		IInd MECH-B	
43.	D.VEERA KUMAR.		II-B	
44.	R. Ranjith		IInd Mech "B"	
45.	Shameer.H		IInd Mech "B"	
46.	Chithu Raj. K	4026	IInd Mech 'A'	
47.	VASANTH KUMAR.S	4059	IInd MECH-'B'	
48.	M.Pozhanthi	4037	IInd MECH-"B"	
49.	G.Velmoorthi	4062	IInd MECH B"	
50.	C.Nadhiravan	4030	IInd mech 'A'	
51.	E. Paulraj	4031	IInd Mech A	
52.	D. SENTHIL KUMAR	4051	IInd mech "B"	
53.	V. Ramkumar	4040	IInd mech B.	
54.	K.Alphan Chakravarthy	4012	IInd mech A	
55	K.Karagaraj		II Mech-A'	
56	C. NAVEEN		II Mech-A'	
57.	N. Manimaran		II Mech-A'	
58.	G. Naveen Jeeshadrishnan		II Mech 'A'	
59.	A.Alphan		II mech 'A'	
60.	YUKESH.K		II MECH B	
61	R.Soorya prakash		"	
62.	K.VIGNESH.		"	

21/8/17
Co-ordinator
(Dr. TTM. Kannan)

24/8/17
HOD / Mech

Principal

M.A.M SCHOOL OF ENGINERING

SIRUGANUR, TRICHY-621105
(ISO 9001:2008 &NAAC –Accredited)

Guest Lecture / Seminar/Workshop /Training Program

Title: NDT (Advances in Material testing)

Resource Person: C. Ramasamy

Date: 21-8-17

Time : 2 - 4 pm

Sl.No	Name of Faculty Member	Department	Signature
1	D. AKILAN	Mechanical	
2	S Ravichandran	Mechanical	
3	Dr. TTM. Kannan	Mechanical	

Coordinator 21/8/17

HOD 4/9/17

Principal

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture Report
On
"Technological Advancement of NDT"

07.08.2017

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Mechanical Engineering
M.A.M. School of Engineering
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M.A.M. SCHOOL OF ENGINEERING
SIRUGANUR, TIRUCHIRAPPALLI-621 105.

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution
Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai
Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Final Year students and Faculty members of the department activity of Guest lecture programme on "**Technological Advancement in NDT**" at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.30 pm on 07.08.2017.

Venue: Seminar Hall

Resource Person:

Er.D.Shankar,
Engineer-NDT Services,
Ever shine Institute of Testing and Training,
First Cross, Thillai Nagar,
Trichirappalli -620 018.

Email: evershineitt@gmail.com
admin@evershineitt.com
Phone No: 0431- 4060282
Mobile Number: 96886 90282

GUEST PROFILE

RESOURCE PERSON:

Er.D.Shankar,
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Trichirappalli -620 018.

Email: evershineitt@gmail.com
admin@evershineitt.com
Phone No: 0431- 4060282
Mobile Number: 96886 90282

PROGRAMME DETAILS

Er.D,S*hankar, Engineer-NDT services, Evershine Testing and Training,* gave a brief lecture about **" Technological advancement of NDT "** at M.A.M School of Engineering on 07.08.2017. He discussed more information about the Basics of Material Testing, Need of NDT, Methods of NDT, Ultrasonic Testing, Radiographic Test, Magnetic particle test, Liquid Penetrating Test and Material. Totally 46 students and 3 Faculty members had attended this Program .

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Technological Development of NDT"
- Demonstration of Welded joint and Casting process Testing methods.
- Power point presentation of NDT Techniques.
- Video session.
- Vote of Thanks

1. **NON-DESTRUCTIVE TESTING**: Non-Destructive testing (NDT) is a wide group of analysis techniques used in science and technology industry to evaluate the properties of a material, component or system without causing damage. The terms nondestructive examination (NDE), nondestructive inspection (NDI), and nondestructive evaluation (NDE) are also commonly used to describe this technology.[2] Because NDT does not permanently alter the article being inspected, it is a highly valuable technique that can save both money and time in product evaluation, troubleshooting, and research. The six most frequently used NDT method are eddy-current, magnetic-particle, liquid penetrant, radiographic, ultrasonic, and visual testing. NDT is commonly used in forensic engineering, mechanical engineering, petroleum engineering, electrical engineering, civil engineering, systems engineering, aeronautical engineering, medicine, and art.

ASTM's nondestructive testing standards provide guides for the appropriate methods and techniques used to detect and evaluate flaws in materials and objects without destroying the specimen at hand. Such tests include radiographic, ultrasonic, electromagnetic (eddy-current), X-ray, acoustic, and tomographic techniques. Detected flaws are evaluated for possible rejection due to nonconformance to set acceptance criteria. These nondestructive testing standards are instrumental to laboratories and a wide variety of industrial plants for examining a material's quality and, consequently, suitability for intended use

2.Methods of Non-Destructive Testing

Liquid (Dye) penetrant method: Liquid penetrant inspection (LPI) is one of the most widely used nondestructive evaluation (NDE) methods. Its popularity can be attributed to two main factors, which are its relative ease of use and its flexibility. The technique is based on the ability of a liquid to be drawn into a "clean" surface breaking flaw by capillary action. . This method is an inexpensive and convenient technique for surface defect inspection. The limitations of the liquid penetrant technique include the inability to inspect subsurface flaws and a loss of resolution on porous materials. Liquid penetrant testing is largely used on nonmagnetic materials for which magnetic particle inspection is not possible. Materials that are commonly inspected using LPI include the following; metals (aluminum, copper, steel, titanium, etc.), glass, many ceramic materials, rubber, plastics. Liquid penetrant inspection is used to inspect of flaws that break the surface of the sample. Some of these flaws are listed below; fatigue cracks, quench cracks grinding cracks, overload and impact fractures, porosity, laps seams, pin holes in welds, lack of fusion or braising along the edge of the bond line.

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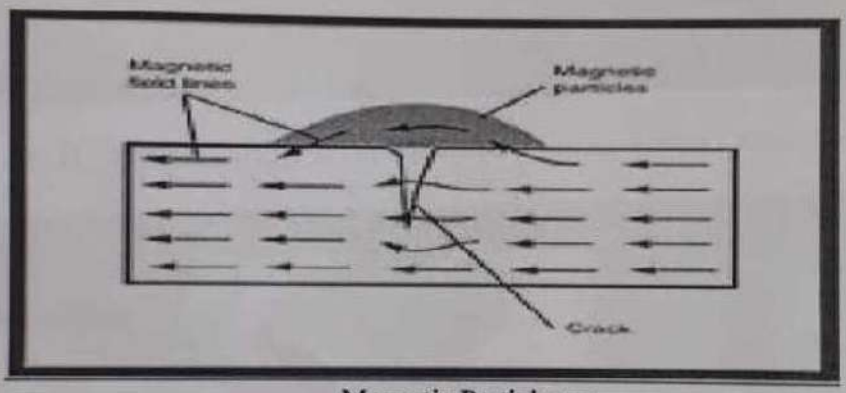
electromagnet yoke is placed on the surface of the part to be examined, a kerosene-iron filling suspension is poured on the surface and the electromagnet is energized. If there is a discontinuity such as a crack or a flaw on the surface of the part, magnetic flux will be broken and a new south and north pole will form at each edge of the discontinuity. Then just like if iron particles are scattered on a cracked magnet, the particles will be attracted to and cluster at the pole ends of the magnet, the iron particles will also be attracted at the edges of the crack behaving poles of the magnet. This cluster of particles is much easier to see than the actual crack and this is the basis for magnetic particle inspection. For the best sensitivity, the lines of magnetic force should be perpendicular to the defect.

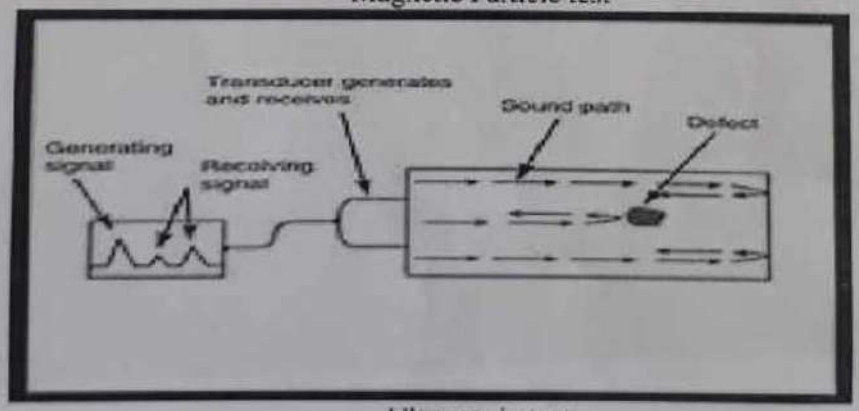
Eddy current testing: Eddy currents are created through a process called electromagnetic induction. When alternating current is applied to the conductor, such as copper wire, a magnetic field develops in and around the conductor. This magnetic field expands as the alternating current rises to maximum and collapses as the current is reduced to zero. If another electrical conductor is brought into the close proximity to this changing magnetic field, current will be induced in this second conductor. These currents are influenced by the nature of the material such as voids, cracks, changes in grain size, as well as physical distance between coil and material. These currents form an impedance on a second coil which is used to as a sensor. In practice a probe is placed on the surface of the part to be inspected, and electronic equipment monitors the eddy current in the work piece through the same probe. The sensing circuit is a part of the sending coil. Eddy currents can be used for crack detection, material thickness measurements, coating thickness measurements, conductivity measurements for material identification, heat damage detection, case depth determination, heat treatment monitoring. Some of the advantages of eddy current inspection include; sensitivity to small cracks and other defects, ability to detect surface and near surface defects, immediate results, portable equipment, suitability for many different applications, minimum part preparation, no necessity to contact the part under inspection, ability to inspect complex shapes and sizes of conductive materials. Some limitation of eddy current inspection; applicability just on conductive materials, necessity for an accessible surface to the probe, skillful and trained personal, possible interference of surface finish and roughness, necessity for reference standards for setup, limited depth of penetration, inability to detect of the flaws lying parallel to the probe coil winding and probe scan direction.

Ultrasonic Inspection: Ultrasonic Testing (UT) uses a high frequency sound energy to conduct examinations and make measurements. Ultrasonic inspection can be used for flaw detection I evaluation, dimensional measurements, material characterization, and more. A typical UT inspection system consists of several functional units, such as the pulser/receiver, transducer, and display devices. A pulser/receiver is an electronic device that can produce high voltage electrical pulse. Driven by the pulser, the transducer of various types and shapes generates high frequency ultrasonic energy operating based on the piezoelectricity technology with using quartz, lithium sulfate, or various ceramics. Most inspections are carried out in the frequency rang of 1 to 25MHz. Couplants are used to transmit the ultrasonic waves from the transducer to the test piece; typical couplants are water, oil, glycerin and grease. The sound energy is introduced and propagates through the materials in the form of waves and reflected from the opposing surface. An internal defect such as crack or void interrupts the waves' propagation and reflects back a portion of the ultrasonic wave. The amplitude of the energy and the time required for

return indicate the presence and location of any flaws in the work-piece. The ultrasonic inspection method has high penetrating power and sensitivity. It can be used from various directions to inspect flaws in large parts, such as rail road wheels pressure vessels and die blocks. This method requires experienced personnel to properly conduct the inspection and to correctly interpret the results. As a very useful and versatile NDT method, ultrasonic inspection method has the following advantages; sensitivity to both surface and subsurface discontinuities, superior depth of penetration for flaw detection or measurement, ability to single-sided access for pulse-echo technique, high accuracy in determining reflector position and estimating size and shape, minimal part preparation, instantaneous results with electronic equipment, detailed imaging with automated systems, possibility for other uses such as thickness measurements. Its limitations; necessity for an accessible surface to transmit ultrasound, extensive skill and training, requirement for a coupling medium to promote transfer of sound energy into test specimen, limits for roughness, shape irregularity, smallness, thickness or not homogeneity, difficulty to inspect of coarse grained materials due to low sound transmission and high signal noise, necessity for the linear defects to be oriented parallel to the sound beam, necessity for reference standards for both equipment calibration, and characterization of flaws.

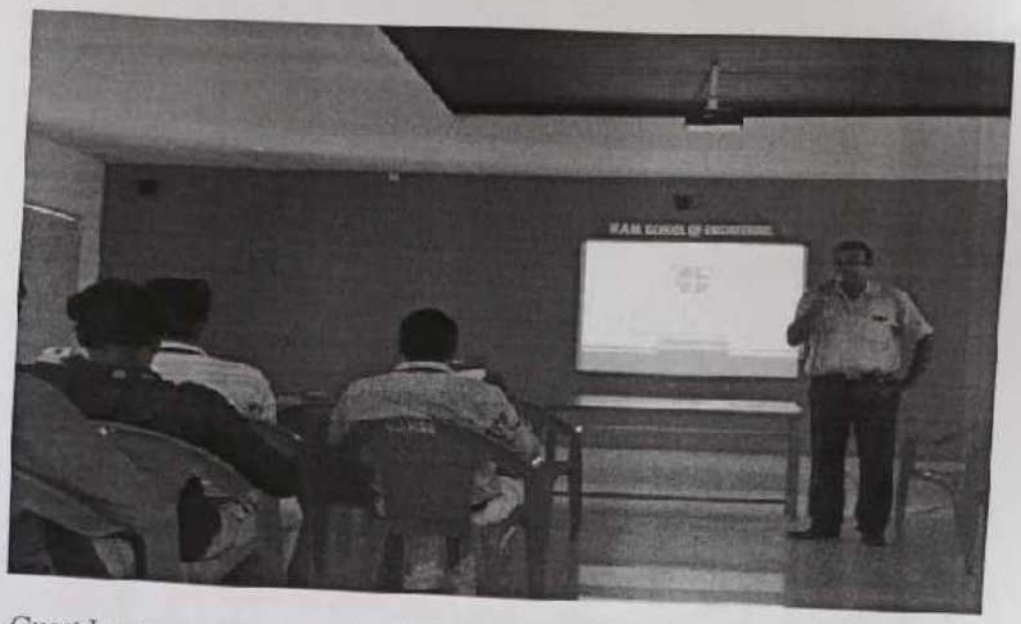


Magnetic Particle test

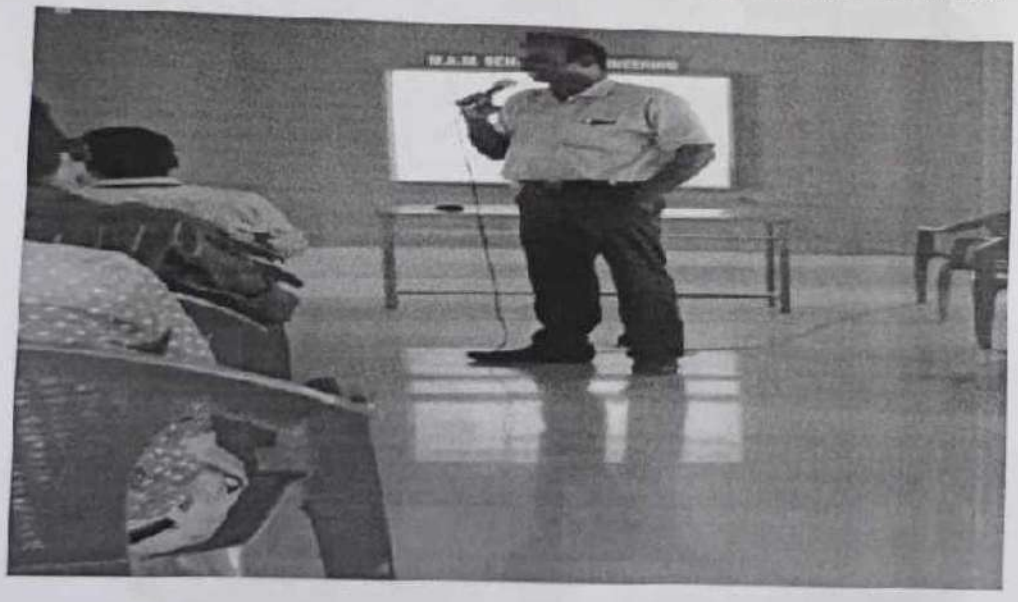


Ultra sonic test

PHOTO PROOF



Guest Lecture on Technological Advancement in NDT delivered by Er.D.Shankar



Presentation of NDT techniques for Various material

7

Conclusion

Er.D.Shankar had delivered the topic "**Technological Advancement of NDT** " to Department of Mechanical Engineering students on 07.08.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He covers all the topics such as Introduction to NDT, Methods of NDT, Various types of material Testing, Radiographic test, Magnetic Particles Test, Dye Penetrating Test and Ultrasonic test. He also thought testing procedures and ISO testing methods and various Inspection techniques. He demonstrates the method of Dye penetrating, Magnetic Particles test and Radio graphic test. It was very useful to students and faculty members of Mechanical Engineering department. Finally power point and Videos presentation show to the student to describe the working principle and testing Procedure of NDT test.

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Feedback Form Report

Name of the Program: Guest Lecture on " Technological Advancement of NDT "
Date: 07.08.2017

1. What is your opinion about the duration of this program?
   A. Short ✓ B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much ✓ B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good B. Good C. Average ✓ D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good ✓ C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory ✓ C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent ✓ C. No
7. Planning of this programme?
   A. Very good B. Good C. Average ✓ D. Poor

Any other comment (if any): very useful

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7. Planning of this programme?
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8. Any other comment (if any): very good

Good -

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   A. A lot B. Satisfactory ✓ C. None of it
6. Did it fulfill your expectation?
   A. Yes ✓ B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good ✓ C. Average D. Poor
8. Any other comment (if any):

← Good –

(8)

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture Report
On
"Advances in Product modeling and Analysis"

31.07.2017

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COMPILED BY
(Dr. TTM. Kannan)

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution

Approved by AICTE, New Delhi. Afflicated to Anna University, Chennai

Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity of Guest lecture programme on "**Advances in Product modeling and Analysis**" at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.30 pm on 31.07.2017.

Venue: Seminar Hall

Resource Person:

Mr.S.Somasundharam,
Executive- Technical,
C Cube Technologies.
41/2 JB towers, Karur Bye pass road,
Trichirappalli -620 002.

Email: info@ccubetechnologies.com

Phone No: 0431- 4210021

Mobile Number: 95856 11155

GUEST PROFILE

RESOURCE PERSON:

Mr.S.Somasundharam,

Executive- Technical,

C Cube Technologies,

41/2 JB towers, Karur Bye pass road,

Trichirappalli -620 002.

Email: info@ccubetechnologies.com

Phone No: 0431- 4210021

Mobile Number: 95856 11155

PROGRAMME DETAILS

Mr.S.SomaSundharam, *Executive-Technical, C Cube Technologies, Trichy* gave a brief lecture about "**Advances in Product modeling and Analysis"** at M.A.M School of Engineering on 31.7.2017. He discussed more information about the Basics of Modeling, Computer animation, Surface modeling, Wire frame modeling, Finite element analysis, Engineering Stress and Thermal Stress of Engineering totally 52 students and 4 Faculty members had attended this Program .

PROGRAM

- **Introduction to Chief Guest**
- **Guest Lecture on Topic "Advances in Product modeling and Analysis"**
- **Demonstration of CAD modeling and Analysis**
- **Video session**
- **Vote of Thanks**

1. 3D –Modeling

3D modeling is the process of creating a 3D representation of any surface or object by manipulating polygons, edges, and vertices in simulated 3D space. 3D modeling can be achieved manually with specialized 3D production software that lets an artist create and deform polygonal surfaces, or by scanning real-world objects into a set of data points that can be used to represent the object digitally.

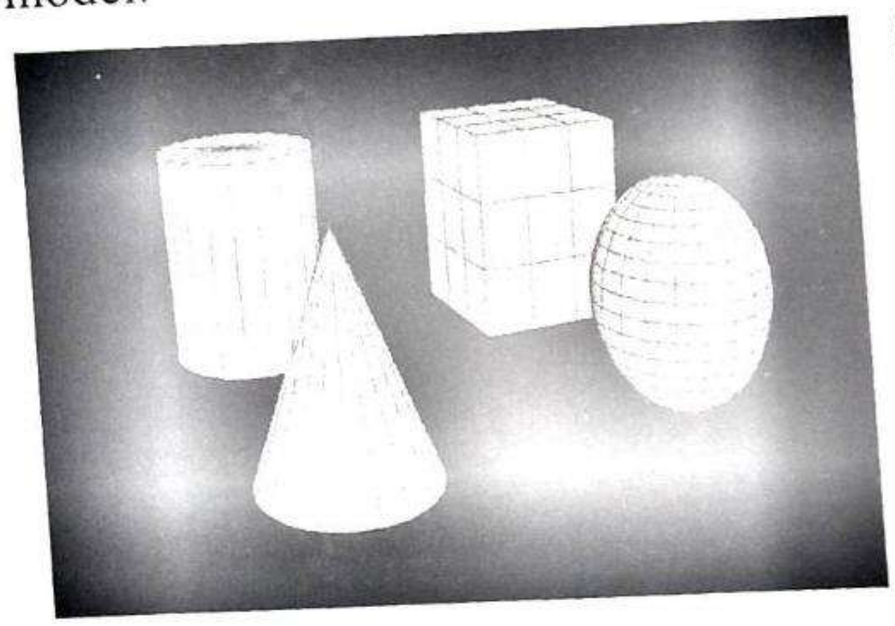
There are three popular ways to represent a model:

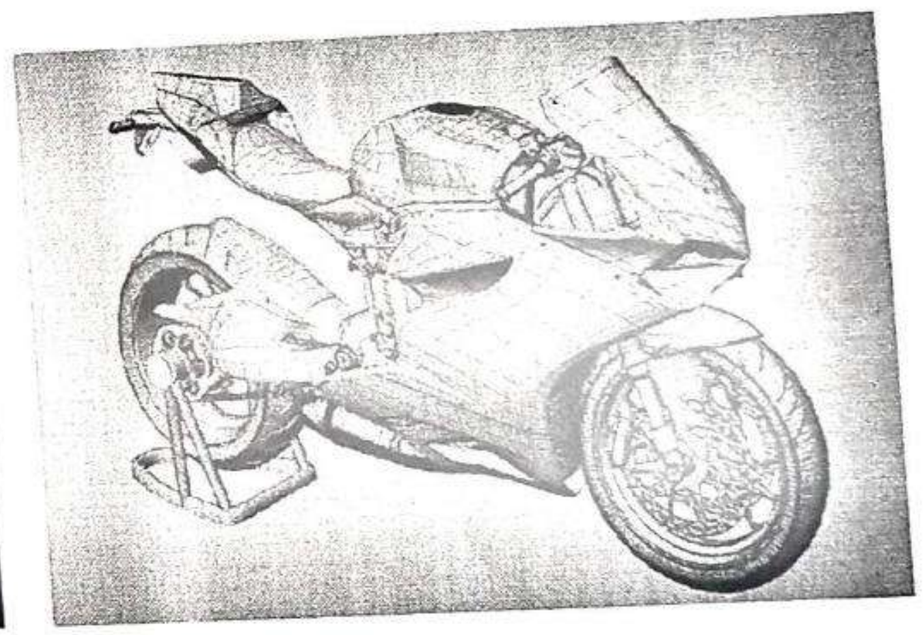
1. Polygonal modeling – Points in 3D space, called vertices, are connected by line segments to form a polygon mesh. The vast majority of 3D models today are built as textured polygonal models, because they are flexible and because computers can render them so quickly. However, polygons are planar and can only approximate curved surfaces using many polygons.
2. Curve modeling – Surfaces are defined by curves, which are influenced by weighted control points. The curve follows (but does not necessarily interpolate) the points. Increasing the weight for a point will pull the curve closer to that point. Curve types include non uniform rational B-spline (NURBS), splines, patches, and geometric primitives
3. Digital sculpting – Still a fairly new method of modeling, 3D sculpting has become very popular in the few years it has been around.There are currently three types of digital sculpting: Displacement, which is the most widely used among applications at this moment, uses a dense model (often generated by subdivision surfaces of a polygon control mesh) and stores new locations for the vertex positions through use of a 32bit image map that stores the adjusted locations. Volumetric, loosely based on voxels, has similar capabilities as displacement but does not suffer from polygon stretching when there are not enough polygons in a region to achieve a deformation. Dynamic tessellation is similar to voxel but divides the surface using triangulation to maintain a smooth surface and allow finer details. These methods allow for very artistic exploration as the model will have a new topology created over it once the models form and possibly details have been sculpted.

2. Computer graphics

3D computer graphics are graphics that utilize a three-dimensional representation of geometric data that is stored in the computer for the purposes of performing calculations and rendering 2D images. Such images may be for later display or for real-time viewing.

3D rendering is the 3D computer graphics process of automatically converting 3Dwire frame models into 2D images with 3D photorealistic effects or non-photo realistic rendering on a computer. In 3D computer graphics, 3D modeling (or three-dimensional modeling) is the process of developing a mathematical representation of any three-dimensional surface of an object (either inanimate or living) via specialized software. The product is called a 3D model.

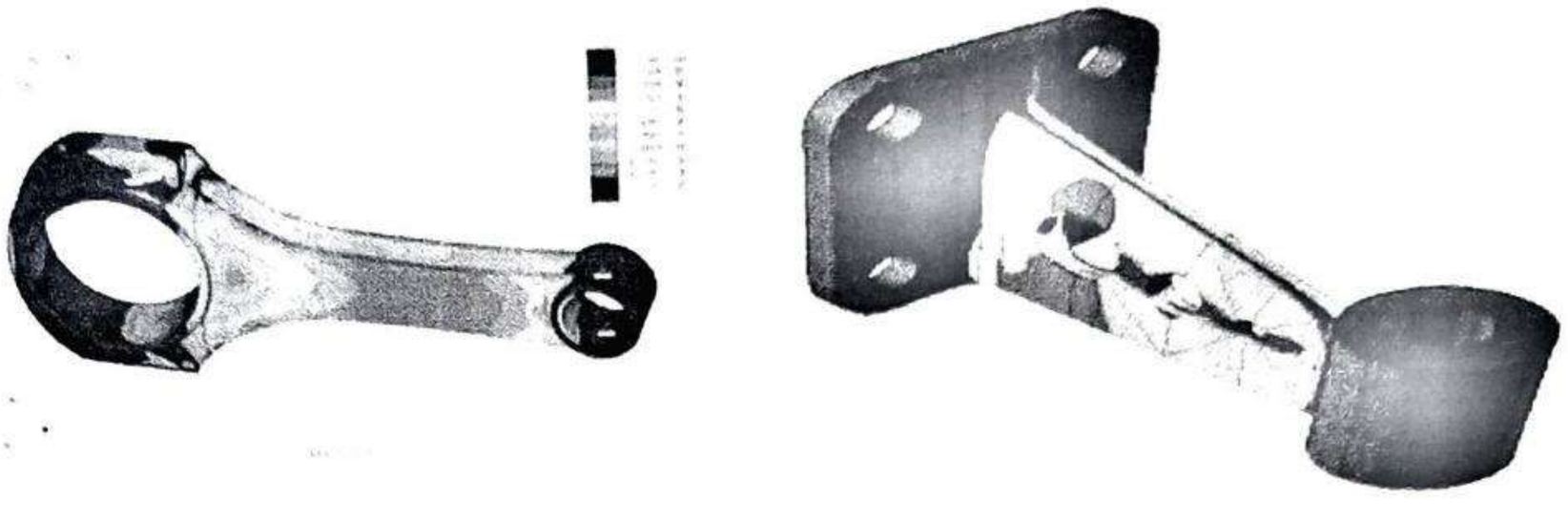




3. Finite Element Analysis

Finite element analysis (FEA) is a computerised method for predicting how a product reacts to real-world forces, vibration, heat, fluid flow and other physical effects. Finite element analysis shows whether a product will break, wear out or work the way it was designed.

Mesh generation is the practice of generating a polygonal or polyhedral mesh that approximates a geometric domain. The term "grid generation" is often used interchangeably. Typical uses are for rendering to a computer screen or for physical simulation such as finite element analysis or computational fluid dynamics.



Finite element method

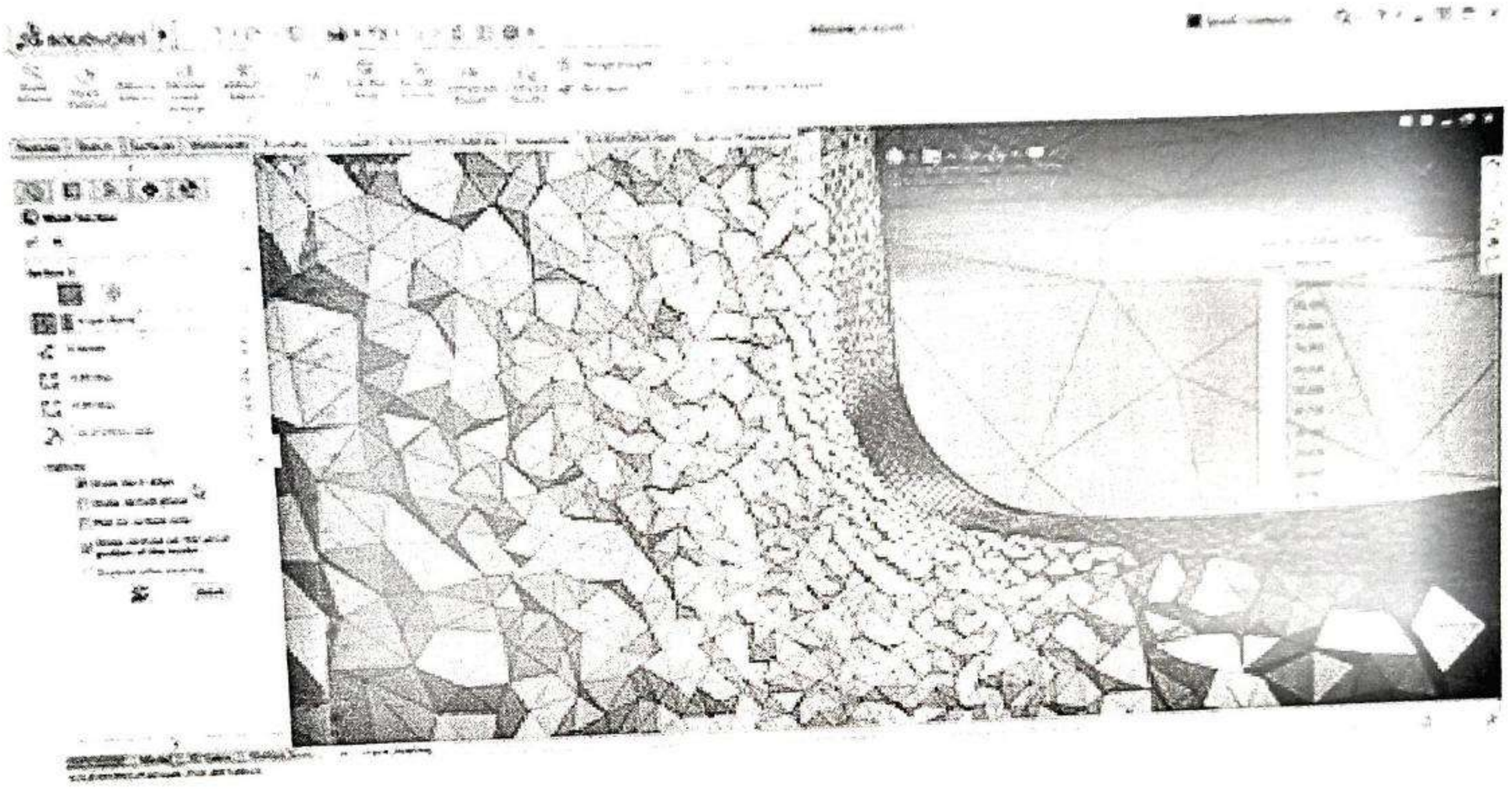
4.Stress Analysis through solid works

Stress analysis is a general term used to describe analyses where the results quantities include **stresses** and strains. It is also know n as structural **analysis**. SOLIDWORKS Simulation uses the displacement formulation of the finite element method to calculate component displacements, strains, and stresses under internal and external loads. The geometry under analysis is discredited using tetrahedral (3D), triangular (2D), and beam elements, and solved by either a direct sparse or iterative solver. SOLIDWORKS Simulation also offers the 2D simplification assumption for plane stress, plane strain, extruded, or axisymmetric options. SOLIDWORKS Simulation can use either an h or p adaptive element type, providing a great advantage to designers and engineers as the adaptive method ensures that the solution has converged.

- Sheet metal body—SOLIDWORKS Simulation assigns the thickness of the shell based on the 3D CAD sheet metal thickness, so Product Designers can leverage the 3D CAD data for Simulation purposes. For shell meshing, SOLIDWORKS Simulation offers a productive tool, called the Shell Manager, to manage multiple shell definitions of your part or assembly document. It improves the workflow for organizing shells according to type, thickness, or material, and allows for a better visualization and verification of shell properties.

- SOLIDWORKS Simulation also offers the 2D simplification assumption for plane stress, plane strain, extruded, or axi symmetric options. Product Engineers can simplify structural beams to optimize performance in Simulation to be modeled with beam elements. Straight, Curved, and tapered Beams are supported. SOLIDWORKS Simulation automatically converts structural members that are

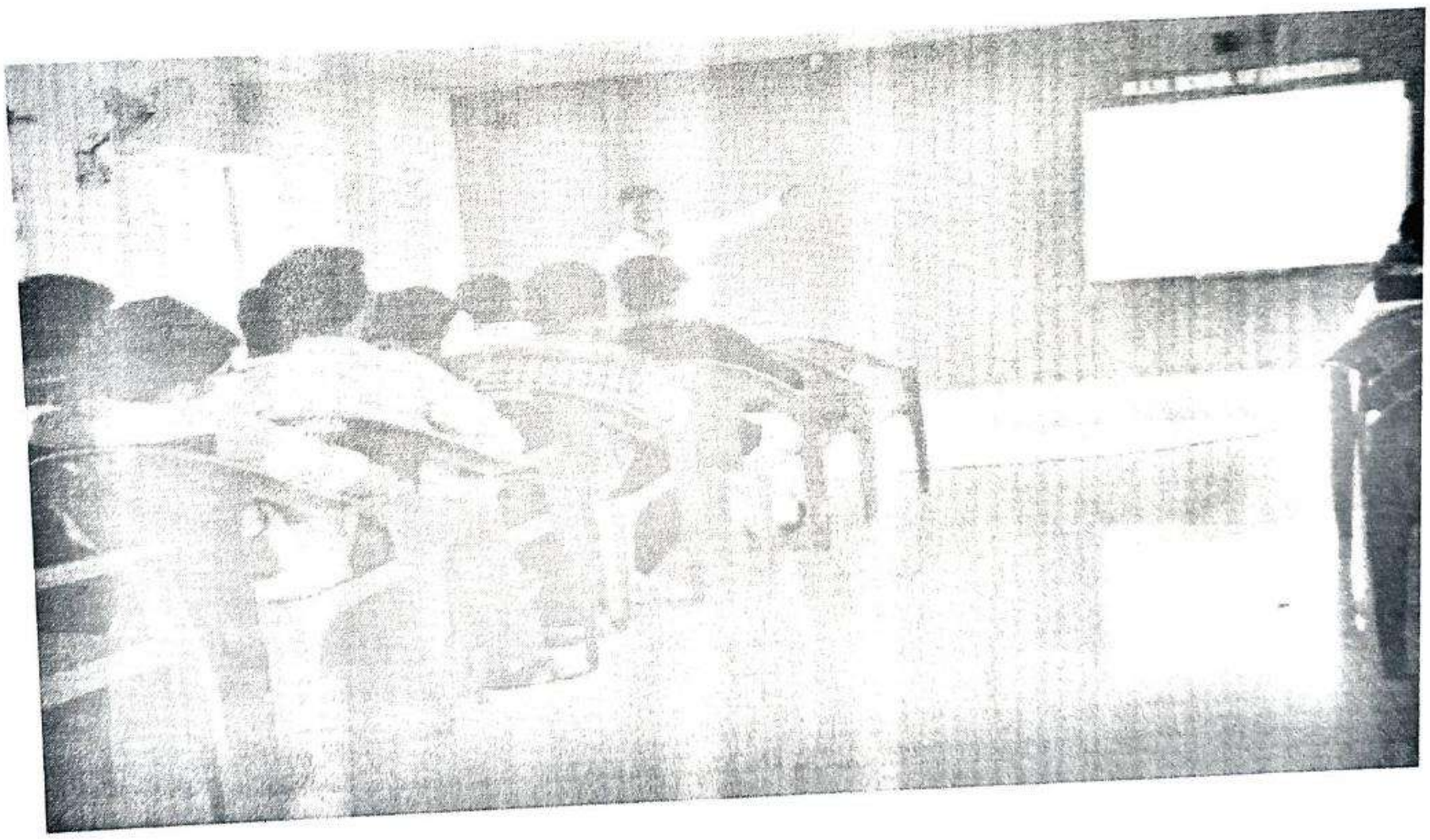
created as weldment features in 3D CAD as beam elements for quick setup of the simulation model. SOLIDWORKS Simulation can use either an h or p adaptive element type, providing a great advantage to designers and engineers, as the adaptive method ensures that the solution has converged. Product Engineers can review the internal mesh elements with the Mesh Sectioning Tools to check the quality of the internal mesh and make adjustments to mesh settings before running the study.



Meshing and Nodes of Engineering Analysis of product

PHOTO PROOF :

Guest Lecture on Advances in Product modeling and Analysis



Presentation of Computer aided Analysis

Conclusion

Mr.S.Soma sundharam had delivered the topic "**Advances in Product modeling and Analysis**" to Department of Mechanical Engineering students on 31.07.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He cover all the topics such as Solid Modeling, Surface modeling, Wire Frame Modeling, Visual realism, Computer graphics, Engineering stress analysis, Thermal Analysis and 3 D modeling, Finite element analysis and Finite element method. He also thought Fundamentals of Computer aided Analysis and Sheet metal analysis. He demonstrates the method of Gear generation and procedure for 3 D modeling. He also thought Engineering stress analysis and Thermal Analysis of various Engineering components such as Boiler, Radiator and Refrigerator. It was very useful to students and faculty members of Mechanical Engineering department. Finally power point and Videos presentation show to the student to describe the working principle 3D printing Technology.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture Report
On
"Powders to Product"

24.07.2017

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COMPILED BY

H.O.D/Mechanical

Head of the Department
Mechanical Engineering
M.A.M. School of Engineering
Siruganur, Trichy-621 105.

PRINCIPAL

PRINCIPAL
M.A.M. SCHOOL OF ENGINEERING
SIRIGANUR, TIRUCHIRAPPALLI-621 105.

M.A.M. SCHOOL OF ENGINEERING

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Second Year and Final Year students and Faculty members of the department activity **of "Powders to Product"** at Seminar Hall between 2.00 pm – 4.30 pm on 24.07.2017

Venue: Seminar Hall

Resource Person:
Dr. V. AnandaKrishnan
Assistant Professor,
Department of Production Engineering,
National Institute of Technology,
Trichy-15.

Email:Krishna@nitt.edu
Phone No: 0431-2503521

2

GUEST PROFILE

RESOURCE PERSON:

Dr. V. AnandaKrishnan
Assistant Professor,
Department of Production Engineering,
National Institute of Technology,
Trichy-15.

Email:Krishna@nitt.edu
Phone No: 0431-2503521

PROGRAMME DETAILS

Dr.V.Anandakrishnan, Assistant Professor, Department of Production Engineering, National Institute of Technology, Trichy gave a brief lecture about **"Powders to Product"** at M.A.M School of Engineering on 24.7.2017. He discussed more information about the Powder metallurgy, Composite Materials, Rapid Prototyping, 3D printing. Totally 9 Faculty member and 102 students had attended this Program .

ABOUT THE PROGRAM

Introduction to Chief Guest

Guest Lecture on Topic "Powders to Product"

Video session

Vote of Thanks

Powder Metallurgy: PM is a term covering a wide range of ways in which materials or components are made from metal powders. PM processes can avoid, or greatly reduce, the need to use metal removal processes, thereby drastically reducing yield losses in manufacture and often resulting in lower costs. Sintering is a heat treatment applied to a powder compact in order to impart strength and integrity. The temperature used for sintering is below the melting point of the major constituent of the Powder Metallurgy material. Powder Technology is an International Journal on the Science and Technology of Wet and Dry Particulate Systems. Powder Technology publishes papers on all aspects of the formation of particles and their characterisation and on the study of systems containing particulate solids. Atomization is accomplished by forcing a molten metal stream through an orifice at moderate pressures. A gas is introduced into the metal stream just before it leaves the nozzle, serving to create turbulence as the entrained gas expands (due to heating) and exits into a large collection volume exterior to the orifice. The collection volume is filled with gas to promote further turbulence of the molten metal jet. Air and powder streams are segregated using gravity or cyclonic separation. Most atomized powders are annealed, which helps reduce the oxide and carbon content. The water atomized particles are smaller, cleaner, and nonporous and have a greater breadth of size, which allows better compacting. The particles produced through this method are normally of spherical or pear shape. Usually, they also carry a layer of oxide over them.

There are three types of atomization:

- Liquid atomization
- Gas atomization
- Centrifugal atomization

Composite Materials: Composite Material is a material made from two or more constituent materials with significantly different physical or chemical properties that, when combined, produce a material with characteristics different from the individual components. The individual components remain separate and distinct within the finished structure. The new material may be preferred for many reasons: common examples include materials which are stronger, lighter, or less expensive when compared to traditional materials. More recently, researchers have also begun to actively include sensing, actuation, computation and communication into composites, which are known as Robotic Materials.

Typical engineered composite materials include:

- mortars, concrete
- Reinforced plastics, such as fibre-reinforced polymer
- Metal composites
- Ceramic composites (composite ceramic and metal matrices)

Composite materials are generally used for buildings, bridges, and structures such as boat hulls, swimming pool panels, race car bodies, shower stalls, bathtubs, storage tanks, imitation granite and cultured marble sinks and countertops. The most advanced examples perform routinely on spacecraft and aircraft in demanding environments.

3D Printing : 3D printing, also known as **additive manufacturing (AM)**, refers to processes used to create a three-dimensional object in which layers of material are formed under computer control to create an object. Objects can be of almost any shape or geometry and are produced using digital model data from a 3D model or another electronic data source such as an Additive Manufacturing File (AMF) file. Thus, unlike material removed from a stock in the conventional

machining process, 3D printing or AM builds a three-dimensional object from computer-aided design (CAD) model or AMF file by successively adding material layer by layer.The term "3D printing" originally referred to a process that deposits a binder material onto a powder bed with inkjet printer heads layer by layer. More recently, the term is being used in popular vernacular to encompass a wider variety of additive manufacturing techniques. United States and global technical standards use the official term *additive manufacturing* for this broader sense. ISO/ASTM52900-15 defines seven categories of AM processes within its meaning: binder jetting, directed energy deposition, material extrusion, material jetting, powder bed fusion, sheet lamination and photopolymerization

3 D Printer

PHOTO PROOF :

Dr.V.Anandakrishnan delivered the lecture

Department of Mechanical Engineering

Conclusion

Dr.V.AnandaKrishnan had delivered the topic "Powders to product" to Department of Mechanical Engineering students on 24.07.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He cover all the topics such as Powder metallurgy, Composite materials and 3D printing for using product, He also thought Fundamentals of Powder metallurgy, Sintering, Compacting and injection moulding process. He also describe the composite materials, production methods and 3 D printing for Product. It was very useful to students and faculty members of Mechanical Engineering department. Finally power point and Videos presentation show to the student to describe the working principle 3D printing Technology.

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
(Accredited by NAAC)
(Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai)

Feedback Form Report

Name of the Program: Guest Lecture on " Powders to Product "
Date: 24.07.2017

1. What is your opinion about the duration of this program?
   A. Short B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good C. Average D. Poor

Any other comment (if any):

Good Organizing.

M.A.M. SCHOOL OF ENGINEERING

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   A. A lot B. Satisfactory C. None of it
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   A. Yes B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good C. Average D. Poor
8. Any other comment (if any):

M.A.M. SCHOOL OF ENGINEERING

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   A. Yes B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good C. Average D. Poor
8. Any other comment (if any):

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Lecture on " Powders to Product "
Date: 24.07.2017

1. What is your opinion about the duration of this program?
   A. Short ✓ B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent ✓ C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good ✓ B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good ✓ C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot ✓ B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes ✓ B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good ✓ C. Average D. Poor
8. Any other comment (if any):

(3)

MAM School of Engineering

Trichy-Chennai Trunk Road, Siruganur, Trichirapalli - 621 105

Date: 17.07.2017

Department of Mechanical Engineering

Topic	Speaker	Venue	Date & Time
Guest Lecture on **"Industrial Automation and Robotics"**	**Er.J.Jijo christo,** Sr.Application Engineer. Axis Global Automation, Chennai.	Seminar Hall MAM School of Engineering.	17.07.2017 & 2.00-4.30 pm

Er.J.Jijo Christo Deliver the lecture about Industrial Automation

Topic Covered ; 1.Industrial Automation

2. SCADA

3. Automatic Guided vehicle

4. Robotics

5. Material Handling System

pm (1)

Topic : Industrial Automation and Robotics **17.07.2017**

Speaker : Er.J.Jijo christo

Session -1 (2.00 pm – 3.15 PM) – Industrial Automation

The Department of Mechanical Engineering Organize the Guest lecture on topic of Industrial Automation and Robotics on 17.07.2017 at seminar Hall. Er.**J.Jijo Christo, Sr.Application Engineer, Axis Global Automation Industry** delivered the lecture of Industrial Automation. He demonstrates the material handling system followed in various industries such Foundry shop, Car manufacturing Industry, Power plant Industry, piping industry and Structural Industry. He gives ideas for Modern industrial automation techniques and implementation process. He explained the degree of freedom of material handling devices and Applications of Pneumatics system. He also thought Automatic Guided vehicle and application in Material handling system in Car Industries and Mining Industries.

Session -1 (3.15 pm – 4.30 PM) – Robotics

Er.J.Jijo christo,Sr.Application Engineer,Axis Global Automation Industry,Delivered the topic of Robotics.He explained the Types of Robotics system,Application of Robotics system,Degree of Freedom,Co ordinate system and Principle of working of Modern robotics.He also present videos and filmshow in Various robots used in Welding process,Painting Process,Casting Process ,Matrial Handling system, medical apllication system and Homestic application system.He thought about SCADA.FANUC system used in Modern manufactturing system using Robots.He also gives presentation about Humanoid robot,Industrial robot,Unmaned vehicle robot and Medical robot.He also demonstrates Hydraulic operated robot,Pneumatic operated robot,Mechanical Robot and Pick and Place robot for material Handling systems.Finaly conclude Robotics play an Important role in Manufacturing industries and relieve the human strain.

FEED BACK

Title of topic: Industrial Automation and Robotics

Speaker: 1. Er.J.Jijo Christo, Sr.Application Engineer, Axis Global Automation Industry.

Sl.No	Name of the student	Year of study	Feed back
1	S.ARIVOLINABISUDEEN	Final Year	Good lecture about the Industrial Automation
2	A-HARIHARASUDHAN	IV YR	usefull
3	K. ABDUL RASHEETH	final year.	very useful to improve my talent & attitude
4	B. mohamed Asim	IV	very useful to us
5	S. Ajith	IV	very knowledge keeping
6	D. M. DHANEESHwa	IV	Useful
7	P. Abbas	IV	very interesting
8	J. ARUL DHILEEPAN	IV	useful
9	S Samser Ahamed	IV	Active lecture about Industrial Automation very useful for us.
10	B. Chandra mohan	IV	Gathered information about the Robots in industrial applications.

Co ordinator
(Dr. T T M. Kannan)

Head of the department

Principal

Guest Lecture on "Industrial Automation & Robotics"

17/7/17
2:00PM - 4:30PM

Sl	Name Of the student	Signature
1	T. Thirumavalavan	T. Thirumavalavan
2	S. PASUPATHI	S. pasupathi
3	S. PRASANTH	
4	M. Soukath Ali Malik	M. Soukath Ali Malik
5	Y. Mohamed Riyaz	Y. Mohamed Riyaz
6	M. Riyas Ahamed	M. Riyas Ahamed
7	T. Elavarasan	T. Elavarasan
8	M. MAHENDRAN	M. Mahendran
9	S. Ganapathi.	S. Ganapathi.
10	S. Goodwin Aroziya Rous	Suriwin Rous
11	C. Fouinast Alphadi	C. Fouinast
12	P. Dhinsh	P. Dhinsh
13	A. Yasararafath	A. Yasararafath
14	V. Manoj kumar	V. Manoj kumar
15	S. Mohammad Nivas	S. Mohammad Nivas
16	I- Syed mohamed.	I. Syed mohamed.
17	K. Dhilip kumar	K. Dhilip kumar
18	S. prakash	S. prakash
19	D. M. DHANEESHWAR	D. M. Dhaneeshwar
20	M. Gowtham	M. Gowtham

Guest lecture on "Industrial Automation & Robotics"

Sl No	Name of the Student	Signature
21	S. JAINUDEEN	
22	I. Mani Moran.	
23	M. MANOJKUMAR	
24	S. Abdual latheef	
25	M. Mohamed Faizal khan	
26	Mohammed Asim. B	
27	Ajith. S	
28	ABBAS. P	
29	ABDUL RASHEETH. K	
30	S. Velmurugan.	
31	P. Kumaran	
32	P. Ajith kumar	
33	R. Sathya Seelan	
34	J. Dineshkumar	
35	Balavignesh. V	
36	J. Arul Dhilapan	
37	G. Purushothaman	
38	B. Noorul Aslam	
39	M. Mohamed Riyas	
40	K. Praveen Kumar	

Guest lecture on "Industrial Automation & Robotics"

17/7/17

S.No	Name of the Student	Signature
41	R. Prabhakaran.	R. Prakash
42	S. Rajeshwaran	S. Rajesh
43	P. Suresh Kanth.	P. Suresh Kanth
44	S. SAMEER AHAMED	S. Sameer Ahamed
45	B. Chandra mohan	B. Chandra mohan
46	A. HARIHARASUDHAN	A. Hariharasudhan.
47	K. vinothkumar	K. Vinothkumar
48		
49		
50		

MAM School of Engineering

Trichy-Chennai Trunk Road, Siruganur, Trichirapalli - 621 105

Date: 10.07.2017

Department of Mechanical Engineering

Topic	Speaker	Venue	Date & Time
Guest Lecture on **"Introduction to 3D printing"**	**Er.M.Pugazhenthi,** Application Engineer, Cube Technologies, Chennai-600069.	Seminar Hall MAM School of Engineering.	10.07.2017 & 2.00-4.30 pm

Er.M.Pugazhenthi Deliver the lecture of Features of 3D printing

Mr.S.Haran Demonstrate 3D Printer for micro manufacturing system

Topic : Introduction to 3D Printing **10.07.2017**

Session-1 (2.00 pm -3.15 pm)

Er.M.Pugenthi from Cube Technologies , Chennai deliver the lecture of Introduction to 3D printing using Portable 3D printer.He cover the topics such as Reverse Engineering,Re engineering,Rapid prototyping and micro manufacturing process, He delivered importance of 3D printer,working principle,special features modeling,stereolithography,Analysiis and optimization.He also thought various componemts such as gear,cams,lavers,brackets,automotive pins,valves,small couplings,Cotter pins and screw in minature size.

Session-1 (3.15 pm -4.30 pm)

Mr S.Haran,Executive,Cube Technologies,Chennai.Who demonstarates the 3D printer,principle parts,working principle,scope and applications.He also trained the students in 3D printer and produce a small components such as Polymer Gear and polymer valves in smal size.He also explains reverse manufacturing system using 3D printer for damaged or worn out components.He also suggest the project work in 3D printing.Finally he give keynote to 3 D printer lead to sustainable manufacturing system and future manufacturing system.

Topics Covered

- Revresre Engineering
- Rapid Prototyping
- 3D printer
- Stereo lithography
- 3D printing

FEED BACK

Title of topic: Introduction to 3D printing

Speaker: 1. Er.M.Pugazhenthi, Application Engineer,

2. Mr.S.Haran, Executive,Cube Technologies.

Sl.No	Name of the student	Year of study	Feed back
1	S. RAJESHWARAN	FINAL YEAR MECHANICAL	Very useful and practical Knowledge gained
2	B. Chandramohan	FINAL YEAR MECHANICAL	USEFUL and gathered lot of information about it.
3	S. pasupathi	FINAL YEAR MECHANICAL	very useful and innovative information.
4	S. Goodwin Arokiya Raj	Final year mechanical	very useful and knowledge Improve.
5	M. Mohamed Riaz	Final year Mechanical	very useful
6	V. Manoj kumar	Final year Mechanical	usefull for project and designeer engineer purpose also.
7	Y. Mohamed Riyaz	final year Mechanical	useful for the Curriculum and future Projects.
8	K. Praveen kumar.	final year mechanical	useful for project and designer engineer purpose also
9	S. Abdul Lathreef	final year Mechanical	need more live demonstration in new innovative topics. the session is very usefull.
10	G. Purushothaman	Finalyear MECH	It is useful for skill and knowledge gained in my mind

Co ordinator

Head of the department

Principal

VII:

10.07.2017

INTRODUCTION TO 3D PRINTING

I attended guest lecture on 3D printing. It is useful to know about reverse engineering, FREE Engineering, Additive engineering. I also take bits of Plastic, Polymer model making process. It is very useful to take project on 3D Printing. I think to take technology for model making process.

S. Jayanthi

10.07.2017

TOPIC;

INTRODUCTION TO 3D PRINTING

I attended guest lecture on 3D Printing. It is useful to know about Reverse engineering, FREE Engineering, Addictive engineering. I also take lots of practice in Polymer model making process. It is very useful to take Project on 3D Printing. I thank to Cube technology for model making process.

S. pasupathi

Topic : Introduction to 3D - Printing

10/7/17 . I attended guest lecturer on 3D - printing . which is useful to know about the Reverse Engg . re - engg , additive engg and rapid prototying method .

I also take hands-on pratice on polymer making model process , it is very useful to take proces . I thanks to cube technology for model making process .

K. ABDUL RASHEETH

812114114002.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture Report
On
"Technological Advancement of NDT"

07.08.2017

TABLE OF CONTENTS

H.O.D/Mechanical

Head of the Department
Mechanical Engineering
M.A.M. School of Engineering
Siruganur, Trichy-621 105.

PRINCIPAL

PRINCIPAL
M.A.M. SCHOOL OF ENGINEERING
SIRIGANUR, TIRUCHIRAPPALLI-621 105.

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Final Year students and Faculty members of the department activity of Guest lecture programme on **"Technological Advancement in NDT"** at Seminar Hall, M.A.M School of Engineering between 2.00 pm – 4.30 pm on 07.08.2017.

Venue: Seminar Hall

Resource Person:

Er.D.Shankar,
Engineer-NDT Services,
Ever shine Institute of Testing and Training,
First Cross, Thillai Nagar,
Trichirappalli -620 018.

Email: evershineitt@gmail.com
admin@evershineitt.com
Phone No: 0431- 4060282
Mobile Number: 96886 90282

GUEST PROFILE

RESOURCE PERSON:

Er.D.Shankar,
Engineer-NDT Services,
Ever Shine Testing and Training,
First Cross,Thillai nagar,
Trichirappalli -620 018.

Email: evershineitt@gmail.com
admin@evershineitt.com
Phone No: 0431- 4060282
Mobile Number: 96886 90282

PROGRAMME DETAILS

Er.D,S*hankar, Engineer-NDT services, Evershine Testing and Training,* gave a brief lecture about **" Technological advancement of NDT "** at M.A.M School of Engineering on 07.08.2017. He discussed more information about the Basics of Material Testing, Need of NDT, Methods of NDT, Ultrasonic Testing, Radiographic Test, Magnetic particle test, Liquid Penetrating Test and Material. Totally 46 students and 3 Faculty members had attended this Program .

PROGRAM

- Introduction to Chief Guest.
- Guest Lecture on Topic "Technological Development of NDT"
- Demonstration of Welded joint and Casting process Testing methods.
- Power point presentation of NDT Techniques.
- Video session.
- Vote of Thanks

1. NON-DESTRUCTIVE TESTING: Non-Destructive testing (NDT) is a wide group of analysis techniques used in science and technology industry to evaluate the properties of a material, component or system without causing damage. The terms nondestructive examination (NDE), nondestructive inspection (NDI), and nondestructive evaluation (NDE) are also commonly used to describe this technology.[2] Because NDT does not permanently alter the article being inspected, it is a highly valuable technique that can save both money and time in product evaluation, troubleshooting, and research. The six most frequently used NDT method are eddy-current, magnetic-particle, liquid penetrant, radiographic, ultrasonic, and visual testing. NDT is commonly used in forensic engineering, mechanical engineering, petroleum engineering, electrical engineering, civil engineering, systems engineering, aeronautical engineering, medicine, and art.

ASTM's nondestructive testing standards provide guides for the appropriate methods and techniques used to detect and evaluate flaws in materials and objects without destroying the specimen at hand. Such tests include radiographic, ultrasonic, electromagnetic (eddy-current), X-ray, acoustic, and tomographic techniques. Detected flaws are evaluated for possible rejection due to nonconformance to set acceptance criteria. These nondestructive testing standards are instrumental to laboratories and a wide variety of industrial plants for examining a material's quality and, consequently, suitability for intended use

2.Methods of Non-Destructive Testing

Liquid (Dye) penetrant method: Liquid penetrant inspection (LPI) is one of the most widely used nondestructive evaluation (NDE) methods. Its popularity can be attributed to two main factors, which are its relative ease of use and its flexibility. The technique is based on the ability of a liquid to be drawn into a "clean" surface breaking flaw by capillary action. . This method is an inexpensive and convenient technique for surface defect inspection. The limitations of the liquid penetrant technique include the inability to inspect subsurface flaws and a loss of resolution on porous materials. Liquid penetrant testing is largely used on nonmagnetic materials for which magnetic particle inspection is not possible. Materials that are commonly inspected using LPI include the following; metals (aluminum, copper, steel, titanium, etc.), glass, many ceramic materials, rubber, plastics. Liquid penetrant inspection is used to inspect of flaws that break the surface of the sample. Some of these flaws are listed below; fatigue cracks, quench cracks grinding cracks, overload and impact fractures, porosity, laps seams, pin holes in welds, lack of fusion or braising along the edge of the bond line.

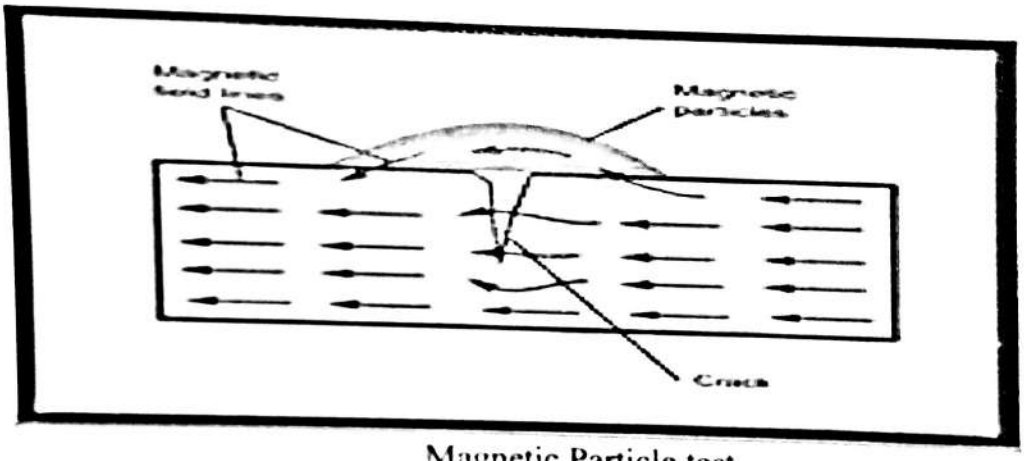
Magnetic particle inspection is one of the simple, fast and traditional nondestructive testing methods widely used because of its convenience and low cost. This method uses magnetic fields and small magnetic particles, such as iron filings to detect flaws in components. The only requirement from an inspect ability standpoint is that the component being inspected must be made of a ferromagnetic material such iron, nickel, cobalt, or some of their alloys, since these materials are materials that can be magnetized to a level that will allow the inspection to be effective. On the other hand, an enormous volume of structural steels used in engineering is magnetic. In its simplest application, an

electromagnet yoke is placed on the surface of the part to be examined, a kerosene-iron filling suspension is poured on the surface and the electromagnet is energized. If there is a discontinuity such as a crack or a flaw on the surface of the part, magnetic flux will be broken and a new south and north pole will form at each edge of the discontinuity. Then just like if iron particles are scattered on a cracked magnet, the particles will be attracted to and cluster at the pole ends of the magnet, the iron particles will also be attracted at the edges of the crack behaving poles of the magnet. This cluster of particles is much easier to see than the actual crack and this is the basis for magnetic particle inspection. For the best sensitivity, the lines of magnetic force should be perpendicular to the defect.

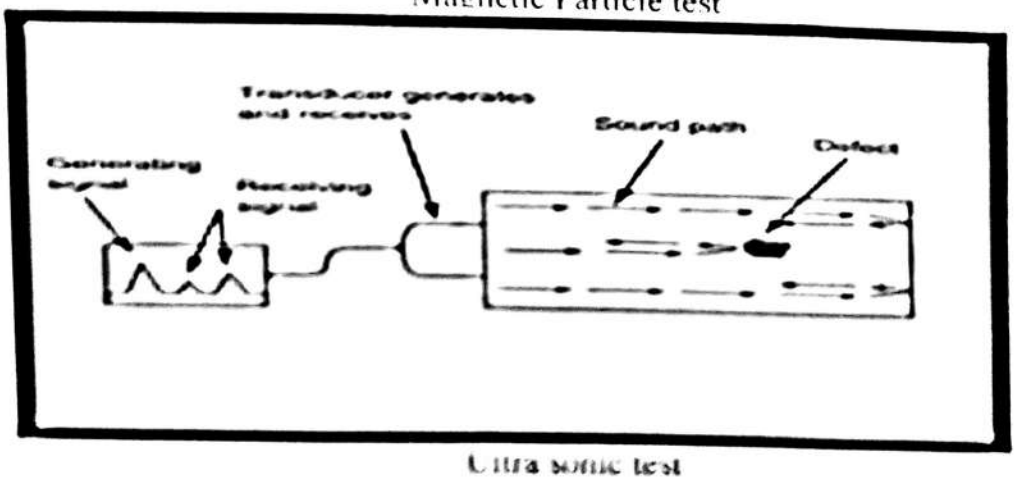
Eddy current testing: Eddy currents are created through a process called electromagnetic induction. When alternating current is applied to the conductor, such as copper wire, a magnetic field develops in and around the conductor. This magnetic field expands as the alternating current rises to maximum and collapses as the current is reduced to zero. If another electrical conductor is brought into the close proximity to this changing magnetic field, current will be induced in this second conductor. These currents are influenced by the nature of the material such as voids, cracks, changes in grain size, as well as physical distance between coil and material. These currents form an impedance on a second coil which is used to as a sensor. In practice a probe is placed on the surface of the part to be inspected, and electronic equipment monitors the eddy current in the work piece through the same probe. The sensing circuit is a part of the sending coil. Eddy currents can be used for crack detection, material thickness measurements, coating thickness measurements, conductivity measurements for material identification, heat damage detection, case depth determination, heat treatment monitoring. Some of the advantages of eddy current inspection include; sensitivity to small cracks and other defects, ability to detect surface and near surface defects, immediate results, portable equipment, suitability for many different applications, minimum part preparation, no necessity to contact the part under inspection, ability to inspect complex shapes and sizes of conductive materials. Some limitation of eddy current inspection; applicability just on conductive materials, necessity for an accessible surface to the probe, skillful and trained personal, possible interference of surface finish and roughness, necessity for reference standards for setup, limited depth of penetration, inability to detect of the flaws lying parallel to the probe coil winding and probe scan direction.

Ultrasonic Inspection: Ultrasonic Testing (UT) uses a high frequency sound energy to conduct examinations and make measurements. Ultrasonic inspection can be used for flaw detection I evaluation, dimensional measurements, material characterization, and more. A typical UT inspection system consists of several functional units, such as the pulser/receiver, transducer, and display devices. A pulser/receiver is an electronic device that can produce high voltage electrical pulse. Driven by the pulser, the transducer of various types and shapes generates high frequency ultrasonic energy operating based on the piezoelectricity technology with using quartz, lithium sulfate, or various ceramics. Most inspections are carried out in the frequency rang of 1 to 25MHz. Couplants are used to transmit the ultrasonic waves from the transducer to the test piece; typical couplants are water, oil, glycerin and grease. The sound energy is introduced and propagates through the materials in the form of waves and reflected from the opposing surface. An internal defect such as crack or void interrupts the waves' propagation and reflects back a portion of the ultrasonic wave. The amplitude of the energy and the time required for

return indicate the presence and location of any flaws in the work-piece. The ultrasonic inspection method has high penetrating power and sensitivity. It can be used from various directions to inspect flaws in large parts, such as rail road wheels pressure vessels and die blocks. This method requires experienced personnel to properly conduct the inspection and to correctly interpret the results. As a very useful and versatile NDT method, ultrasonic inspection method has the following advantages; sensitivity to both surface and subsurface discontinuities, superior depth of penetration for flaw detection or measurement, ability to single-sided access for pulse-echo technique, high accuracy in determining reflector position and estimating size and shape, minimal part preparation, instantaneous results with electronic equipment, detailed imaging with automated systems, possibility for other uses such as thickness measurements. Its limitations; necessity for an accessible surface to transmit ultrasound, extensive skill and training, requirement for a coupling medium to promote transfer of sound energy into test specimen, limits for roughness, shape irregularity, smallness, thickness or not homogeneity, difficulty to inspect of coarse grained materials due to low sound transmission and high signal noise, necessity for the linear defects to be oriented parallel to the sound beam, necessity for reference standards for both equipment calibration, and characterization of flaws.



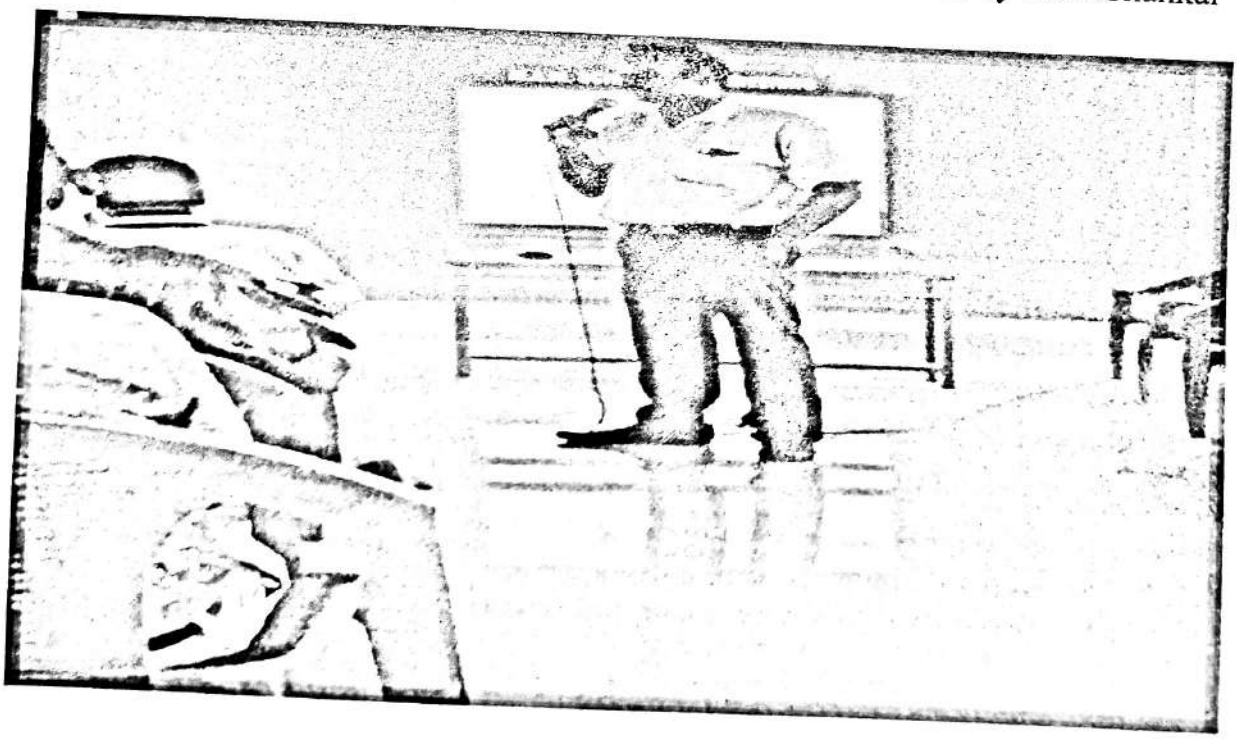
Magnetic Particle test



Ultrasonic test

PHOTO PROOF

Guest Lecture on Technological Advancement in NDT delivered by Er.D.Shankar



Presentation of NDT techniques for Various material

Conclusion

Er.D.Shankar had delivered the topic "**Technological Advancement of NDT** " to Department of Mechanical Engineering students on 07.08.2017 at seminar Hall, M.A.M. School of Engineering, Trichy. He covers all the topics such as Introduction to NDT, Methods of NDT, Various types of material Testing, Radiographic test, Magnetic Particles Test, Dye Penetrating Test and Ultrasonic test. He also thought testing procedures and ISO testing methods and various Inspection techniques. He demonstrates the method of Dye penetrating, Magnetic Particles test and Radio graphic test. It was very useful to students and faculty members of Mechanical Engineering department. Finally power point and Videos presentation show to the student to describe the working principle and testing Procedure of NDT test.

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Feedback Form Report

Name of the Program: Guest Lecture on " Technological Advancement of NDT "
Date: 07.08.2017

1. What is your opinion about the duration of this program?
   A. Short ✓ B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much ✓ B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good B. Good C. Average ✓ D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good ✓ C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory ✓ C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent ✓ C. No
7. Planning of this programme?
   A. Very good B. Good C. Average ✓ D. Poor

Any other comment (if any): very useful

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← Good –

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8. Any other comment (if any):

← Good –

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M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY- 621105.

Guest Lecture Report

on

"AWARENESS ABOUT GATE EXAM"

4th Jan2019

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HOD/Mechanical

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M.A.M. SCHOOL OF ENGINEERING

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INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity for the Guest lecture program on **"AWARENESS ABOUT GATE EXAM"** at Lecturer Hall (AB-201), M.A.M. School of Engineering between 11.00 AM – 1.00 PM on 4th January 2019.

Venue: Lecturer Hall (AB-201)

Resource Person:

Er. H. Azman,
Gatewin Academy,
Trichy.

GUEST PROFILE

Er. H. Azman,
Gate Coaching Instructor,
Gatewin Academy,
Trichy.
Phone: 9884433860.

PROGRAM DETAILS

Er. H. Azman,Gatewin Academy, gave a Guest lecture about **"AWARENESS ABOUT GATE EXAM"**at M.A.M School of Engineering on 4th Jan 2019. He discussed about the advantages in clearing GATE exams and its importance in carrier growth. Totally 65 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "AWARENESS ABOUT GATE EXAM"
- Board Presentation of GATE exam score importance.
- Interaction session
- Feedback session

COURSE CONTENT

The Graduate Aptitude Test in Engineering (GATE) is an examination that primarily tests the comprehensive understanding of various undergraduate subjects in engineering and science. GATE is conducted jointly by the Indian Institute of Scienceand seven Indian Institutes of Technologies at Roorkee, Delhi, Guwahati, Kanpur, Kharagpur, Chennai and Mumbai on behalf of the National Coordination Board – GATE, Department of Higher Education, Ministry of Human Resources Development (MHRD), Government of India.

The GATE score of a candidate reflects the relative performance level of a candidate. The score is used for admissions to various post-graduate education programs (e.g. Master of Engineering, Master of Technology, Doctor of Philosophy) in Indian higher education institutes, with financial assistance provided by MHRD and other government agencies. Recently, GATE scores are also being used by several Indian public sector undertakings (i.e., government-owned companies) for recruiting graduate engineers in entry-level positions. It is one of the most competitive examinations in India.

Eligibility:

- Bachelor's degree holders in Engineering / Technology / Architecture and those who are in the final year of such programs.
- Master's degree holders in any branch of Science/Mathematics/Statistics/Computer Applications or equivalent and those who are in the final year of such programs.
- Candidates in the second or higher year of Four-year integrated master's degree programs in Engineering / Technology.
- Candidates in the fourth or higher year of Five-year integrated master's degree programs or Dual Degree programs in Engineering / Technology.
- Candidates with qualifications obtained through examinations conducted by professional societies recognized by UGC as equivalent to B.E./B.Tech.
- Those who have completed section A or equivalent of such professional courses are also eligible.
- There is no age limit criterion defied by the exam conducting authority to appear in GATE.

PHOTO PROOF

Er. H. Azman about "AWARENESS ABOUT GATE EXAM"

CONCLUSION

Er. H. Azmanhad delivered the topic **"AWARENESS ABOUT GATE EXAM"**to thestudentsof Mechanical Engineeringdepartment on 04.01.2019 atLecturer Hall (AB-201), M.A.M. School of Engineering, Trichy. He covers the topics of various opportunities in scoring GATE exam.Finally,he taught the proceduresinvolved in learning methods and techniques for clearing such exams. It was very useful to Student and Faculty members to get the awareness of competitive exams.

PHOTO PROOF

Er. H. Azman about "AWARENESS ABOUT GATE EXAM"

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PHOTO PROOF

Er. H. Azman about "AWARENESS ABOUT GATE EXAM"

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M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"SIX SIGMA PRINCIPLES"

5th Jan 2019

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Compiled by **HOD/Mechanical** **PRINCIPAL**

M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
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INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity for the Guest lecture program on **"SIX SIGMA PRINCIPLES"** at Seminar Hall, M.A.M. School of Engineering between 11.00 AM – 1.00 PM on 5th January 2019.

Venue: Seminar Hall

Resource Person:

Mr. Mohamed Imran,
Synergy School of business,
Trichy.

GUEST PROFILE

Mr. Mohamed Imran,

Technical Manager,

Synergy School of business,

Trichy.

PROGRAM DETAILS

Mr. Mohamed Imran, Synergy School of business, gave a Guest lecture about **"SIX SIGMA PRINCIPLES"** at M.A.M. School of Engineering on 5th Jan 2019. He discussed about the quality management in manufacturing and business processes. Totally 55 students and 3 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "SIX SIGMA PRINCIPLES"
- PowerPoint Presentation of Six Sigma History & Techniques.
- PowerPoint Presentation of statistical modeling of manufacturing processes.
- Interaction session
- Feedback session

COURSE CONTENT

Six Sigma (6σ) is a set of techniques and tools for process improvement. Six Sigma strategies seek to improve the quality of the output of a process by identifying and removing the causes of defects and minimizing variability in manufacturing and business processes. It uses a set of quality management methods, mainly empirical, statistical methods, and creates a special infrastructure of people within the organization who are experts in these methods. Each Six Sigma project carried out within an organization follows a defined sequence of steps and has specific value targets, for example: reduce process cycle time, reduce pollution, reduce costs, increase customer satisfaction, and increase profits.

Six Sigma doctrine asserts:

- Continuous efforts to achieve stable and predictable process results (e.g. by reducing process variation) are of vital importance to business success.
- Manufacturing and business processes have characteristics that can be defined, measured, analysed, improved, and controlled.
- Achieving sustained quality improvement requires commitment from the entire organization, particularly from top-level management.

Features that set Six Sigma apart from previous quality-improvement initiatives include:

- A clear focus on achieving measurable and quantifiable financial returns from any Six Sigma project.
- An increased emphasis on strong and passionate management leadership and support.
- A clear commitment to making decisions on the basis of verifiable data and statistical methods, rather than assumptions and guesswork.

Difference from Lean Management:

Lean management and Six Sigma are two concepts which share similar methodologies and tools. Both programs are Japanese-influenced, but they are two different programs. Lean management is focused on eliminating waste using a set of proven standardized tools and methodologies that target organizational efficiencies, while Six Sigma's focus is on eliminating defects and reducing variability. Both systems are driven by data though Six Sigma is much more dependent on accurate data.

PHOTO PROOF

Mr. Mohamed Imran, about **"SIX SIGMA PRINCIPLES"**

CONCLUSION

Mr. Mohamed Imran had delivered the topic **"SIX SIGMA PRINCIPLES"** to the students of Mechanical Engineering department on 05.01.2019 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics of process involved in quality management and business operations. It was very useful to Students and Faculty members to get the knowledge of such principles in managing skills.

M.A.M. SCHOOL OF ENGINEERING

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To:

The Editor,
The Hindu,
Trichy

Date : 01.07.2017

Sir/Madam,

Kindly arrange to publish the following in today engagement column on 03.07.2017 on your esteemed daily.

Function Name : **"Advancement in CNC Machining"**

Resource Person : **Mr.N.Manivannan,**
Faculty –CNC / Welding,
R.K.Metal Industries,Trichy.

Date : 03.07.2017

Venue : M.A.M School of Engineering – Seminar Hall

Organized By : Department Of Mechanical Engineering

Time : 2.00 P.M

Thanking You,

With Regards,

(Dr.P.RANJITHKUMAR)
PRINCIPAL

PRINCIPAL
M.A.M. SCHOOL OF ENGINEERING
SIRIGANUR, TIRUCHIRAPPALLI-621 105.

Trichy - Chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105.
0431 - 2910218 / 2910219, Mob : 7708000972
http://www.mamse.co.in Email : principal@mamse.co.in

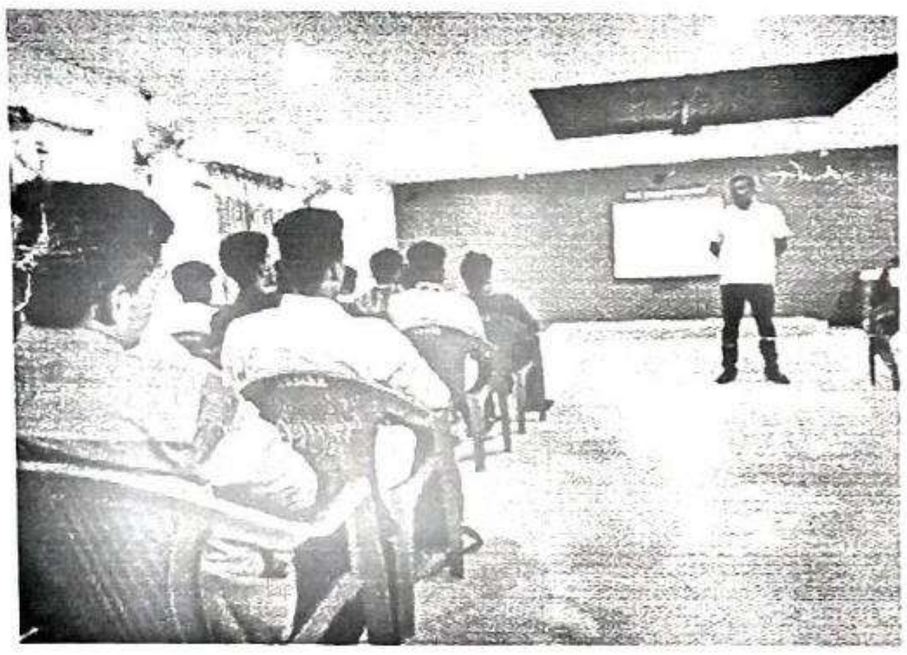
MAM School of Engineering

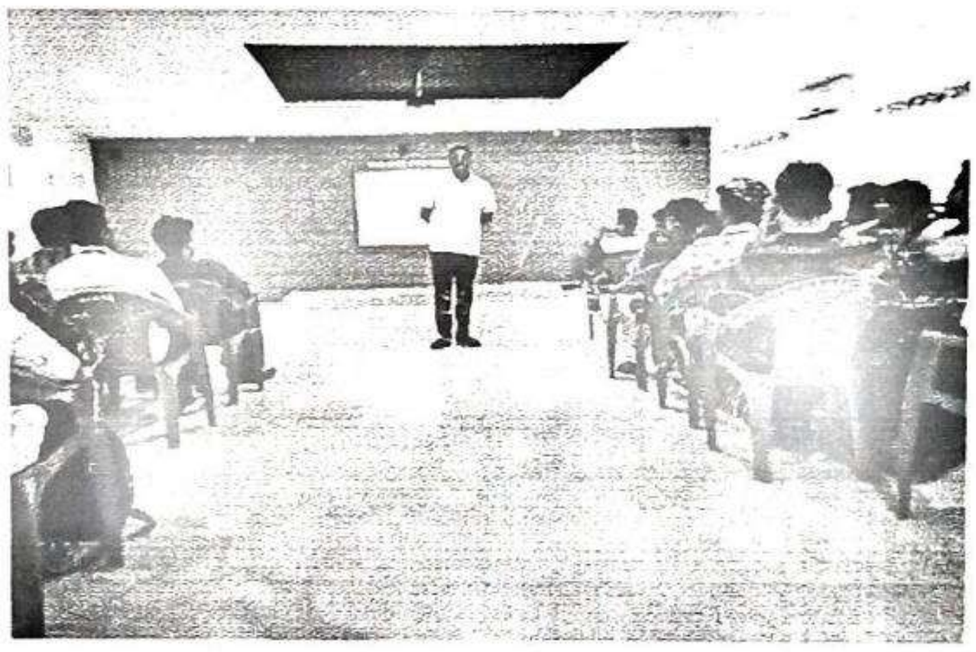
Trichy-Chennai Trunk Road, Siruganur, Trichirapalli - 621 105

Date: 03.07.2017

Department of Mechanical Engineering

Topic	Speaker	Venue	Date & Time
Guest Lecture on **"Advancement in CNC Machining"**	**Er.N.Manivannan,** **Faculty-CNC Programming** R.K.Metals, Thiruverambur, Trichy-14.	Seminar Hall MAM School of Engineering.	03.07.2017 & 2.00-4.30 pm





Advancement in CNC Machining

Er.N.Manivannan delivered basics of CNC programming for turning and milling operation. He also explains the details of G-Code and M-Code of machining process. He teaches how to convert computer aided drawing into Computer aided manufacturing using graphical interfacing software. The various details of machining operation such plain turning, taper turning and eccentric turning are prepared as per CNC programming procedure. He also delivered the advancement of CNC programming in micro turning and micro milling process using existing NC & CNC Machines. He also demonstrated the spindle speed, feed, Depth of Cut, tool setting and job setting in CNC milling process using different software. After lecture program students are asked questions form CNC coding system, Maintenance procedure and Job opportunities in India..

FEED BACK

Title of topic: Advancement in CNC Machining

Speaker: Er.N. Manivannan

Sl.No	Name of the student	Year of study	Feed back
1	R. SIVA	III rd. year.	Very useful Information.
2	S. JAYABAL	III rd year	Very useful, more information gathering
3	S. SARTHIVEL	III RD YEAR	Very Suse to understand the CNC
4	V. BALA SUBRA MANIAN	III RD YEAR	I LEARN FOR. MANY INFORNATION IN CNC M/C
5	T. ANANDHA BABU	III ED YEAR.	VERY USEFUL TO LEARN ABOUT CNC M/C
6	A.M. ATHIEF	III RD YEAR MBI	I Learn (formula & Mazak) Program Language, use full
7	S. Surya	III rd year	Very use ful Information.
8	B. PRABAKARAN	III rd Year	I learn a Regade versions name and language of CNC at that session
9	S. ANTONY PRINCE	III Year.	Very Intresting and useful session I Learn something new about CNC.
10	P. Robinson Xavier.	III yr.	Very intresting session. & more information getter have thankyou sir, ☺

03/07/17

Convener
Co-ordinator
Dr. TTM. Kannan
Assoc Prof / Mech

Head of the department

Principal

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Workshop Report

on

"GEOMETRICAL DIMENSIONS AND TOLERANCE"

24th June 2019 to 26th June 2019

TABLE OF CONTENTS

Compiled by

HOD/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.
(Accredited by NAAC)

INVITATION

The Department of Mechanical Engineering Cordially invites Final Year students of Aeronautical, Mechanical, Mechatronics and Faculty members for the workshop on **"Geometrical Dimensions and Tolerance"** at Max Neumann Lab, M.A.M. School of Engineering between 09.00 AM – 04.30 PM from 24th June2019 to 26th June 2019.

Venue: **Max Neumann Lab,**
Second Floor, Main Block,
MAMSE.

Resource Person:

Dr. P. Arulanandham,
Alpha CADD,
Chennai.

Most of researcher have been studied the surface grinding process parameter and conduct optimization process using conventional surface grinding machine. Only a few researcher conducted grinding force and tool wear calculations, but no one construct mini surface grinder for holding both magnetic and non magnetic material for surface grinding process.

GUEST PROFILE

Dr. P. Arulanandham,
Alpha CADD,
Chennai.

PROGRAM DETAILS

Dr. P. Arulanandham, Alpha CADD, Conducted a workshop about **"GEOMETRICAL DIMENSIONS AND TOLERANCE "** at M.A.M School of Engineering on 24th June 2019to 26th June 2019. He discussed about the design aspects of machining and its importance in Engineerng carrier. Totally 60 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Lecture on Topic "GEOMETRICAL DIMENSIONS AND TOLERANCING"
- Board Presentation of Basics.
- Interaction session
- Feedback session

minimising surface roughness in precision grinding of silicon using resin bonded diamond wheel. They conclude specific energy calculated by theoretical calculations and compared with finite element method using analysis software.

XMoh et al (2010) have investigated the grinding process is characterised by multiplicity of dynamically interacting process variables surface roughness, material removal and specific energy are considered to be important factors in predicting performance of grinding process by using RSM. They conclude larger material removal rate is achieved by medium speed of grinding wheel and lower surface roughness is achieved by higher wheel speed during grinding process of stainless steel plates.

Kwak et al (2014) have presented the experimental set up to analyze effectively the grinding power and surface roughness of ground work piece in the external cylindrical grinding of hardened SCM440 steel using RSM. Mini surface grinding is suitable for machining micro components and circularity error developed by higher feed rate.

Mane et al (2014) have developed micro grinding machine for machining ultra precision of micro components using bio medical applications. They also analysing surface roughness of grinding process and material removal rate of austenitic stainless steel and conclude higher wheel speed produce lower surface roughness.

Walk et al (2014) have fabricated and investigated desktop machine for manufacturing small components using Ultra small micro pencil grinding tools. They investigated micro pencil grinding machine process parameters for predicting material removal rate, re clamping error and grinding force analysis of composite materials. Finally conclude ultra small micro pencil grinding tools may be implement micro factory and nano grinding process.

COURSE CONTENT

Geometric Dimensioning and Tolerance

Geometric dimensioning and tolerance (GD&T) is a system for defining and communicating engineering tolerances. It uses a symbolic language on engineering drawings and computer-generated three-dimensional solid models that explicitly describe nominal geometry and its allowable variation. It tells the manufacturing staff and machines what degree of accuracy and precision is needed on each controlled feature of the part. GD&T is used to define the nominal (theoretically perfect) geometry of parts and assemblies, to define the allowable variation in form and possible size of individual features, and to define the allowable variation between features.

Dimensioning specifications define the nominal, as-modeled or as-intended geometry. One example is a basic dimension.

Tolerancing specifications define the allowable variation for the form and possibly the size of individual features, and the allowable variation in orientation and location between features. Two examples are linear dimensions and feature control frames using a datum reference (both shown above).

There are several standards available worldwide that describe the symbols and define the rules used in GD&T. One such standard is American Society of Mechanical Engineers (ASME) Y14.5. This article is based on that standard, but other standards, such as those from the International Organization for Standardization (ISO), may vary slightly. The Y14.5 standard has the advantage of providing a fairly complete set of standards for GD&T in one document. The ISO standards, in comparison, typically only address a single topic at a time

CHAPTER 2
2.1 LITERATURE SURVEY

Weck et al (2000) have proposed to demand on Rapid and economic fabrication of miniature with complex shapes and new challenges for ultra precision machine tool design. They construct mini grinding machine for miniature of components and conduct grinding parameters of tool steel. They also found higher grinding wheel speed produce slower surface roughness.

Stephenson et al (2012) have considered in the context of the design of the machine and some major design issues include stiffness of damping, Structural configuration, structural connectivity and dynamic performance of mini machine tool, They also proposed to construct bench type Ultra precision machine will be role in small and medium enterprises for miniature of components.

Xhou et al (2002) have proposed a new model for surface grinding machine by taking into machining parameters of alloy steel and predict surface roughness in ceramic grinding using Random distribution of grain protrusion heights using Gaussian distribution model.

Rao et al (2003) have carried out experimental studies to obtain optimum conditions for silicon carbide using genetic algorithm and predict the result of effect of grinding wheel grit size and grinding parameters such wheel depth of cut and work feed rate on the surface roughness and damages are also investigated.

Agarwal et al (2005) have established a new Analytical surface roughness model on the basis of stochastic nature of the grinding process governed mainly random distribution model by assuming the profile of groove generated by individual grains of surface grinding process. They informed grinding forces can be easily predicted by finite element method.

Konneh et al (2011) have investigated surface grinding parameters of low carbon steel specimen using Taguchi method and Box behnken design for

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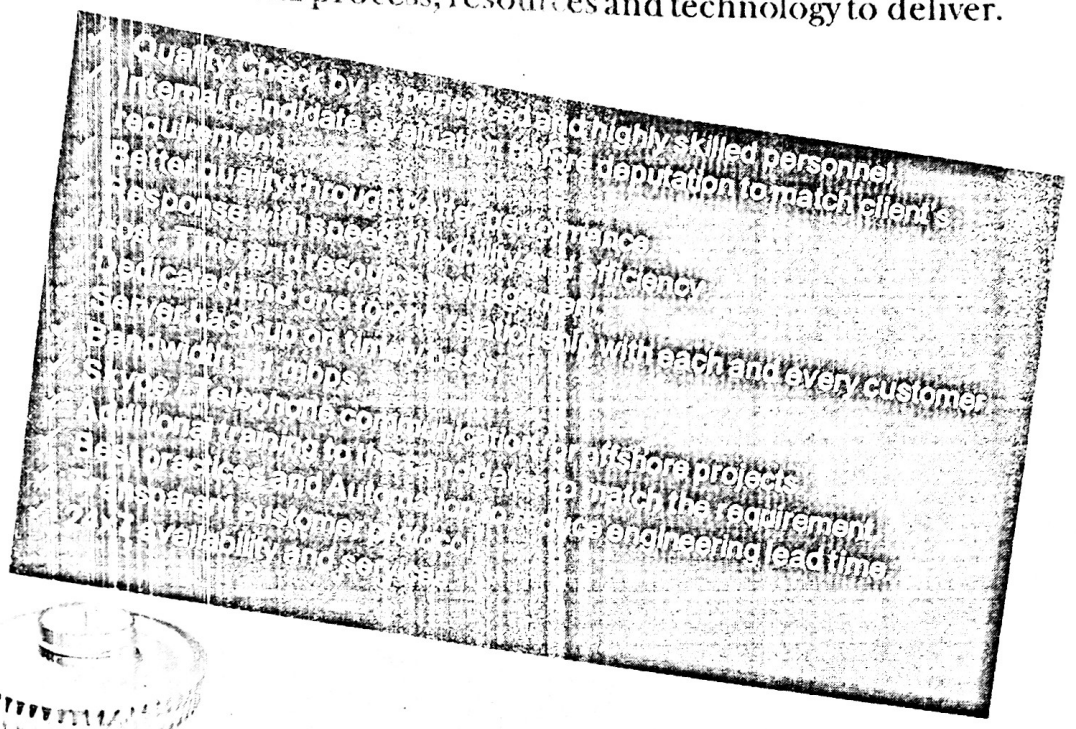
Internal process, resources and technology to deliver.



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ABOUT U's

AlphaCADD is one of the India's leading technology solutions provider in the areas of Concept Design,Reverse Engineering,Prototype Building,CD Scanning of physical part. We have strong knowledge in Automobile Sheet Metal, Engineering calculations ,GD&T and various CAD tools like Pro Engineer, Pro Catalog, PEM & P Methods, Pro Weldtek, Pro Mechanica, Stress Analysis, Autodesk Inventor, Revit Architecture, Revit MEP, Staad PRO, Tekla, CREO, CATIA, AutoCAD, solidworks.

Established in 2012, AlphaCADD has consistently delivered industry proven expertise to a wide range of technologies and industries across India through the entire product cycle and represents several leading and cutting edge CAD/CAM/CAE products around the world. We have product development project experience, carried out projects inside India and Overseas. We carried out projects from Data migration,Harness design, Concept design to Product development, Design Automation for various overseas Clients.

Our 16 years of design engineering and project management experiences constructed AlphaCADD Engineering services in Chennai. We carried out various projects and Presently working with several major Clients in India and we have considerable hands on CAD knowledge and experience. AlphaCADD provides the perfect balance between cost quality with timely support, reliable product delivery and real time results. AlphaCADD's now how makes you ready for today and positions you for tomorrow.

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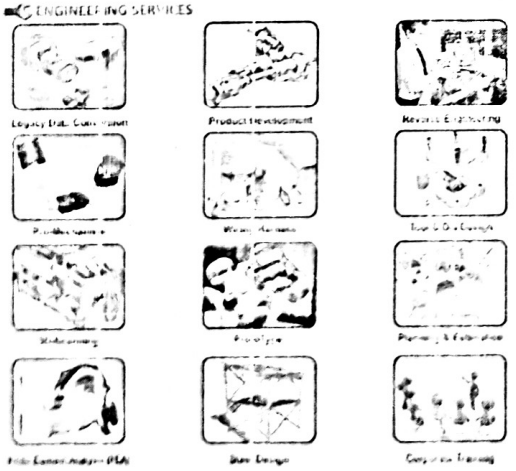
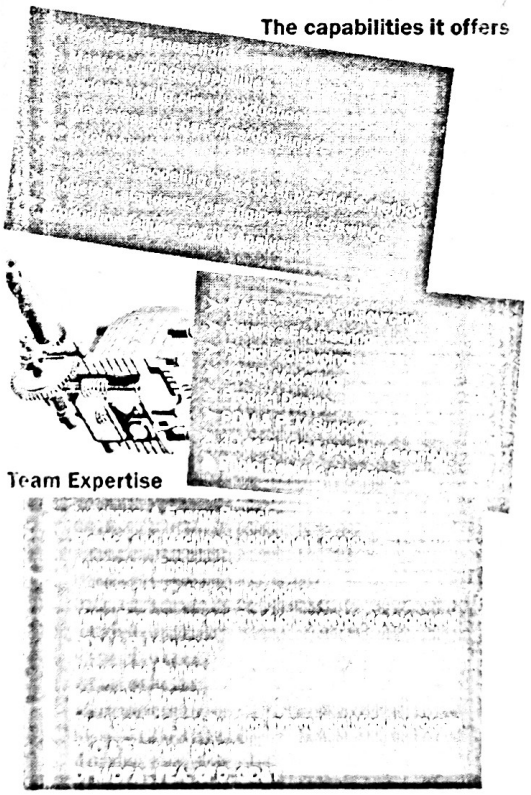
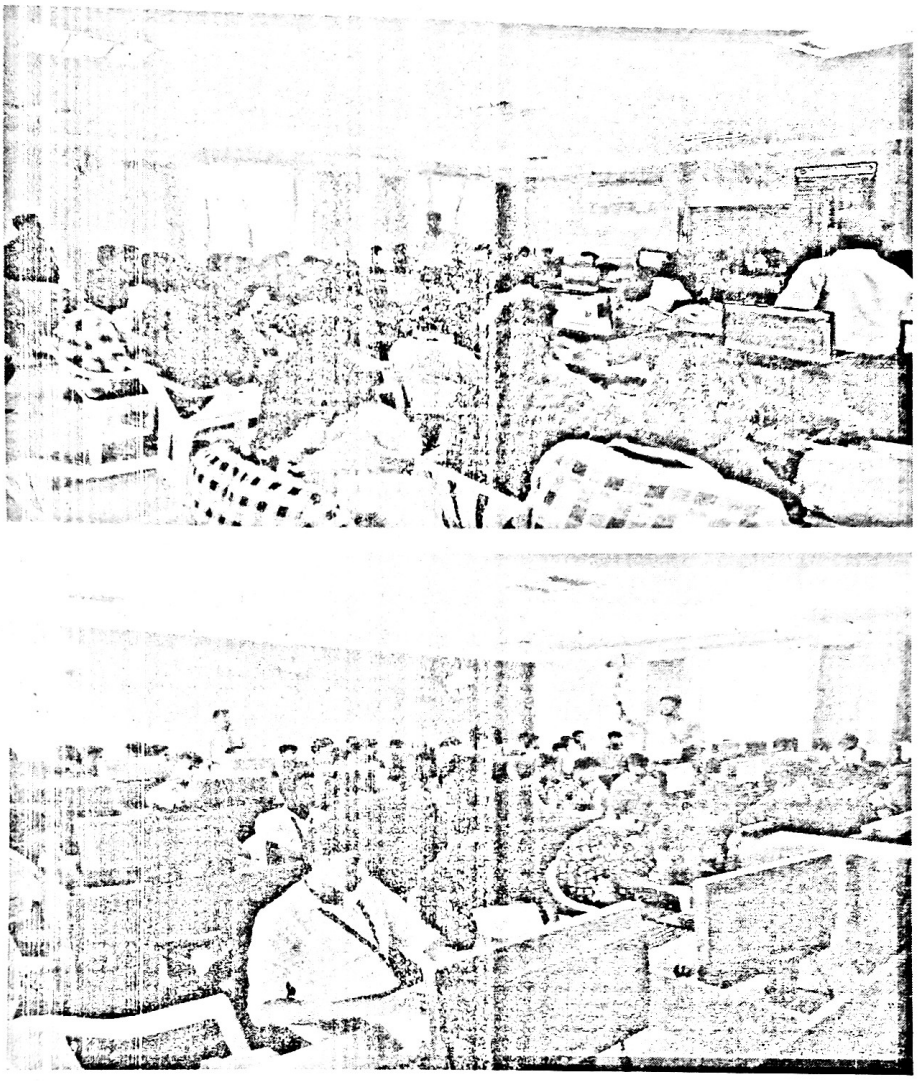


The capabilities it offers



Team Expertise

PHOTO PROOF



Dr. P. Arulanandham about **"GEOMETRICAL DIMENSIONS AND TOLERANCING"**

CONCLUSION

Dr. P. Arulanandham had conducted the Workshop "Geometrical Dimensions And Tolerancing" to the students of Mechanical, Aeronautical and Mechatronics Engineering department on 24th June 2019 to 26th June 2019 at Max Neumann Lab, M.A.M. School of Engineering, Trichy. He covers the various topics in Dimensioning and Tolerances. Finally, He taught the procedures involved in learning methods and techniques for excelling in Design field. It was very useful to Student and Faculty members to get the knowledge of basic desinging and machining knowledge.

M.A.M.SCHOOL OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2018-2019 ODD SEMESTER
05 Sem [III YEAR] CREO ATTENDANCE

S.NO	REG.NO	STUDENT NAME	27/6/19 FN	28/6/19 FN				
1	812117114001	ABDUL MAJEEDHU M						
2	812117114002	ABDUL SALAM B						
3	812117114004	AJITH K						
4	812117114005	AJITH S	LA	LA	LA	LA	LA	LA
5	812117114006	AJITHKUMAR C						
6	812117114007	AJITHKUMAR K						
7	812117114008	AKALYA K						
8	812117114009	AKTHAR AHAMED S						
9	812117114012	ARUNKUMAR K						
10	812117114014	ATHIRAJ A						
11	812117114015	BALAKRISHNAN G						
12	812117114017	BHARATHI P						
13	812117114018	CHIYAVUTHEEN Y						
14	812117114021	FAHIM APSAR S						
15	812117114022	FARHAN SAHIB S	LA	LA	LA	LA	LA	LA
16	812117114023	FROSE KHAN S						
17	812117114027	JAGADEESH K						
18	812117114028	JAYAKUMAR G	LA	LA	LA	LA	LA	LA
19	812117114029	JAYASHREE R						
20	812117114030	JENIFER AGALYA C						
21	812117114034	KARTHIKEYAN (14-08-2000) R						
22	812117114035	KEERTHI SANKAR M						
23	812117114036	MAHATHEER MOHAMMED M	AB					
24	812117114037	MANIKANDAN P						
25	812117114038	MANIKANDAN R						
26	812117114039	MANIMARAN B						
27	812117114041	MOHAMED ARAFATH K						
28	812117114044	MOHAMED FAWAZ S						
29	812117114045	MOHAMED ISHAIK T						
30	812117114048	MOHAMED SAFIULLAH M						
31	812117114051	NANCY MARY P						
32	812117114052	NAVEEN KUMAR M						
33	812117114054	NISHAR AHAMED Z						
34	812117114055	NITHINKUMAR S						

			27/6/19	28/6/19	29/6/19	1/7/19	2/7/19	3/7/19
35	812117114056	PASUPATHY S			AB	AB	AB	AB
36	812117114057	PONMUDI CHOLAN U						
37	812117114058	PRAKASH B						
38	812117114059	RAMESH K LA				LA	LA	LA
39	812117114061	SABITH ALI A						
40	812117114062	SACHIN RYON A V						
41	812117114063	SELVAKUMAR D						
42	812117114064	SENBAGA PANDIAN S						
43	812117114065	SHALINI PRIYA S						
44	812117114066	SIVAKUMAR G		AB				
45	812117114067	SIVARAM S LA	LA	LA	LA	LA	LA	
46	812117114069	SUBASH K						
47	812117114070	SULTHAN IBRAHIM MARIKHA M						
48	812117114071	SURIYAPRAKASH T						
49	812117114073	SURYA V						
50	812117114075	SYED THILFIN ALHAQ H						
51	812117114077	UMAR FAROOQ H						
52	812117114078	VASANTH S						
53	812117114080	VEERAMANI V LA						
54	812117114081	VELMURUGAN A						
55	812117114082	VENGATESH.D LA						
56	812117114083	VENGADESAN K						
57	812117114084	VIJAY K						
58	812117114086	VIJAYAPRATHAP V						
59	812117114088	VIMALRAJ K						
60	812117114089	VINITH DIFNISH P						
61	812117114092	MURALI D						
62	812117114301	LOGESH P						
63	812117114303	SYED MUSTAQ						
64	812117114701	S. BALAMURUGAN						
65	812117114702	C.SATHYASEELAN						
66	812117114703	D. PARKAVI						

M.A.M.SCHOOL OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2018-2019 ODD SEMESTER
05 Sem [III YEAR] CREO ATTENDANCE

S.NO	REG.NO	STUDENT NAME	4/7/19	5/7/19				
1	812117114001	ABDUL MAJEEDHU M A						
2	812117114002	ABDUL SALAM B						
3	812117114004	AJITH K						
4	812117114005	AJITH S						
5	812117114006	AJITHKUMAR C	LA	LA				
6	812117114007	AJITHKUMAR K						
7	812117114008	AKALYA K						
8	812117114009	AKTHAR AHAMED S						
9	812117114012	ARUNKUMAR K						
10	812117114014	ATHIRAJ A		AB				
11	812117114015	BALAKRISHNAN G						
12	812117114017	BHARATHI P		AB				
13	812117114018	CHIYAVUTHEEN Y						
14	812117114021	FAHIM APSAR S						
15	812117114022	FARHAN SAHIB S						
16	812117114023	FROSE KHAN S	LA	LA				
17	812117114027	JAGADEESH K						
18	812117114028	JAYAKUMAR G						
19	812117114029	JAYASHREE R	LA	LA				
20	812117114030	JENIFER AGALYA C						
21	812117114034	KARTHIKEYAN (14-08-2000) R						
22	812117114035	KEERTHI SANKAR M						
23	812117114036	MAHATHEER MOHAMMED M						
24	812117114037	MANIKANDAN P	AB					
25	812117114038	MANIKANDAN R						
26	812117114039	MANIMARAN B		AB				
27	812117114041	MOHAMED ARAFATH K	AB					
28	812117114044	MOHAMED FAWAZ S						
29	812117114045	MOHAMED ISHAIK T						
30	812117114048	MOHAMED SAHULLAH M						
31	812117114051	NANCY MARY P						
32	812117114052	NAVEEN KUMAR M	AB					
33	812117114054	NISHAR AHAMED Z						
34	812117114055	NITHINKUMAR S						

M.A.M. SCHOOL OF ENGINEERING

Department of Mechanical Engineering

Attendence Sheet

National Level Workshop

2 years / MECH — AutoCad Invention Held On 27.06.2019 - 05.07.2019 / AN

S. No	Reg.No	Student Name	27/6/19	28/6/19	29/6/19	01/07/19	02/07/19	03/07/19	04/07/19	05/07/19
2	812118114002	Ajith Kumar A	AB	AB	AB	AB	AB			
3	812118114006	Amarnath S	S Amarnath	S Amarnath	S Amarnath	S Amarnath	S Amarnath	S Amarnath	S Amarnath	S Amarnath
4	812118114007	Aravindhan K	AB	AB	AB	AB	AB	AB	AB	AB
5	812118114008	Aravinth S	S Aravinth	S Aravinth	S Aravinth	S Aravinth	S Aravinth	S Aravinth	S Aravinth	S Aravinth
6	812118114009	Bharathi Raja B	B Bharathi	B Bharathi	B Bharathi	B Bharathi	B Bharathi	B Bharathi	B Bharathi	B Bharathi
7	812118114010	Ganesh Kannan K	AB	AB	AB	AB	AB	AB	AB	AB
8	812118114011	Gogul R	R Gogul	R Gogul	R Gogul	R Gogul	R Gogul	R Gogul	R Gogul	R Gogul
9	812118114012	Gopikaran K	K Gopikaran	K Gopikaran	K Gopikaran	K Gopikaran	K Gopikaran	K Gopikaran	K Gopikaran	K Gopikaran
10	812118114013	Gopinath P	AB	AB	AB	AB	AB	AB	AB	AB
11	812118114014	Hariharan M	M Hariharan	M Hariharan	M Hariharan	M Hariharan	M Hariharan	M Hariharan	M Hariharan	M Hariharan
12	812118114015	Hariharan N	N Hariharan	AB	AB	N Hariharan	N Hariharan	N Hariharan	N Hariharan	N Hariharan
13	812118114016	Jeyachandra Mohan T	AB	AB	AB	AB	AB	AB	AB	AB
14	812118114017	Jeeva D	D Jeeva	D Jeeva	D Jeeva	D Jeeva	D Jeeva	D Jeeva	D Jeeva	D Jeeva
15	812118114018	Kameshwaran K	AB	AB	AB	AB	AB	AB	AB	AB
16	812118114019	Karthik N	N Karthik	N Karthik	N Karthik	N Karthik	N Karthik	N Karthik	N Karthik	N Karthik
17	812118114020	Manikandan T	T Manikandan	AB	AB	AB	T Manikandan	T Manikandan	T Manikandan	T Manikandan
18	812118114022	Mohamed Izathul Iqram R								
19	812118114023	Mohamed Bathusha A								
20	812118114024	Murugan M	M Murugan	M Murugan	M Murugan	M Murugan	M Murugan	M Murugan	M Murugan	M Murugan
21	812118114025	Prathap V	V Prathap	V Prathap	V Prathap	V Prathap	V Prathap	V Prathap	V Prathap	V Prathap
22	812118114027	Raj Kumar R	AB	AB	R Raj Kumar	R Raj Kumar	R Raj Kumar	R Raj Kumar	R Raj Kumar	R Raj Kumar
23	812118114028	Raman G	AB	AB	AB	AB	AB	AB	AB	AB
24	812118114029	Sasi Kumar I	I Sasikumar	I Sasikumar	I Sasikumar	I Sasikumar	I Sasikumar	I Sasikumar	I Sasikumar	I Sasikumar
25	812118114030	Selvabharathi P	AB	AB	AB	AB	AB	AB	AB	AB
26	812118114031	Selvamani R	R Selvamani	R Selvamani	R Selvamani	R Selvamani	R Selvamani	R Selvamani	R Selvamani	R Selvamani

27 | 812116114029 | NAVEEN KUMAR.K

27	812118114032	Senthur Nivas S									
28	812118114033	Siva Sankaran V									
29	812118114034	Tamilselvan S									
30	812118114035	Thennarasu S									
31	812118114036	Umaiya Saravanan M									
32	812118114037	Vasanthan B									
33	812118114038	Veeramunishwaran M									
34	812118114039	Vigneswaran S									
35	812118114040	Vigneswaran S									
36	812118114041	Vikram S									
37	812118114042	Yasith Ahamed H									
38.	L-001	GAUTHAMRAJ.J									

Co-ordinator
[R. VIJAYAKUMAR]

26/6

38-8=30

S. BALAMURUGAN

M.A.M.SCHOOL OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2018-2019 ODD SEMESTER
07 Sem [IV YEAR]

Work shop :- Industrial drawing with GD&T ***held on*** 24/06/19 to 26/06/19

Attendance Sheet

S.NO	REG.NO	STUDENT NAME	24-06-2019		25-06-2019		26-06-2019	
			FN	AN	FN	AN	FN	AN
1	812116114001	ABDUL RASHEED H						
2	812116114002	AKASH.S						
3	812116114003	AKSHYA BALA.B	← AB →					
4	812116114004	ALPHAN.A						
5	812116114005	ANBU SELVAN.T G						
6	812116114006	ANEES AHAMED.A						
7	812116114007	ARAVINDH J						
8	812116114008	ARAVINDHAN .A						
9	812116114010	BARATHI RAJA M						
10	812116114011	BOOBALAN.M						
11	812116114012	DEEPAN CHAKKRAVARTHI K						
12	812116114013	GOGUL R						
13	812116114014	GOPALAKRISHNAN .K						
14	812116114015	JEEVARASAN R						
15	812116114016	JENITH.P						
16	812116114017	KANAGARAJ K						
17	812116114018	KARUNAKARAN.K						
18	812116114019	MANIKANDAN.M						
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20	812116114021	MATHI VANAN.S						
21	812116114023	MOHAMED MUZZAMMIL.N						
22	812116114024	MOORTHI M						
23	812116114025	MUTHUKUMAR M						
24	812116114026	MUTHURAJ K						
25	812116114027	NAVANEETHA KRISHNAN K						
26	812116114028	NAVEEN.C						
27	812116114029	NAVEEN KUMAR.K						
28	812116114030	NEETHI DEVAN.C						
29	812116114031	PAUL RAJ.E						
30	812116114035	PRAVEEN.B				← AB →		
31	812116114036	PRAVEEN.C					← AB →	
32	812116114037	PUHAZHENTHI.M						
33	812116114038	RAJADURAI.P						
34	812116114039	RAMANAN.V						
35	812116114040	RAMKUMAR.V						
36	812116114041	RANJITH.A						
37	812116114042	RANJITH.R				← AB →		

38	812116114043		SANGILI PANDIAN SURAJ.S	←AB→ ←AB→
39	812116114044		SANTHOSH KUMAR.U	
40	812116114045		SARAN.J	
41	812116114046		SARATH KUMAR.K	
42	812116114047		SARAVANA KUMAR P	
43	812116114048		SASI KUMAR.A	
44	812116114050		SELVA.A	←AB→
45	812116114051		SENTHIL KUMAR.D	←AB→
46	812116114052		SHAMEER H	
47	812116114053		SOORIYA PRAKASH.R	
48	812116114054		SUDARVANAN.M	←AB→ ←AB→ ←AB→
49	812116114055		SUNDAR P	
51	812116114058		VASANTHA RAJA.M	
52	812116114059		VASANTH KUMAR S	
53	812116114060		VEERAIYA.M	
54	812116114061		VEERA KUMAR D	←AB→
55	812116114062		VELMOORTHI.G	
56	812116114065		VIGNESH.K	←AB→
57	812116114066		VISHNU KUMAR.R	
58	812116114067		VISHVA B	
59	812116114068		VIVEK.M	
60	812116114069		YUKESH K	
61	812116114301		FAIZEL HAMEED M	
62	812116114302		KARTHEESWARAN J	
63	812116114303		MADHAN R	
64	812116114306		RIIYAAZ AHAMED M	
65	812116114702		MANIKANDAN A	
66	812116114704		RUBEN A	
67	812116114701		SARAVANAN S	
68	812116114703		VIJAYAKUMAR K	
69	811216114501		SURENDAR E	

INSTRUCTOR
[R.NOMAKUMAR]

[J. Jayakumar]

HEAD OF DEPARTMENT

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"SIX SIGMA PRINCIPLES"

5th Jan 2019

TABLE OF CONTENTS

Compiled by

HOD/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.
(Accredited by NAAC)

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity for the Guest lecture program on **"SIX SIGMA PRINCIPLES"** at Seminar Hall, M.A.M. School of Engineering between 11.00 AM – 1.00 PM on 5th January 2019.

Venue: Seminar Hall

Resource Person:

Mr. Mohamed Imran,
Synergy School of business,
Trichy.

GUEST PROFILE

Mr. Mohamed Imran,

Technical Manager,

Synergy School of business,

Trichy.

PROGRAM DETAILS

Mr. Mohamed Imran, Synergy School of business, gave a Guest lecture about **"SIX SIGMA PRINCIPLES"** at M.A.M. School of Engineering on 5th Jan 2019. He discussed about the quality management in manufacturing and business processes. Totally 55 students and 3 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "SIX SIGMA PRINCIPLES"
- PowerPoint Presentation of Six Sigma History & Techniques.
- PowerPoint Presentation of statistical modeling of manufacturing processes.
- Interaction session
- Feedback session

COURSE CONTENT

Six Sigma (**6σ**) is a set of techniques and tools for process improvement. Six Sigma strategies seek to improve the quality of the output of a process by identifying and removing the causes of defects and minimizing variability in manufacturing and business processes. It uses a set of quality management methods, mainly empirical, statistical methods, and creates a special infrastructure of people within the organization who are experts in these methods. Each Six Sigma project carried out within an organization follows a defined sequence of steps and has specific value targets, for example: reduce process cycle time, reduce pollution, reduce costs, increase customer satisfaction, and increase profits.

Six Sigma doctrine asserts:

- Continuous efforts to achieve stable and predictable process results (e.g. by reducing process variation) are of vital importance to business success.
- Manufacturing and business processes have characteristics that can be defined, measured, analysed, improved, and controlled.
- Achieving sustained quality improvement requires commitment from the entire organization, particularly from top-level management.

Features that set Six Sigma apart from previous quality-improvement initiatives include:

- A clear focus on achieving measurable and quantifiable financial returns from any Six Sigma project.
- An increased emphasis on strong and passionate management leadership and support.
- A clear commitment to making decisions on the basis of verifiable data and statistical methods, rather than assumptions and guesswork.

Difference from Lean Management:

Lean management and Six Sigma are two concepts which share similar methodologies and tools. Both programs are Japanese-influenced, but they are two different programs. Lean management is focused on eliminating waste using a set of proven standardized tools and methodologies that target organizational efficiencies, while Six Sigma's focus is on eliminating defects and reducing variability. Both systems are driven by data though Six Sigma is much more dependent on accurate data.

PHOTO PROOF

Mr. Mohamed Imran, about **"SIX SIGMA PRINCIPLES"**

CONCLUSION

Mr. Mohamed Imran had delivered the topic **"SIX SIGMA PRINCIPLES"** to the students of Mechanical Engineering department on 05.01.2019 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics of process involved in quality management and business operations. It was very useful to Students and Faculty members to get the knowledge of such principles in managing skills.

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M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY- 621105.

Guest Lecture Report

on

"AWARENESS ABOUT GATE EXAM"

4th Jan2019

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Compiled by **HOD/Mechanical** **PRINCIPAL**

M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.
(Accredited by NAAC)

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity for the Guest lecture program on **"AWARENESS ABOUT GATE EXAM"** at Lecturer Hall (AB-201), M.A.M. School of Engineering between 11.00 AM – 1.00 PM on 4th January 2019.

Venue: Lecturer Hall (AB-201)

Resource Person:

Er. H. Azman,
Gatewin Academy,
Trichy.

GUEST PROFILE

Er. H. Azman,
Gate Coaching Instructor,
Gatewin Academy,
Trichy.
Phone: 9884433860.

PROGRAM DETAILS

Er. H. Azman,Gatewin Academy, gave a Guest lecture about **"AWARENESS ABOUT GATE EXAM"**at M.A.M School of Engineering on 4th Jan 2019. He discussed about the advantages in clearing GATE exams and its importance in carrier growth. Totally 65 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "AWARENESS ABOUT GATE EXAM"
- Board Presentation of GATE exam score importance.
- Interaction session
- Feedback session

COURSE CONTENT

The Graduate Aptitude Test in Engineering (GATE) is an examination that primarily tests the comprehensive understanding of various undergraduate subjects in engineering and science. GATE is conducted jointly by the Indian Institute of Scienceand seven Indian Institutes of Technologies at Roorkee, Delhi, Guwahati, Kanpur, Kharagpur, Chennai and Mumbai on behalf of the National Coordination Board – GATE, Department of Higher Education, Ministry of Human Resources Development (MHRD), Government of India.

The GATE score of a candidate reflects the relative performance level of a candidate. The score is used for admissions to various post-graduate education programs (e.g. Master of Engineering, Master of Technology, Doctor of Philosophy) in Indian higher education institutes, with financial assistance provided by MHRD and other government agencies. Recently, GATE scores are also being used by several Indian public sector undertakings (i.e., government-owned companies) for recruiting graduate engineers in entry-level positions. It is one of the most competitive examinations in India.

Eligibility:

- Bachelor's degree holders in Engineering / Technology / Architecture and those who are in the final year of such programs.
- Master's degree holders in any branch of Science/Mathematics/Statistics/Computer Applications or equivalent and those who are in the final year of such programs.
- Candidates in the second or higher year of Four-year integrated master's degree programs in Engineering / Technology.
- Candidates in the fourth or higher year of Five-year integrated master's degree programs or Dual Degree programs in Engineering / Technology.
- Candidates with qualifications obtained through examinations conducted by professional societies recognized by UGC as equivalent to B.E./B.Tech.
- Those who have completed section A or equivalent of such professional courses are also eligible.
- There is no age limit criterion defied by the exam conducting authority to appear in GATE.

PHOTO PROOF

Er. H. Azman about **"AWARENESS ABOUT GATE EXAM"**

CONCLUSION

Er. H. Azmanhad delivered the topic **"AWARENESS ABOUT GATE EXAM"**to thestudentsof Mechanical Engineeringdepartment on 04.01.2019 atLecturer Hall (AB-201), M.A.M. School of Engineering, Trichy. He covers the topics of various opportunities in scoring GATE exam.Finally,he taught the proceduresinvolved in learning methods and techniques for clearing such exams. It was very useful to Student and Faculty members to get the awareness of competitive exams.

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M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY- 621105.

Guest Lecture Report

on

"INTRODUCTION TO NDT"

28th Dec 2018

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M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.
(Accredited by NAAC)

INVITATION

The Department of Mechanical Engineering Cordially invites Second Year students and Faculty members of the department activity for the Guest lecture program on **"INTRODUCTION TO NDT"** at Seminar Hall, M.A.M. School of Engineering between 11.00 AM – 1.00 PM on 28th December 2018.

Venue: College Auditorium

Resource Person:

Er. Shankar Ganesh,
Evershine Institute of Training,
Trichy.

GUEST PROFILE

Er. Shankar Ganesh,
Non-destructive Testing Technician& Trainee,
Evershine Institute of Training,
Trichy.
Phone: 9688690282

PROGRAM DETAILS

Er. Shankar Ganesh,Non-destructive Testing Technician & Trainee,Evershine Institute of Training, gave a Guest lecture about "**INTRODUCTION TO NDT**"at M.A.M School of Engineering on 28th Dec 2018. He discussed about the basics of NDT,its applications in industries and opportunities in Inspection field. Totally 63 students and 3 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "INTRODUCTION TO NDT"
- Power point presentation of NDT Methods.
- Power point presentation ofNDT Procedures.
- Video session.
- Interaction session
- Feedback session

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"INTRODUCTION TO NDT"

28th Dec 2018

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M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.
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INVITATION

The Department of Mechanical Engineering Cordially invites Second Year students and Faculty members of the department activity for the Guest lecture program on **"INTRODUCTION TO NDT"** at Seminar Hall, M.A.M. School of Engineering between 11.00 AM – 1.00 PM on 28th December 2018.

Venue: College Auditorium

Resource Person:

Er. Shankar Ganesh,
Evershine Institute of Training,
Trichy.

GUEST PROFILE

Er. Shankar Ganesh,
Non-destructive Testing Technician & Trainee,
Evershine Institute of Training,
Trichy.
Phone: 9688690282

PROGRAM DETAILS

Er. Shankar Ganesh, Non-destructive Testing Technician & Trainee, Evershine Institute of Training, gave a Guest lecture about "**INTRODUCTION TO NDT**" at M.A.M.School of Engineering on 28th Dec 2018. He discussed about the basics of NDT, its applications in industries and opportunities in Inspection field. Totally 63 students and 3 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "INTRODUCTION TO NDT"
- Power point presentation of NDT Methods.
- Power point presentation of NDT Procedures.
- Video session.
- Interaction session
- Feedback session

COURSE CONTENT

Non Destructive Testing:

Non-destructive testing (NDT) is a wide group of analysis techniques used in science and technology industry to evaluate the properties of a material, component or system without causing damage. The terms Non-Destructive Examination (NDE), Non-Destructive Inspection (NDI), and Non-Destructive Evaluation (NDE) are also commonly used to describe this technology. Because NDT does not permanently alter the article being inspected, it is a highly valuable technique that can save both money and time in product evaluation, troubleshooting, and research. The six most frequently used NDT methods are eddy-current, magnetic-particle, liquid penetrant, radiographic, ultrasonic, and visual testing. NDT is commonly used in forensic engineering, mechanical engineering, petroleum engineering, electrical engineering, civil engineering, systems engineering, aeronautical engineering, medicine, and art. Innovations in the field of non-destructive testing have had a profound impact on medical imaging, including on echocardiography, medical ultrasonography, and digital radiography.

NDT methods rely upon use of electromagnetic radiation, sound and other signal conversions to examine a wide variety of articles (metallic and non-metallic, food-product, artefacts and antiquities, infrastructure) for integrity, composition, or condition with no alteration of the article undergoing examination. Visual inspection (VT), the most commonly applied NDT method, is quite often enhanced by the use of magnification, borescopes, cameras, or other optical arrangements for direct or remote viewing. The internal structure of a sample can be examined for a volumetric inspection with penetrating radiation (RT), such as X-rays, neutrons or gamma radiation. Sound waves are utilized in the case of ultrasonic testing (UT), another volumetric NDT method – the mechanical signal (sound) being reflected by conditions in the test article and evaluated for amplitude and distance from the search unit (transducer).

Applications:

NDT is used in a variety of settings that covers a wide range of industrial activity, with new NDT methods and applications, being continuously developed. Non-destructive testing methods are routinely applied in industries where a failure of a component would cause significant hazard or economic loss, such as in transportation, pressure vessels, building structures, piping, and hoisting equipment.

PHOTO PROOF

Er. Shankar Ganesh about "**INTRODUCTION TO NDT**"

CONCLUSION

Er. Shankar Ganesh had delivered the topic "**INTRODUCTION TO NDT**" to the students of Mechanical Engineering department on 28.12.2018 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics of various Inspection techniques for quality control that are used in Industries. Finally taught the procedures involved in inspecting the materials through video session. It was very useful to Students and Faculty members to get the knowledge of testing methods in Inspection systems.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture
on
"Design Implementation in Industries using CAD Softwares"

01.09.2018

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Second Year students and Faculty members for a Guest Lecture on "**Design Implementation in Industries by using CAD Softwares**" at Smart Class Room, M.A.M School of Engineering between 11.00 AM – 12.30 PM on 01.09.2018.

Venue: Smart Class Room

Resource Person:

Er. S. Ganesh Babu,
Business Development Manager,
5D CADD Software Training Center,
Trichy – 620001.

Mobile number : 7904773135

GUEST PROFILE

Resource Person:

Er. S. Ganesh Babu,
Business Development Manager,
5D CADD Software Training Center,
Trichy – 620001.

Mobile number: 7904773135

PROGRAMME DETAILS

Er. S. Ganesh Babu,, Development Manager of 5D CADD Software Training Center, gave a speech on "**Design Implementation in Industries by using CAD Softwares**" at M.A.M School of Engineering on 01.09.2018. He discussed more information about importance of design softwares in industries. Totally 58 students and 3 Faculty members attended this program.

PROGRAM AGENDA

- Introduction about themselves.
- Guest Lecture on "Design Implementation in Industries using CAD Softwares "
- Power point presentation of list of CAD softwares for Mechanical Engineering.
- Power point presentation of real world application of CAD in industries.
- Interaction session
- Feedback session

COURSE CONTENT

CAD/CAM SOFTWARE:

CAD is use of computer technology for design and design documentation. CAD/CAM applications are used to both design a product and program manufacturing processes, specifically, CNC machining. CAM software uses the models and assemblies created in CAD software to generate tool paths that drive the machines that turn the designs into physical parts. CAD/CAM software is most often used for machining of prototypes and finished parts.

Modeling with CAD systems offers a number of advantages over traditional drafting methods that use rulers, squares, and compasses. Designs can be altered without erasing and redrawing. CAD systems offer "zoom" features analogous to a camera lens whereby a designer can magnify certain elements of a model to facilitate inspection. Computer models are typically three-dimensional and can be rotated on any axis, much as one could rotate an actual three dimensional model in one's hand, enabling the designer to gain a fuller sense of the object. CAD systems also lend themselves to modeling cutaway drawings, in which the internal shape of a part is revealed, and to illustrating the spatial relationships among a system of parts.

PHOTO PROOF

Er. S. Ganesh Babu, giving a speech on Design Implementation in Industries by using CAD Softwares.

CONCLUSION

Er. S. Ganesh Babu had delivered a speech on Design Implementation in Industries by using CAD Softwares to the department of Mechanical Engineering students on 01.09.2018 at Smart Class Room, M.A.M. School of Engineering, Trichy. He covers the topics such as list of softwares for modeling, Advancements in Machining process through CAM, Introduction and application new softwares for Industries. Finally taught the procedure of design and develop the engineering models through video session. It was very useful to Student and Faculty members to get the importance of Design Softwares.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Two Day Workshop
On
"Rapid Prototyping with Hands on Training"

02.08.2018 & 03.08.2018

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M.A.M. SCHOOL OF ENGINEERING

Trichy-Chennai Trunk Road,Siruganur,Tiruchirappalli-621 105.

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)

(Accredited by NAAC)

Department of Mechanical Engineering

&

The Institution of Engineers (INDIA)

Students Chapter 621 105/MAMS/MC

Cordially invite you for the Inaguration of Two Day Workshop on

RAPID PROTOTYPING WITH HANDS ON TRAINING

In associatin with

Next Generation 3D Printer PVT LTD

Er. R. Selvaraj FIE.,

Chairman,
The Instittion of Engineers,
Tirchirappalli.

has kindly consented to inaugurate the workshop.

At 10.00 A.M, on 02nd Aug 2018,

In Seminar Hall

AL HAJ Er. M.A. Peer Mohamed

Correspondent, M.A.M.S.E

Presides

Dr.P.Ranjith kumar

Principal,M.A.M.S.E

Felicitates

Mr.S.Maniam Ramasamy
Organizing Secretary

Dr.K.Chandrasekaran
Co-ordinator

PROGRAMME DETAILS

Department of Mechanical Engineering(MAMSE) in association with Next generation 3D Printing Pvt Ltd., conducted a Two Day Workshop about "**Rapid Prototyping with Hands on Training**" on 02.08.2018 & 03.08.2018. A demonstration of 3D printing is provided by using the CAD Software. Totally 60 students and 3 Faculty members attended this program.

DAY 1

- Introduction & History
- Methods of Manufacturing
- 3D Printing & Technology
- Scope & Application
- G Code & M Code
- 3D Pen
- 3D Scanner

DAY 2

- Post processing
- Software for Design & Slicing
- Design Consideration
- During 3D Printing
- Software Training
- Live Demonstration

COURSE CONTENT

Introduction

The term rapid prototyping (RP) refers to a class of technologies that can automatically construct physical models from Computer Aided Design (CAD) data. The main advantage of the system is that almost any shape can be produced. Time and money savings vary from 50 – 90 % compared to conventional systems. Rapid prototyping techniques are often referred to solid free-form fabrication; computer automated manufacturing or layered manufacturing. The computer model is sliced into thin layers and the part is fabricated by adding layers on one another.

Basic Process

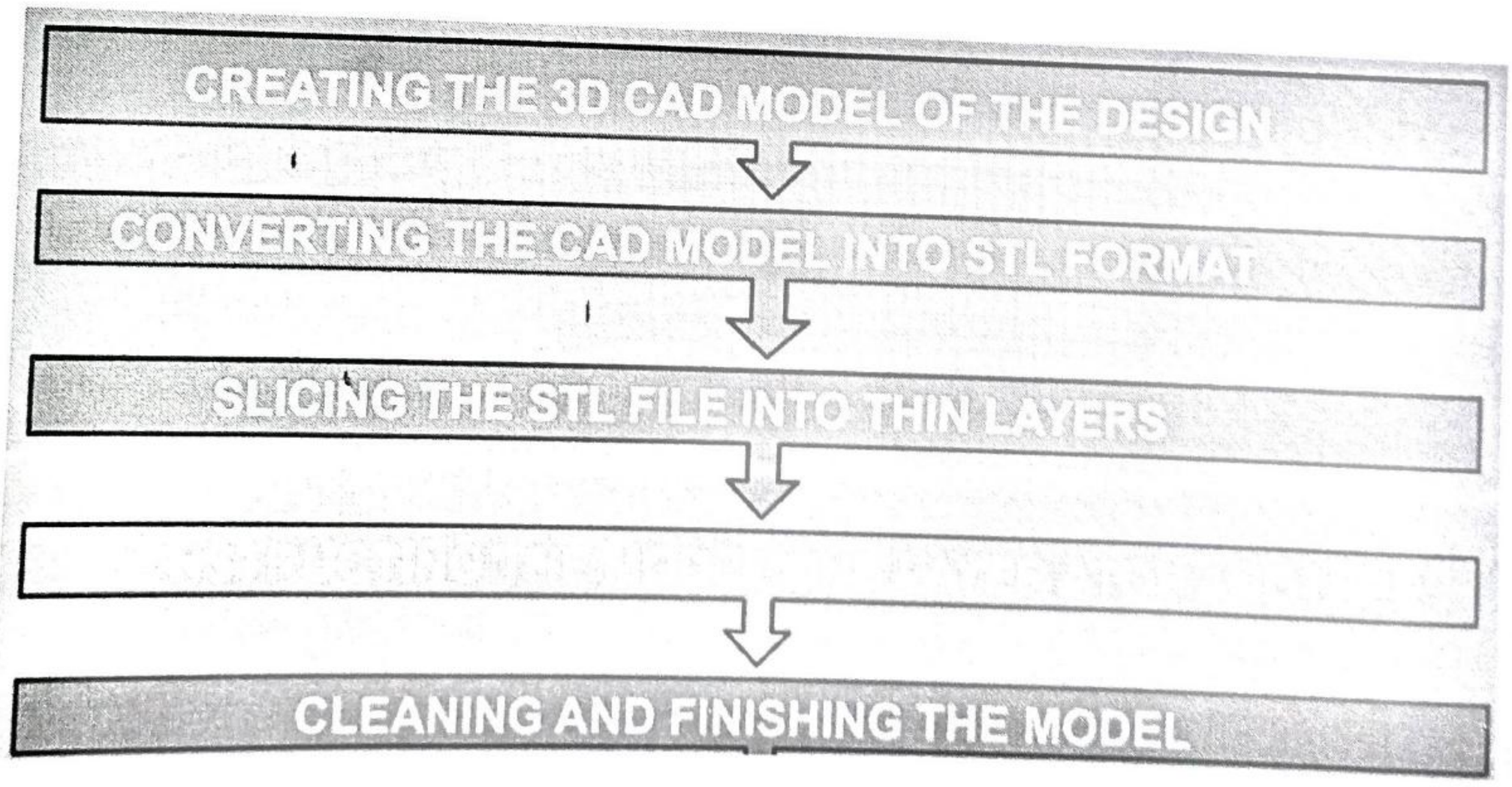

PHOTO PROOF

In association with Next Generation 3D Printer Pvt Ltd.

Conclusion

A Two day workshop about Rapid Prototyping were provided by the mechanical engineering faculties in association with next generation 3D Printing Pvt Ltd. Recent trends in the designing field about 3d modeling were discussed with the students and faculty members. A practical session for each of the student was conducted on the last day of workshop to explain the process thoroughly. It was very useful to Student and Faculty members to get the knowledge of various dimensions in Computer Aided Designing field.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture
On
"Non Destructive Testing"

20.07.2018

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M.A.M. SCHOOL OF ENGINEERING

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invitesFinal Year students and Faculty members for a talkon **"Non Destructive Testing"** at College Auditorium,M.A.M School of Engineering between 10.30 AM – 12.20 PM on 20.07.2018.

Venue: College Auditorium

Resource Person:

Er. V. Ramasamy
Technical director,
Aplus NDT,
Coimbatore

Mobile number:9789651999

GUEST PROFILE

Resource Person:

Er. V. Ramasamy
Technical director,
Aplus NDT.

Mobile number: 9789651999

PROGRAMME DETAILS

Er. V. Ramasamy, Technical director, Aplus NDT., gave a guest lecture on"**Non Destructive Testing"** at M.A.M School of Engineering on 20.07.2018.Hediscussed about various Testing methods through NDT. Totally 61students and 3 Faculty members attended this program.

PROGRAM

- Introduction about themselves.
- A guest lecture on "**Non Destructive Testing"**
- Power point presentation about Non Destructive Testing.
- Power point presentation of various methodologies in NDT.
- Interaction session
- Feedback session

COURSE CONTENT

Nondestructive testing or non-destructive testing (NDT) is a wide group of analysis techniques used in science and technology industry to evaluate the properties of a material, component or system without causing damage. The terms nondestructive examination (NDE), nondestructive inspection (NDI), and nondestructive evaluation (NDE) are also commonly used to describe this technology.

NDT methods rely upon use of electromagnetic radiation, sound and other signal conversions to examine a wide variety of articles (metallic and non-metallic, food-product, artifacts and antiquities, infrastructure) for integrity, composition, or condition with no alteration of the article undergoing examination. Visual inspection (VT), the most commonly applied NDT method, is quite often enhanced by the use of magnification, borescopes, cameras, or other optical arrangements for direct or remote viewing.

Need for NDT :

NDT is used in a variety of settings that covers a wide range of industrial activity, with new NDT methods and applications, being continuously developed. Nondestructive testing methods are routinely applied in industries where a failure of a component would cause significant hazard or economic loss, such as in transportation, pressure vessels, building structures, piping, and hoisting equipment.

PHOTO PROOF

Er. V. Ramasamy giving a lecture on **Non Destructive Testing**

Conclusion

Mr. Ramasamy had delivered a lecture on Non Destructive Testing to the department of Mechanical Engineering students on 20.07.2018 at College Auditorium, M.A.M. School of Engineering, Trichy. He explains the basic concepts in NDT and its need in industries and also in various other engineering sectors . He also explains the various types of testing methods and its economical importance in manufacturing. Finally he taught the procedure for joining the NDT course. It was very useful to Student and Faculty members to get the knowledge of various dimensions in engineering.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture
On
"Product Design and Devolopment"

19.07.2018

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members for a talk on "**Product Design and Devolopment**" at College Auditorium, M.A.M School of Engineering between 2.30 – 4.30 PM on 19.07.2018.

Venue: College Auditorium

Resource Person:

Er. V.Sundar
Technical officer,
Softech CADD School PVT LTD.

Mobile number : 9884433860

GUEST PROFILE

Resource Person:

Er. V.Sundar,
Technical officer,
Softech CADD School PVT LTD.

Mobile number : 9884433860

PROGRAMME DETAILS

Er. V.Sundar, Technical officer, Softech CADD School PVT LTD., gave a guest lecture on **"Product Design and Devolopment"** at M.A.M School of Engineering on 19.07.2018. He discussed about various manufacturing methods after Designing the model. Totally 65 students and 3 Faculty members attended this program.

PROGRAM

- Introduction about themselves.
- A guest lecture on "**Product Design and Devolopment"**
- Power point presentation about Design and Devolopment methods in engineering.
- Power point presentation of various methodologies in devoloping a model through computers.
- Interaction session
- Feedback session

COURSE CONTENT

The most successful economies are based on innovation and creativity led entrepreneurship. The government is focusing on putting concerted efforts to produce job creators.

The current MOOC on Product Design and Development is conceptualized and planned in such a way that it helps both job creators as well as job seekers. The main objective of the course is to acquaint the learners/students with the practical knowledge regarding conceptualization, design and development of a new product. The need of a new product, the product life cycle, the product design process, the application of Value Engineering principles in product design, various product design tools such as CAD, DFM, DFA and DFMA have been explained with relevant and specific examples/ case studies. The concept of Ergonomics in context of the product design has been explained with the help of case studies. The fundamental concept of Rapid Prototyping as well the working principles of the basic rapid prototyping techniques has also been explained.

PHOTO PROOF

Er. V.Sundar *giving a lecture on* ***Product Design and Development***

Conclusion

Mr. Sundar had delivered a lecture on Product Design and Development to the department of Mechanical Engineering students on 19.07.2018 at College Auditorium, M.A.M. School of Engineering, Trichy. He explains the basic concepts in Product Design and Development and its need in industries and also in various other engineering sectors . He also explains the various types of devolopment methods and its economical importance in manufacturing. Finally he taught the procedure for joining the course especially for job seekers. It was very useful to Student and Faculty members to get the knowledge of various dimensions in engineering.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

A Talk
On
"Higher Studies for Engineers"

13.07.2018

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invitesFinal Year students and Faculty members for a talkon **"Higher Studies For Engineers"** at College Auditorium,M.A.M School of Engineering between 2.00 AM – 4.30 PM on 13.07.2018.

Venue: College Auditorium

Resource Person:

Mr. Sivakumar,
Chief Executive Officer,
Trichy Plus.

Mobile number: 8754768888

GUEST PROFILE

Resource Person:

Mr. Sivakumar,

Chief Executive Officer,
Trichy Plus.

Mobile number: 8754768888

PROGRAMME DETAILS

Mr. Sivakumar, CEO of Trichy Plus, gave a speech on"**Higher Studies for Engineers"** at M.A.M School of Engineering on 13.07.2018.Hediscussed more information Entrance Exams for Higher Education in INDIA and abroad opportunities for education. Totally 102students and4 Faculty membersattended this program.

PROGRAM

- Introduction about themselves.
- A talk on "Higher Studies for Engineers"
- Power point presentation of Entrance exams for PG Programs.
- Power point presentation of abroad Opportunities for MS Program
- Interaction session
- Feedback session

COURSE CONTENT

GATE :

The Graduate Aptitude Test in Engineering (GATE) is an All-India examination administered and conducted in eight zones across the country by the GATE Committee comprising of Faculty members from IISc, Bangalore and other seven IIT's on behalf of the National Coordinating Board, Department of Education, Ministry of Human Resources Development. The GATE score/rank is used for admissions to Post Graduate Programmes (ME, M.Tech, MS, Direct Ph.D.) in institutes like IITs and IISc etc with financial assistance offered by MHRD. PSUs too use the GATE scores for recruiting candidates for various prestigious jobs with attractive remuneration.

Popular Entrance Exams For Abroad Education :

Some of the most popular, and most important, international entrance exams for abroad studies include the SAT, MCAT, LSAT, GMAT, GRE, IELTS and the TOEFL. These are required for admission to universities and colleges in various countries across the globe; at times, the need may be a combination of one or more of these and other tests/examinations specific to that country and its education system.

PHOTO PROOF

Mr. Sivakumargiving a speech on Higher Studies for Engineers

Conclusion

Mr. Sivakumar had delivered a speech on Higher Studies for Engineers to the department of Mechanical Engineering students on 13.07.2018 at College Auditorium, M.A.M. School of Engineering, Trichy. He explains the basic ideas about pursuing higher education with a good remuneration in India through GATE exam. He also explains the procedure to apply for entrance exams to do Masters degree in abroad through various entrance exams available in our place. Finally taught the procedure of preparing the Technical and aptitude exams. It was very useful to Student and Faculty members to get the knowledge of Higher Education.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture Report
On
"ADVANCEMENTS IN CAD/CAM/CAE"

11.07.2018

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Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Final Year students and Faculty members of the department activity of Guest lecture program on **"Advancements in CAD/CAM/CAE"** at Seminar Hall, M.A.M School of Engineering between 10.00 AM – 2.15 PM on 11.07.2018.

Venue: College Auditorium

Resource Person:

Mr. Bharanidharan,
Technical officer,
Softech CADD School PVT LTD.

Mobile number: 9884433860

GUEST PROFILE

RESOURCE PERSON:

Mr. Bharanidharan,
Technical officer,
Softech CADD School PVT LTD.

Mobile number : 9884433860

PROGRAMME DETAILS

Mr. Bharanidharan, Technical officer, Softech CADD School, gave a Guest lecture about **"Advancements in CAD/CAM/CAE"** at M.A.M School of Engineering on 11.07.2018. He discussed more information about the Basics of CAD and its applications in industries, opportunities in design field. Totally 74 students and 4 Faculty members attended this program.

PROGRAM

- Introduction about themselves.
- Guest Lecture on Topic "Advancements in CAD/CAM/CAE"
- Power point presentation of Design software packages.
- Power point presentation of Computer Aided Machining
- Video session.
- Interaction session
- Feedback session
- Vote of Thanks

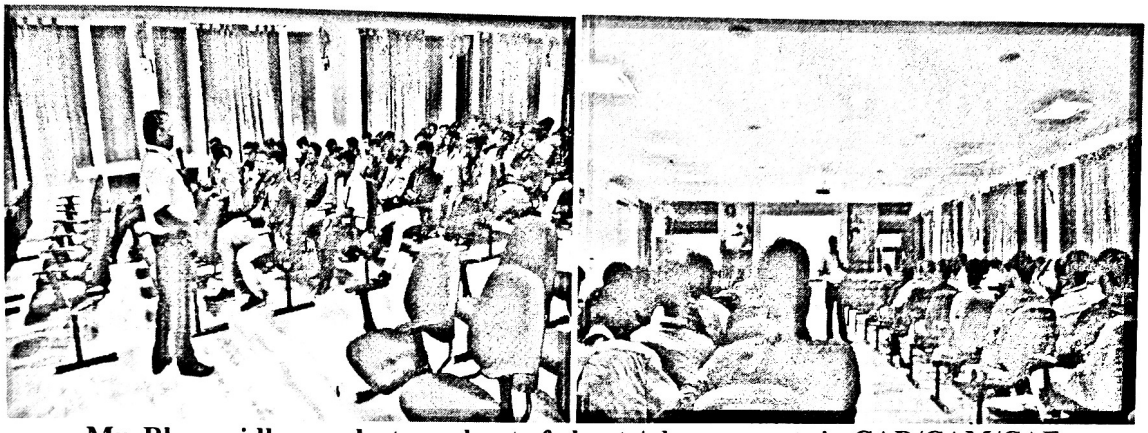
COURSE CONTENT

CAD/CAM SOFTWARE:

CAD is use of computer technology for design and design documentation. CAD/CAM applications are used to both design a product and program manufacturing processes, specifically, CNC machining. CAM software uses the models and assemblies created in CAD software to generate tool paths that drive the machines that turn the designs into physical parts. CAD/CAM software is most often used for machining of prototypes and finished parts.

Modeling with CAD systems offers a number of advantages over traditional drafting methods that use rulers, squares, and compasses. Designs can be altered without erasing and redrawing. CAD systems offer "zoom" features analogous to a camera lens whereby a designer can magnify certain elements of a model to facilitate inspection. Computer models are typically three-dimensional and can be rotated on any axis, much as one could rotate an actual three dimensional model in one's hand, enabling the designer to gain a fuller sense of the object. CAD systems also lend themselves to modeling cutaway drawings, in which the internal shape of a part is revealed, and to illustrating the spatial relationships among a system of parts.

PHOTO PROOF



Mr. Bharanidharan, lecture about of about Advancements in CAD/CAM/CAE

Conclusion

Mr. Bharanidharan had delivered the topic "Advancements in CAD/CAM/CAE" to department of Mechanical Engineering students on 11.07.2018 at College Auditorium, M.A.M. School of Engineering, Trichy. He covers the topics such as software modeling techniques, Advancements in Machining process through CAM, Introduction and application new softwares for Engineering Design. Finally taught the procedure of design and develop the engineering models through video session. It was very useful to Student and Faculty members to get the knowledge of advances in Design systems.

M.A.M SCHOOL OF ENGINEERING
SIRUGAUR, TRICHY-621 105.

Guest Lecture Report
On
"ADVANCEMENTS IN CAD/CAM/CAE"

11.07.2018

TABLE OF CONTENTS

COMPILED BY

H.O.D/Mechanical

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

ISO 9001 : 2008 Certified Institution

Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai

Trichy - chennai Trunk Road, Siruganur, Tiruchirappalli - 621 105, India

INVITATION

The Department of Mechanical Engineering Cordially invites Final Year students and Faculty members of the department activity of Guest lecture program on "**Advancements in CAD/CAM/CAE**" at Seminar Hall, M.A.M School of Engineering between 10.00 AM – 2.15 PM on 11.07.2018.

Venue: College Auditorium

Resource Person:

Mr. Bharanidharan,
Technical officer,
Softech CADD School PVT LTD.

Mobile number: 9884433860

GUEST PROFILE

RESOURCE PERSON:

Mr. Bharanidharan,
Technical officer,
Softech CADD School PVT LTD.

Mobile number : 9884433860

PROGRAMME DETAILS

Mr. Bharanidharan, Technical officer, Softech CADD School, gave a Guest lecture about "**Advancements in CAD/CAM/CAE**" at M.A.M School of Engineering on 11.07.2018. He discussed more information about the Basics of CAD and its applications in industries, opportunities in design field. Totally 74 students and 4 Faculty members attended this program.

PROGRAM

- Introduction about themselves.
- Guest Lecture on Topic "Advancements in CAD/CAM/CAE"
- Power point presentation of Design software packages.
- Power point presentation of Computer Aided Machining
- Video session.
- Interaction session
- Feedback session
- Vote of Thanks

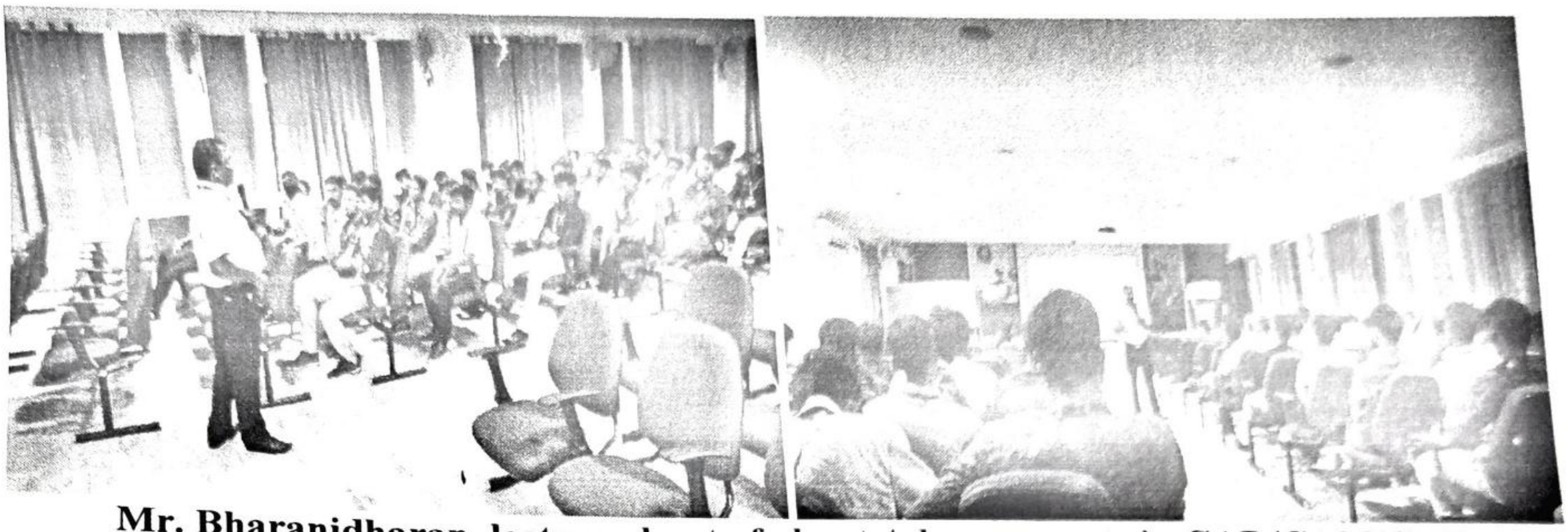
COURSE CONTENT

CAD/CAM SOFTWARE:

CAD is use of computer technology for design and design documentation. CAD/CAM applications are used to both design a product and program manufacturing processes, specifically, CNC machining. CAM software uses the models and assemblies created in CAD software to generate tool paths that drive the machines that turn the designs into physical parts. CAD/CAM software is most often used for machining of prototypes and finished parts.

Modeling with CAD systems offers a number of advantages over traditional drafting methods that use rulers, squares, and compasses. Designs can be altered without erasing and redrawing. CAD systems offer "zoom" features analogous to a camera lens whereby a designer can magnify certain elements of a model to facilitate inspection. Computer models are typically three-dimensional and can be rotated on any axis, much as one could rotate an actual three dimensional model in one's hand, enabling the designer to gain a fuller sense of the object. CAD systems also lend themselves to modeling cutaway drawings, in which the internal shape of a part is revealed, and to illustrating the spatial relationships among a system of parts.

PHOTO PROOF



Mr. Bharanidharan, lecture about of about Advancements in CAD/CAM/CAE

Conclusion

Mr. Bharanidharan had delivered the topic "Advancements in CAD/CAM/CAE" to department of Mechanical Engineering students on 11.07.2018 at College Auditorium, M.A.M. School of Engineering, Trichy. He covers the topics such as software modeling techniques, Advancements in Machining process through CAM, Introduction and application new softwares for Engineering Design. Finally taught the procedure of design and develop the engineering models through video session. It was very useful to Student and Faculty members to get the knowledge o advances in Design systems.

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"ADVANCED WELDING TECHNOLOGIES"

28th Feb 2020

TABLE OF CONTENTS

Compiled by

HOD/Mechanical Engg.

PRINCIPAL

GUEST PROFILE

Er. K. Rajeshkumar
RK Industries,
Trichy.

PROGRAM DETAILS

Er. K. Rajeshkumar, RK Industries gave a Guest lecture about **"Advanced Welding Technologies"** at M.A.M School of Engineering on 28th Feb 2020. He discussed about various welding courses and its importance in Engineering carrier. Totally 40 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic **"Advanced Welding Technologies"**
- Board Presentation of Basic Welding Types.
- Interaction session
- Feedback session

PHOTOS

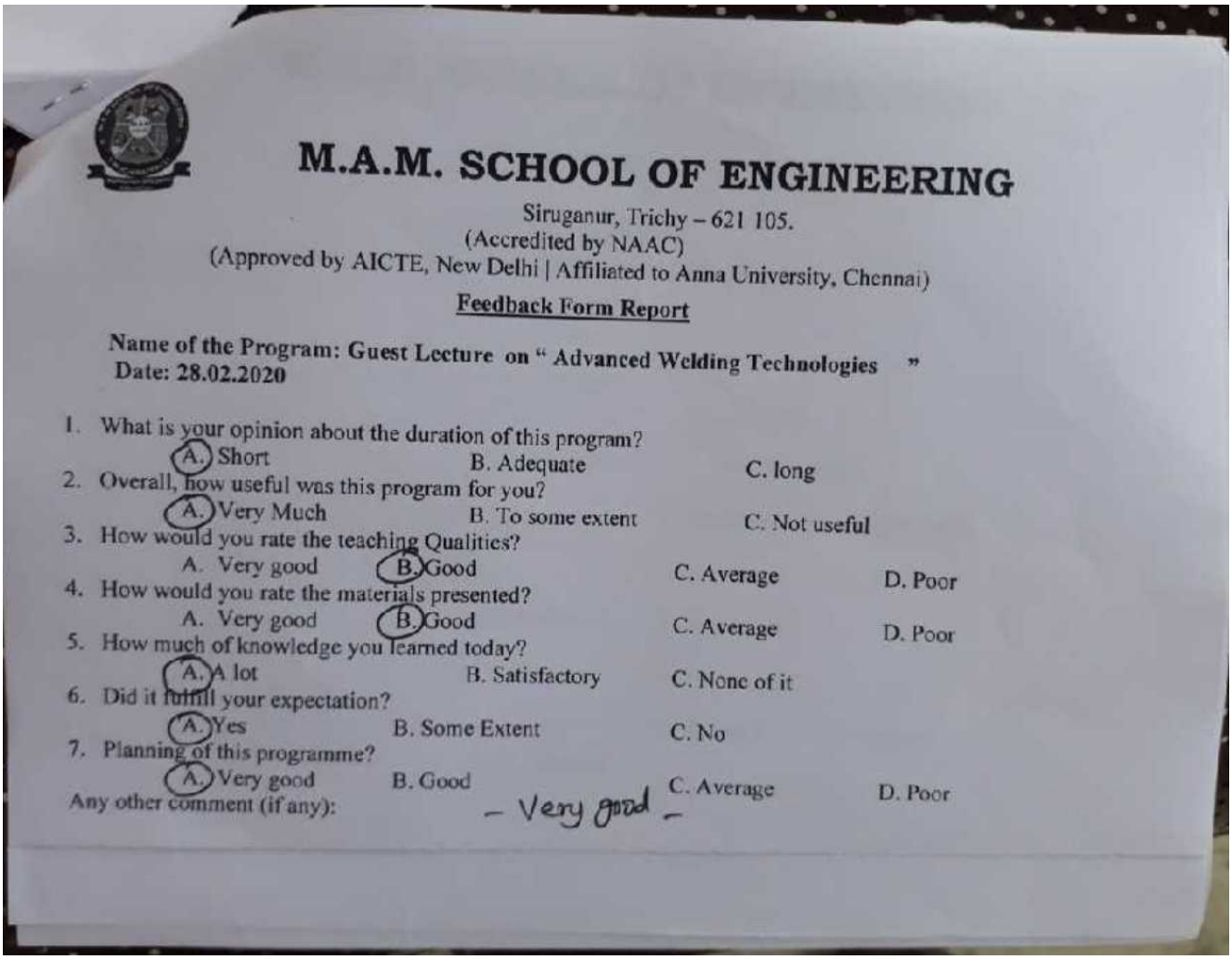
Er. K. Rajeshkumar about "Advanced Welding Technologies" & Newspaper Cutting of "The Hindu" Today's Engagement.

CONCLUSION

Er. K. Rajeshkumar had delivered the topic "**Advanced Welding Technologies**" to the students of Mechanical Engineering department on 28th Feb 2020 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics of various welding methods available and its importance through video session. It was very useful to Student and Faculty members to get the knowledge of different methodologies.

Course Content

Program Title	Guest Lecture on **" Advanced Welding Technologies "**
Description about the event (200 words)	The Guest lecture was organized by the "Department of Mechanical Engineering of MAMSE on " **Advanced Welding Technologies** " on 28.02.2020.The resource person was **Er.K.Rajeshkumar, RK Industries , Trichy .** This Guest Lecture was mainly organized for giving the basic knowledge on varicus Joining methods used in manufacturing a products and what are the advanced welding technologies used in nowadays .The various factors to be considered while joining a product sub parts . The invitation for this program was prepared by the designer team of MAMSE and distributed through Face book and WhatsApp. Nearly 40 students and 2 faculties have attended this Guest Lecture The session was started sharply by 02.30Pm and welcome address was given by **Mr.S.Ravichandran , Assistant Professor, Mechanical Engineering.** and Introduction about the Resource person was given by . **Mr.Vimal Kumar . M Assistant Professor, Mechanical Engineering Department** After that the resource person starts the presentation with the Machining process and the factors to be considered while selecting a joining methods for a product At last the questionnaire session was given to the participants and the rescurce person explained the answers for the questions asked by the participants The feedback for the participants was collected through form
Theme	To give the basic knowledge of the factors to be considered while designing a product
Programme Held	@ Seminar Hall , MAMSE
Duration	60 minutes
Start days	28.02.2020
End days	28.02.2020
No of Students participants	40
No of Faculty participants	2
Expenditure amount (any)	Nil
Mode of session delivery	Offline Direct Discussion
Objective (100 words)	To give the basic knowledge on the Welding Technologies
Benefit in terms of learn skills/knowledge obtain (150words)	Students and Faculties got knowledge on Advanced Welding Technologies used in recent manufacturing methods
Photo :	Available



M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Lecture on " Advanced Welding Technologies "
Date: 28.02.2020

1. What is your opinion about the duration of this program?
   (A.) Short B. Adequate C. long
2. Overall, how useful was this program for you?
   (A.) Very Much B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good (B.) Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good (B.) Good C. Average D. Poor
5. How much of knowledge you learned today?
   (A.) A lot B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   (A.) Yes B. Some Extent C. No
7. Planning of this programme?
   (A.) Very good B. Good C. Average D. Poor

Any other comment (if any): – Very good –

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Lecture on " Advanced Welding Technologies "
Date: 28.02.2020

1. What is your opinion about the duration of this program?
   A. Short ✓ B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much ✓ B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good ✓ B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good ✓ C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot ✓ B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes ✓ B. Some Extent C. No
7. Planning of this programme?
   A. Very good ✓ B. Good C. Average D. Poor
8. Any other comment (if any):
   – Excellent –

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Lecture on " Advanced Welding Technologies "
Date: 28.02.2020

1. What is your opinion about the duration of this program?
   A. Short B. Adequate ✓ C. long
2. Overall, how useful was this program for you?
   A. Very Much ✓ B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good ✓ B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good ✓ B. Good C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory ✓ C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent ✓ C. No
7. Planning of this programme?
   A. Very good ✓ B. Good C. Average D. Poor
8. Any other comment (if any): – Good –

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Lecture on " **Advanced Welding Technologies** "
Date: 28.02.2020

1. What is your opinion about the duration of this program?
   (A.) Short B. Adequate C. long
2. Overall, how useful was this program for you?
   (A.) Very Much B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good (B.) Good C. Average D. Poor
4. How would you rate the materials presented?
   (A.) Very good B. Good C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot (B.) Satisfactory C. None of it
6. Did it fulfill your expectation?
   (A.) Yes B. Some Extent C. No
7. Planning of this programme?
   (A.) Very good B. Good C. Average D. Poor
8. Any other comment (if any):
   - Very good -

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"RECENT TRENDS IN CAD/CAM"

21st Feb 2020

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Compiled by

HOD/Mechanical Engg.

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

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(Accredited by NAAC)

INVITATION

The Department of Mechanical Engineering Cordially invites Final Year students and Faculty members of the department activity for the Guest lecture program on **"Recent Trends in CAD/CAM"** at College Auditorium, M.A.M. School of Engineering between 10.00 AM to 1.00 PM on 21st Feb 2020.

Venue: College Auditorium

Resource Person:

Dr. A. Elango,
Former Professor & Principal,
A.C.College of Engg & Technology,
Karaikudi.

GUEST PROFILE

Dr. A. Elango,
Former Professor & Principal,
A.C.College of Engg & Technology,
Karaikudi.

PROGRAM DETAILS

Dr. A. Elango, Former Professor & Principal, A.C. College of Engg & Technology, gave a Guest lecture about **"Recent Trends in CAD/CAM"** at M.A.M. School of Engineering on 21st Feb 2020. He discussed about modelling techniques and its importance in Engineering carrier. Totally 40 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "**Recent Trends in CAD/CAM**"
- Board Presentation of mechanical system basics.
- Interaction session
- Feedback session

COURSE CONTENT

In 3D computer graphics, 3D modelling is the process of developing a mathematical representation of any surface of an object (either inanimate or living) in three dimensions via specialized software. The product is called a 3D model. Someone who works with 3D models may be referred to as a 3D artist. It can be displayed as a two-dimensional image through a process called 3D rendering or used in a computer simulation of physical phenomena. The model can also be physically created using 3D printing devices.

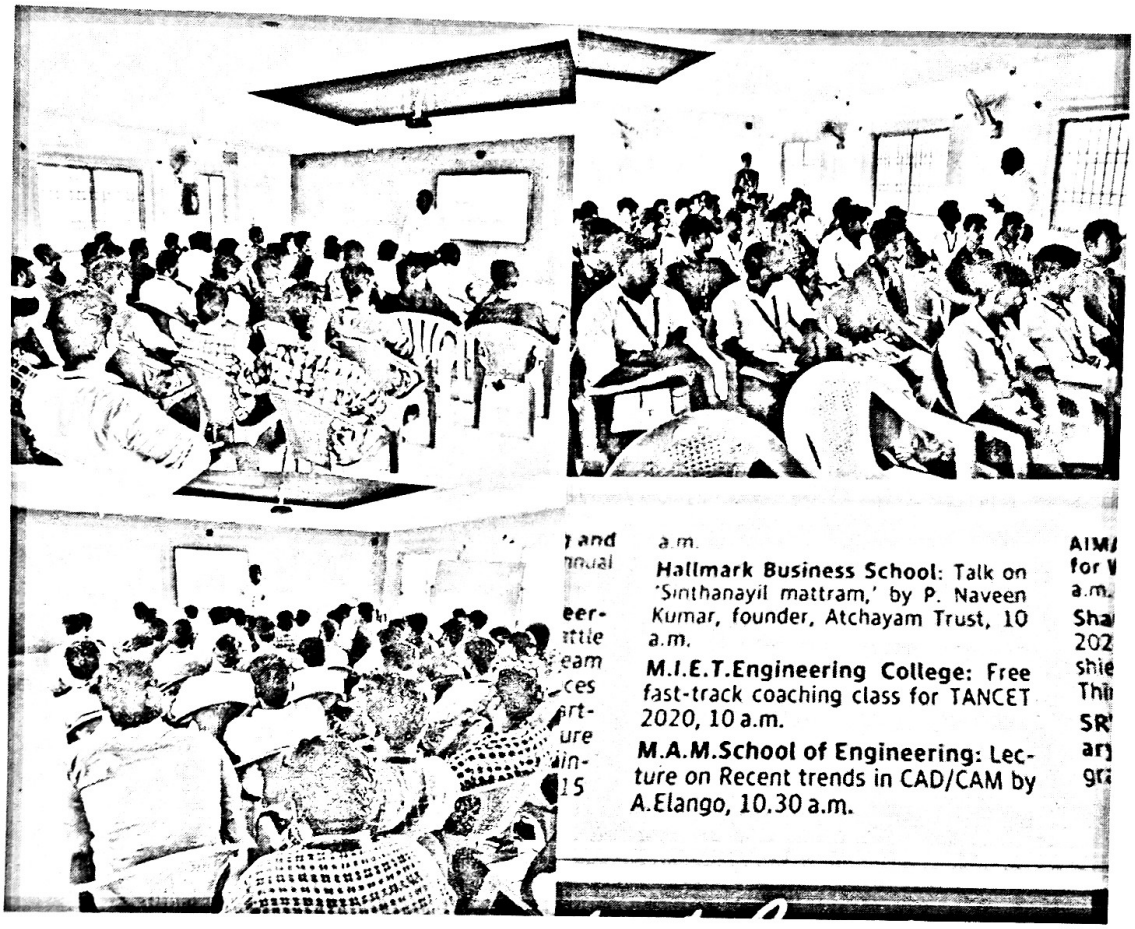
Models may be created automatically or manually. The manual modelling process of preparing geometric data for 3D computer graphics is similar to plastic arts such as sculpting.

3D modelling software is a class of 3D computer graphics software used to produce 3D models. Individual programs of this class are called modelling applications or modelers.

Three-dimensional (3D) models represent a physical body using a collection of points in 3D space, connected by various geometric entities such as triangles, lines, curved surfaces, etc. Being a collection of data (points and other information), 3D models can be created by hand, algorithmically (procedural modeling), or scanned. Their surfaces may be further defined with texture mapping.

3D models are widely used anywhere in 3D graphics and CAD. Their use predates the widespread use of 3D graphics on personal computers. Many computer games used pre-rendered images of 3D models as sprites before computers could render them in real-time. The designer can then see the model in various directions and views, this can help the designer see if the object is created as intended to compared to their original vision. Seeing the design this way can help the designer/company figure out changes or improvements needed to the product.

PHOTOS



a.m.

Hallmark Business School: Talk on 'Sinthanayil mattram,' by P. Naveen Kumar, founder, Atchayam Trust, 10 a.m.

M.I.E.T.Engineering College: Free fast-track coaching class for TANCET 2020, 10 a.m.

M.A.M.School of Engineering: Lecture on Recent trends in CAD/CAM by A.Elango, 10.30 a.m.

Dr. A. Elango about "**Recent Trends in CAD/CAM**" & Newspaper Cutting of "The Hindu" Today's Engagement.

CONCLUSION

Dr. A. Elango had delivered the topic "**Recent Trends in CAD/CAM**" to the students of Mechanical Engineering department on 21st Feb 2020 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics of various modelling softwares for CAD/CAM and its importance through video session. It was very useful to Student and Faculty members to get the knowledge of designing methodologies.

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"ADVANCEMENTS IN NDT"

14th Feb 2020

TABLE OF CONTENTS

Compiled by

HOD/Mechanical Engg.

PRINCIPAL

GUEST PROFILE

Er. Shankar Ganesh.
Evershine Technology.
Trichy.

PROGRAM DETAILS

Er. Shankar Ganesh. Evershine Technology. gave a Guest lecture about "**Advancements in NDT**" at M.A.M School of Engineering on 14th Feb 2020. He discussed about NDT methods used in Industries and its importance in Engineering carrier. Totally 40 students and 2 Faculty members attended the program.

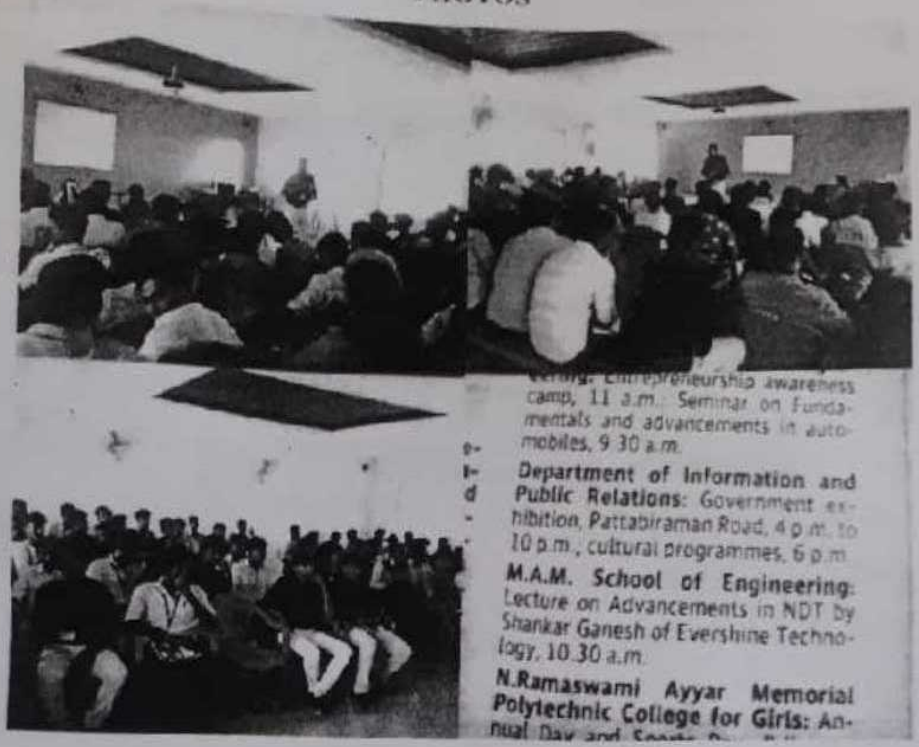
PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "**Advancements in NDT**"
- Board Presentation of NDT basics.
- Interaction session
- Feedback session

Course Content

Program Title	Guest Lecture on " **Advancement in NDT** "
Description about the event (200 words)	Department of Mechanical Engineering had the Guest Lecture on " **Advancement in NDT** " on 14.02.2020.The resource person was **Er.Shankar Ganesh , Ever shine Technology, Trichy** This Guest Lecture was mainly organized for giving the basic knowledge about the Testing Methods used in Manufacturing . Various Testing Methods and their benefits and the Advancement in the Non Destructive Testing (NDT) .The various factors to be considered for selecting the testing method for a particular Manufacturing . The invitation for this program was prepared by the designer team of MAMSE and distributed through Facebook and WhatsApp. Totally around 40 participant has attended this Guest Lecture The session was started sharply by 11.30 am and welcome address was given by **Mr.S.Ravichandran.Assistant Professor,** Mechanical Engineering Department. and Introduction about the Resource person was given by **Mr.R.Ramanathan , Associate Professor & HOD of Mechanical Engineering.** After that the resource person starts the presentation with the Machining process and testing methods . He has given the usage of various machining process and the advancement of the NDT. At last the questionnaire session was given to the participants and the resource person explained the answers for the questions asked by the participants The feedback for the participants was collected through form
Theme	To give the basic knowledge of various testing methods used in Manufacturing
Programme Held	@ Seminar Hall , MAMSE
Duration	45 minutes
Start days	14.02.2020
End days	14.02.2020
No of Students participants	40
No of Faculty participants	2
Expenditure amount (any)	Nil
Mode of session delivery	Offline Direct Discussion
Objective (100 words)	To give the basic knowledge about the various testing methods
Benefit in terms of learn skills/knowledge obtain (150words)	Students and Faculties got knowledge on the Testing Methods and the Advancement in NDT
Photo :	Available

PHOTOS



camp, 11 a.m.. Seminar on Fundamentals and advancements in automobiles, 9.30 a.m.

Department of Information and Public Relations: Government exhibition, Pattabiraman Road, 4 p.m. to 10 p.m., cultural programmes, 6 p.m.

M.A.M. School of Engineering: Lecture on Advancements in NDT by Shankar Ganesh of Evershine Technology, 10.30 a.m.

N.Ramaswami Ayyar Memorial Polytechnic College for Girls: An-

Er. Shankar Ganesh about "**Advancements in NDT**" & Newspaper Cutting of "The Hindu" Today's Engagement

CONCLUSION

Er. Shankar Ganesh had delivered the topic "Advancements in NDT" to the students of Mechanical Engineering department on 14th Feb 2020 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers various methodologies involved in Non Destructive Testing and its importance through video session. It was very useful to Student and Faculty members to get the knowledge of designing methodologies.

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Leeture on " Advancement in NDT "
Date: 14.02.2020

1. What is your opinion about the duration of this program?
   A. Short ✓ B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent ✓ C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good ✓ B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good ✓ C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot ✓ B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent ✓ C. No
7. Planning of this programme?
   A. Very good ✓ B. Good C. Average D. Poor

Any other comment (if any):

— No Comments

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
(Accredited by NAAC)
(Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai)

Feedback Form Report

Name of the Program: Guest Lecture on " Advancement in NDT "
Date: 14.02.2020

1. What is your opinion about the duration of this program?
   A. Short B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent C. Not useful
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4. How would you rate the materials presented?
   A. Very good B. Good C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good C. Average D. Poor
8. Any other comment (if any):

– Good –

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
(Accredited by NAAC)
(Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai)

Feedback Form Report

Name of the Program: Guest Lecture on " **Advancement in NDT** "
Date: 14.02.2020

1. What is your opinion about the duration of this program?
   A. Short B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent C. No
7. Planning of this programme?
   A. Very good B. Good C. Average D. Poor
8. Any other comment (if any):

— Good —
— Very useful —

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
(Accredited by NAAC)
(Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai)

Feedback Form Report

Name of the Program: Guest Lecture on " Advancement in NDT "
Date: 14.02.2020

1. What is your opinion about the duration of this program?
   A. Short ✓ B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much B. To some extent ✓ C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good ✓ B. Good C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good ✓ C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory ✓ C. None of it
6. Did it fulfill your expectation?
   A. Yes B. Some Extent C. No ✓
7. Planning of this programme?
   A. Very good ✓ B. Good C. Average D. Poor
8. Any other comment (if any):

— very usfull —

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"PRODUCT DESIGN USING SOLID WORKS"

24th Jan 2020

TABLE OF CONTENTS

Compiled by HOD/Mechanical Engg. PRINCIPAL

GUEST PROFILE

Er. N. Santhanam,
Centre Manager,
TCIL-IT,
Trichy-620006.

PROGRAM DETAILS

Er. N. Santhanam, TCIL-IT gave a Guest lecture about **"Product Design using Solid Works"** at M.A.M School of Engineering on 24th Jan 2020. He discussed about the solid modelling in Computer Aided Design & Computer Aided Engineering and its importance in Engineering carrier. Totally 30 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "Product Design using Solid Works"
- Board Presentation of Modelling Basics.
- Interaction session
- Feedback session

COURSE CONTENT

SolidWorks is a solid modeling computer - aided design (CAD) and computer-aided engineering (CAE) computer program that runs primarily on Microsoft Windows. While it is possible to run SolidWorks on MacOS, It is not supported by SolidWorks.[2] SolidWorks is published by Dassault Systèmes.

SolidWorks is a solid modeler, and utilizes a parametric feature-based approach which was initially developed by PTC (Creo/Pro-Engineer) to create models and assemblies. The software is written on Parasolid-kernel.

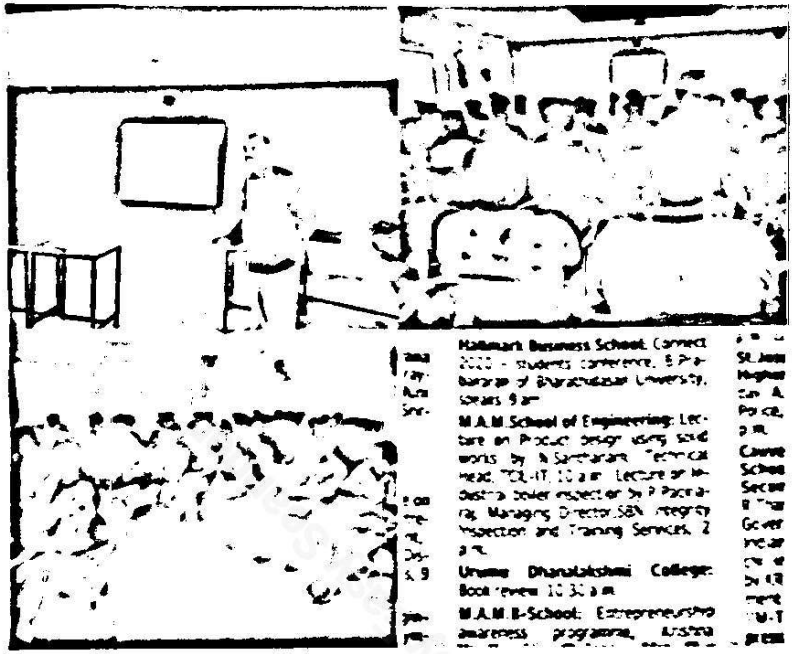
Parameters refer to constraints whose values determine the shape or geometry of the model or assembly. Parameters can be either numeric parameters, such as line lengths or circle diameters, or geometric parameters, such as tangent, parallel, concentric, horizontal or vertical, etc. Numeric parameters can be associated with each other through the use of relations, which allows them to capture design intent.

Design intent is how the creator of the part wants it to respond to changes and updates. For example, you would want the hole at the top of a beverage can to stay at the top surface, regardless of the height or size of the can. SolidWorks allows the user to specify that the hole is a feature on the top surface, and will then honor their design intent no matter what height they later assign to the can.

Features refer to the building blocks of the part. They are the shapes and operations that construct the part. Shape-based features typically begin with a 2D or 3D sketch of shapes such as bosses, holes, slots, etc. This shape is then extruded to add or cut to remove material from the part. Operation-based features are not sketch-based, and include features such as fillets, chamfers, shells, applying draft to the faces of a part, etc.

Building a model in SolidWorks usually starts with a 2D sketch (although 3D sketches are available for power users). The sketch consists of geometry such as points, lines, arcs, conics (except the hyperbola), and splines. Dimensions are added to the sketch to define the size and location of the geometry. Relations are used to define attributes such as tangency, parallelism, perpendicularity, and concentricity. The parametric nature of SolidWorks means that the dimensions and relations drive the geometry, not the other way around. The dimensions in the sketch can be controlled independently, or by relationships to other parameters inside or outside the sketch.

PHOTOS



Er. N. Santhanam about "Product Design using Solid Works"

CONCLUSION

Er. N. Santhanam had delivered the topic "Product Design using Solid Works" to the students of Mechanical Engineering department on 24th Jan 2020 at Seminar Hall, M A M School of Engineering, Trichy. He covers the topics of various softwares available for solid modelling and its importance through video session. It was very useful to Student and Faculty members to get the knowledge of designing methodologies.

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"AUTOMATION AND INDUSTRIAL ROBOTICS"

10th Jan 2020

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Compiled by **HOD/Mechanical Engg.** **PRINCIPAL**

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"AUTOMATION AND INDUSTRIAL ROBOTICS"

10th Jan 2020

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Compiled by

HOD/Mechanical Engg.

PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.
(Accredited by NAAC)

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity for the Guest lecture program on **"Automation and Industrial Robotics"** at College Auditorium, M.A.M. School of Engineering between 10.00 AM to 1.00 PM on 10th Jan 2020.

Venue: College Auditorium

Resource Person:

Er. Muthukumar,
Application Engineer, AGIIT,
Salai Road, Trichy-18.

GUEST PROFILE

Er. Muthukumar,
Application Engineer, AGIIT,
Salai Road, Trichy-18.

PROGRAM DETAILS

Er. Muthukumar, Application Engineer, AGIIT, gave a Guest lecture about "**Automation and Industrial Robotics**" at M.A.M School of Engineering on **10th Jan 2020**. He discussed about Automation process of machines used in Industries and its importance in Engineering carrier. Totally 40 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "**Automation and Industrial Robotics**"
- Board Presentation of Automation basics.
- Interaction session
- Feedback session

COURSE CONTENT

Robotics is an interdisciplinary branch of engineering and science that includes mechanical engineering, electronic engineering, information engineering, computer science, and others. Robotics deals with the design, construction, operation, and use of robots, as well as computer systems for their control, sensory feedback, and information processing.

Robots all have some kind of mechanical construction, a frame, form or shape designed to achieve a particular task. For example, a robot designed to travel across heavy dirt or mud, might use caterpillar tracks. The mechanical aspect is mostly the creator's solution to completing the assigned task and dealing with the physics of the environment around it. Form follows function.

Robots have electrical components which power and control the machinery. For example, the robot with caterpillar tracks would need some kind of power to move the tracker treads. That power comes in the form of electricity, which will have to travel through a wire and originate from a battery, a basic electrical circuit. Even petrol powered machines that get their power mainly from petrol still require an electric current to start the combustion process which is why most petrol powered machines like cars, have batteries. The electrical aspect of robots is used for movement (through motors), sensing (where electrical signals are used to measure things like heat, sound, position, and energy status) and operation (robots need some level of electrical energy supplied to their motors and sensors in order to activate and perform basic operations)

All robots contain some level of computer programming code. A program is how a robot decides when or how to do something. In the caterpillar track example, a robot that needs to move across a muddy road may have the correct mechanical construction and receive the correct amount of power from its battery, but would not go anywhere without a program telling it to move. Programs are the core essence of a robot, it could have excellent mechanical and electrical construction, but if its program is poorly constructed its performance will be very poor (or it may not perform at all). There are three different types of robotic programs: remote control, artificial intelligence and hybrid. A robot with remote control programing has a preexisting set of commands that it will only perform if and when it receives a signal from a control source, typically a human being with a remote control. It is perhaps more appropriate to view devices controlled primarily by human commands as falling in the discipline of automation rather than robotics. Robots that use artificial intelligence interact with their environment on their own without a control source, and can determine reactions to objects and problems they encounter using their preexisting programming. Hybrid is a form of programming that incorporates both AI and RC functions.

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"ADVANCES IN MACHINING PROCESS"

4th Jan 2020

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Compiled by

HOD/Mechanical Engg.

PRINCIPAL

GUEST PROFILE

Dr. P. Hariharan
Director-Student Affiairs,
Anna University,
Chennai.

PROGRAM DETAILS

Dr. P. Hariharan, Director-Student Affiairs, Anna University, gave a Guest lecture about "Advances In Machining Process" at M.A.M. School of Engineering on 4th Jan 2020. He discussed about various advanced machining process and its importance in Engineering carrier. Totally 50 students and 5 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "Advances In Machining Process"
- Board Presentation of mechanical system basics.
- Interaction session
- Feedback session

Course Content

Program Title	Guest Lecture on **" Advances in Machining Process "**
Description about the event (200 words)	Department of Mechanical Engineering had the privilege of having Guest Lecture on **" Advances in Machining Process "** on 04.01.2020.The resource person was Dr. P.Hariharan, Director- Students Affairs Anna University , Chennai -25 This Guest Lecture was mainly organized for giving the basic knowledge about the Advances in Machining Process and the factors to be considered for the Design of the machining process for getting more benefit The invitation for this program was prepared by the designer team of MAMSE and distributed through Facebook and WhatsApp. Totally around 100 participant has attended this Guest Lecture The session was started sharply by 2.30pm and welcome address was given by **Mr.R.Ramanathan , Associate Professor & HOD** of Mechanical Engineering and Introduction about the Resource person was given by **Mr.S.Ravichandran,Assistant Professor,** Mechanical Engineering Department. After that the resource person starts the presentation with the Machining process s which are using by the people in the field of Manufacturing . Also he has given the usage of various machining process and the advance of the latest Technology . At last the questionnaire session was given to the participants and the resource person explained the answers for the questions asked by the participants The feedback for the participants was collected through form.
Theme	To give the basic knowledge of various Machining Process
Programme Held	Guest Lecture @ Seminar Hall
Duration	60 minutes
Start days	04.01.2020
End days	04.01.2020
No of Students participants	50
No of Faculty participants	5
Expenditure amount (any)	Nil
Mode of session delivery	Offline Direct discussion
Objective (100 words)	To give the basic knowledge about the various Machining Process and their advances
Benefit in terms of learn skills/knowledge obtain (150words)	Students and Faculties got knowledge on the Latest Advances in the various Machining Process
Photo :	Available

Course Content

Program Title	Guest Lecture on " **Advances in Machining Process** "
Description about the event (200 words)	Department of Mechanical Engineering had the privilege of having Guest Lecture on " **Advances in Machining Process** " on 04.01.2020.The resource person was Dr. P.Hariharan, Director- Students Affairs Anna University , Chennai -25 This Guest Lecture was mainly organized for giving the basic knowledge about the Advances in Machining Process and the factors to be considered for the Design of the machining process for getting more benefit The invitation for this program was prepared by the designer team of MAMSE and distributed through Facebook and WhatsApp. Totally around 100 participant has attended this Guest Lecture The session was started sharply by 2.30pm and welcome address was given by **Mr.R.Ramanathan , Associate Professor & HOD** of Mechanical Engineering and Introduction about the Resource person was given by **Mr.S.Ravichandran,Assistant Professor**, Mechanical Engineering Department. After that the resource person starts the presentation with the Machining process s which are using by the people in the field of Manufacturing . Also he has given the usage of various machining process and the advance of the latest Technology . At last the questionnaire session was given to the participants and the resource person explained the answers for the questions asked by the participants The feedback for the participants was collected through form.
Theme	To give the basic knowledge of various Machining Process
Programme Held	Guest Lecture @ Seminar Hall
Duration	60 minutes
Start days	04.01.2020
End days	04.01.2020
No of Students participants	50
No of Faculty participants	5
Expenditure amount (any)	Nil
Mode of session delivery	Offline Direct discussion
Objective (100 words)	To give the basic knowledge about the various Machining Process and their advances
Benefit in terms of learn skills/knowledge obtain (150words)	Students and Faculties got knowledge on the Latest Advances in the various Machining Process
Photo :	Available

PHOTOS

Dr. P. Hariharan about "Advances In Machining Process"

CONCLUSION

Dr. P. Hariharan had delivered the topic "Advances In Machining Process" to the students of Mechanical Engineering department on 4th Jan 2020 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics of advanced manufacturing technologies and its importance through video session. It was very useful to Student and Faculty members to get the knowledge of designing methodologies.

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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Feedback Form Report

Name of the Program: Guest Lecture Report on "ADVANCES IN MACHINING PROCESS"
DATE:04.01.2020.

1. What is your opinion about the duration of this program?
   A. Short ✓ B. Adequate C. long
2. Overall, how useful was this program for you?
   A. Very Much ✓ B. To some extent C. Not useful
3. How would you rate the teaching Qualities?
   A. Very good B. Good ✓ C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good ✓ B. Good C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot B. Satisfactory ✓ C. None of it
6. Did it fulfill your expectation?
   A. Yes ✓ B. Some Extent C. No
7. Planning of this programme?
   A. Very good ✓ B. Good C. Average D. Poor
8. Any other comment (if any): - Good -

M.A.M. SCHOOL OF ENGINEERING

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   (A.) Very good B. Good C. Average D. Poor
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   (A.) A lot B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   (A.) Yes B. Some Extent C. No
7. Planning of this programme?
   (A.) Very good B. Good C. Average D. Poor
8. Any other comment (if any): - Very Good -

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
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5. How much of knowledge you learned today?
   (A.) A lot B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes (B.) Some Extent C. No
7. Planning of this programme?
   (A.) Very good B. Good C. Average D. Poor
8. Any other comment (if any): - Very Good -

M.A.M. SCHOOL OF ENGINEERING

Siruganur, Trichy – 621 105.
(Accredited by NAAC)
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Name of the Program: Guest Lecture Report on "ADVANCES IN MACHINING PROCESS"
DATE:04.01.2020.

1. What is your opinion about the duration of this program?
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2. Overall, how useful was this program for you?
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3. How would you rate the teaching Qualities?
   A. Very good B. Good ✓ C. Average D. Poor
4. How would you rate the materials presented?
   A. Very good B. Good ✓ C. Average D. Poor
5. How much of knowledge you learned today?
   A. A lot ✓ B. Satisfactory C. None of it
6. Did it fulfill your expectation?
   A. Yes ✓ B. Some Extent C. No
7. Planning of this programme?
   A. Very good ✓ B. Good C. Average D. Poor
8. Any other comment (if any): -Good-

M.A.M. SCHOOL OF ENGINEERING,

SIRUGANUR, TRICHY - 621105.

Guest Lecture Report

on

"APPLICATION OF SOLAR POWER IN MECHANICAL SYSTEMS"

3rd Jan 2020

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Compiled by HOD/Mechanical Engg. PRINCIPAL

M.A.M. SCHOOL OF ENGINEERING

Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.
(Accredited by NAAC)

INVITATION

The Department of Mechanical Engineering Cordially invites Third Year students and Faculty members of the department activity for the Guest lecture program on **"Application of Solar Power in Mechanical Systems"** at College Auditorium, M.A.M. School of Engineering between 10.00 AM to 1.00 PM on 3rd Jan 2020.

Venue: College Auditorium

Resource Person

Dr.A.Elango,
Former Professor & Principal,
A C College of Engg & Technology,
Karaikudi

GUEST PROFILE

Dr.A.Elango,
Former Professor & Principal,
A.C.College of Engg & Technology,
Karaikudi.

PROGRAM DETAILS

Dr.A.Elango, Former Professor & Principal, A.C.College of Engg & Technology, gave a Guest lecture about **"Application of Solar Power in Mechanical Systems"** at M.A.M School of Engineering on 3rd Jan 2020. He discussed about solar power consumption techniques and its importance in Engineering carrier. Totally 25 students and 2 Faculty members attended the program.

PROGRAM AGENDA

- Introduction about himself.
- Guest Lecture on Topic "**Application of Solar Power in Mechanical Systems**"
- Board Presentation of mechanical system basics.
- Interaction session
- Feedback session

COURSE CONTENT

Solar power is the conversion of energy from sunlight into electricity, either directly using photovoltaics (PV), indirectly using concentrated solar power, or a combination. Concentrated solar power systems use lenses or mirrors and solar tracking systems to focus a large area of sunlight into a small beam. Photovoltaic cells convert light into an electric current using the photovoltaic effect.

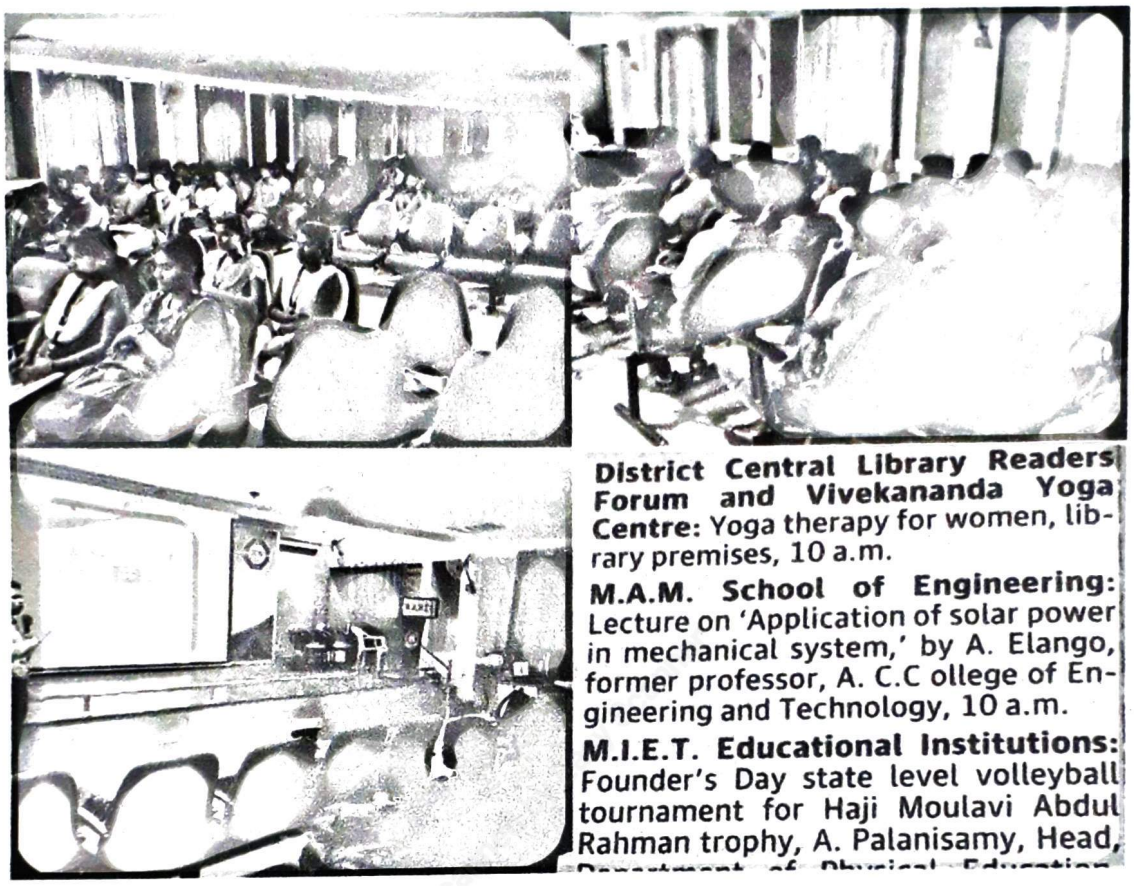
Photovoltaics were initially solely used as a source of electricity for small and medium-sized applications, from the calculator powered by a single solar cell to remote homes powered by an off-grid rooftop PV system. Commercial concentrated solar power plants were first developed in the 1980s. As the cost of solar electricity has fallen, the number of grid-connected solar PV systems has grown into the millions and utility-scale photovoltaic power stations with hundreds of megawatts are being built. Solar PV is rapidly becoming an inexpensive, low-carbon technology to harness renewable energy from the Sun.

A grid-connected photovoltaic system, or grid-connected PV system is an electricity generating solar PV power system that is connected to the utility grid. A grid-connected PV system consists of solar panels, one or several inverters, a power conditioning unit and grid connection equipment. They range from small residential and commercial rooftop systems to large utility-scale solar power stations. Unlike stand-alone power systems, a grid-connected system rarely includes an integrated battery solution, as they are still very expensive. When conditions are right, the grid-connected PV system supplies the excess power, beyond consumption by the connected load, to the utility grid.

Residential, grid-connected rooftop systems which have a capacity more than 10 kilowatts can meet the load of most consumers. They can feed excess power to the grid where it is consumed by other users. The feedback is done through a meter to monitor power transferred. Photovoltaic wattage may be less than average consumption, in which case the consumer will continue to purchase grid energy, but a lesser amount than previously. If photovoltaic wattage substantially exceeds average consumption, the energy produced by the panels will be much in excess of the demand. In this case, the excess power can yield revenue by selling it to the grid. Depending on their agreement with their local grid energy company, the consumer only needs to pay the cost of electricity consumed less the value of electricity generated. This will be a negative number if more electricity is generated than consumed. Additionally, in some cases, cash incentives are paid from the grid operator to the consumer.

Connection of the photovoltaic power system can be done only through an interconnection agreement between the consumer and the utility company. The agreement details the various safety standards to be followed during the connection.

PHOTOS



District Central Library Readers Forum and Vivekananda Yoga Centre: Yoga therapy for women, library premises, 10 a.m.

M.A.M. School of Engineering: Lecture on 'Application of solar power in mechanical system,' by A. Elango, former professor, A. C.C ollege of Engineering and Technology, 10 a.m.

M.I.E.T. Educational Institutions: Founder's Day state level volleyball tournament for Haji Moulavi Abdul Rahman trophy, A. Palanisamy, Head,

Dr.A.Elango about "Application of Solar Power in Mechanical Systems" & Newspaper Cutting of "The Hindu" Today's Engagement.

CONCLUSION

Dr.A.Elango had delivered the topic "**Application of Solar Power in Mechanical Systems**" to the students of Mechanical Engineering department on 3rd Jan 2020 at Seminar Hall, M.A.M. School of Engineering, Trichy. He covers the topics of solar power integration with day today life and its importance through video session. It was very useful to Student and Faculty members to get the knowledge of designing methodologies.