



A Certificate Course

ON

NON-DESTRUCTIVE TECHNIQUES IN MANUFACTURING INDUSTRIES

From 19th FEB 2024 to 23rd FEB 2024



ORGANIZED BY

DEPARTMENT OF MECHANICAL ENGINEERING

AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY,
(Approved by AICTE, Permanently Affiliated to JNTUGV, VIZAYANAGARAM,
ACCREDITED BY NAAC and Recognized under 2(f) & 12(b) by UGC New Delhi)
Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

AVANTHI EDUCATIONAL SOCIETY

Avanthi Educational Society under the Leadership of Sri M. Srinivasa Rao garu as chairman was started in the Year 1991. Within a short span of its establishment, the group has made a remarkable stride in the field of education offering various courses at Under Graduate, Post Graduate, Pharmacy & Engineering levels. This milestone is achieved as the institution carved itself to impart quality and career-oriented education, countering the challenges of the modern world through planning, dedication, determination, prompt execution and with the innovative ideas of our advisory board.

Today, Avanthi Educational Society is proud to have a strength of over 16000 students with 15 institutions under its ambit. It is the path of glory towards the success during the last 19 years. The institution has been adjudged many times as the second best educational institutions in the twin cities and 16th best in all over India through the impartial survey made by the renowned magazine "India Today".

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

AIET started in the year 1999 and offers various courses at Engineering and PG level. The college is providing with rooms, computer centre, laboratories and seminar hall with audio-visual equipments. Industry Institute interaction is conducted regularly to emphasize on the latest trends in the present market.



It is very near to Narsipatnam. Frequent bus facilities are available both from and to Visakhapatnam and Narsipatnam. Very safe and secure hostel facility is available for Girl students. These are the additional facilities besides excellent academic atmosphere in the college campus.

DEPARTMENT OF MECHANICAL ENGINEERING

Mechanical Engineering department was started in the year 2005 with intake strength of 60 seats, this was increased to 120 students in 2012 and this was increased to 180 students in 2013. The department has well qualified and trained faculty members. It has well equipped laboratories and workshops and includes a CAD/CAM laboratory where students are imparted training in advanced production techniques and design and analysis of machine elements.

The department of Mechanical Engineering has been contributing its humble share of the Mechanical Engineering graduates for national needs. Several of the graduates who have passed out of this department are occupying responsible positions in various Engineering Industries like Hindustan Shipyard Limited, Renault Nissan, Varun Motors, Tata Consultancy Services, HP and IBM and holding responsible positions in the premier educational institutes in and outside India.

ABOUT WORKSHOP

Non-destructive 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 non-destructive examination (NDE), non-destructive inspection (NDI), and non-destructive evaluation (NDE) are also commonly used to describe this technology. The six most frequently used NDT methods are eddy current, magnetic-particle, liquid penetrate, radiographic, ultrasonic, and visual testing. An additional challenge for NDT manufacturers is meeting the high customer expectations. Customers are demanding a host of features in the new equipment, which may not be possible due to technology or economic limitations.

TOPICS TO BE COVERED

Introduction to NDT and Overview of NDT Platforms, Engineering Materials & Manufacturing Processes, Properties of Material & Testing, Properties of Material & Testing, Visual Testing, Liquid Penetrate Testing, Magnetic Particle Testing Ultrasonic Testing

For Registration, please contact Mr. B. Rama krishna, Assistant Professor, Department of Mechanical Engineering.

CHIEFPATRON

Smt. M. Gnaneswari President,
Avanthi Educational Society

PATRON

Dr. CPVNJ MohanRao Principal,
Avanthi Institute of Engineering And Technology

CHAIRMAN

Dr. V. Harikiran
HOD of Mechanical Engineering

CO ORDINATOR

Mr. B. Ramakrishna
Asst. Professor



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNTUG VIZAYANAGARAM
NAAC Accredited with A+ grade and recognized under 2(f)&12(b) by UCG New Delhi)
Tamaram (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist, Pin-531113.

DEPARTMENT OF MECHANICAL ENGINEERING


CIRCULAR

Date : 13/02/2024

We are happy to inform you that, Department of Mechanical Engineering, AIET is organizing five day certificate course on “Non –Destructive Techniques in Manufacturing Industries” from 19th February 2024 to 23rd February 2024 in physical mode for all III B. Tech students. Interested candidates directly to enroll above course on or before 18/02/2024. For further details contact Course Coordinator Mr. B. Rama Krishna, Assistant Professor, Mechanical Engineering.

Resource Person Details:

1. Sri MD Farooq
Level 2 Expert
MEGHA NDT
Visakhapatnam
2. D. Samuel
Level 2 Expert
MEGHA NDT
Visakhapatnam


Dr. V. Harikiran
HOD

Mechanical Department

Copy to: Principal, AIET

Head of the Department
Department of Mechanical Engg.
Avanthi Institute of Engg. & Tech.,
Makavarapalem, Anakapalli Dt. -531113



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNTUG VIZAYANAGARAM
NAAC Accredited with A+ grade and recognized under 2(f)&12(b) by UCG New Delhi)
Tamaram (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist, Pin-531113.

DEPARTMENT OF MECHANICAL ENGINEERING

A five -day workshop on

NON-DESTRUCTIVE TECHNIQUES IN MANUFACTURING INDUSTRIES

19th FEB 2024 to 23rd FEB 2024

Syllabus of the Workshop:

Chapter-1

- Introduction to NDT and overview of NDT Platforms

Chapter-2

- Engineering Materials & Manufacturing Processes

Chapter-3

- Properties of Material & Testing

Chapter-4

- Visual Testing (Theory & Practical)

Chapter-5

- Liquid Penetrate testing (Theory & Practical), Magnetic Partical Testing (Theory &Partical) Ultrasonic Testing (Theory &Partical)

Chapter-6

- Applicability & Q&A Partical use, Future skill development and Training prior to joining industry

EXPECTED OUTCOMES

- This workshop will provide insight on NDT.
- It will strengthen participants skills in NDT to perform various engineering problems.
- Workshop will help to understand application of NDT in the multidisciplinary areas such as nuclear. Materials inspection and so on.


COEDINATOR


HOD

Head of the Department
Department of Mechanical Engg.
Avanthi Institute of Engg. & Tech.,
Makavarapalem, Anakapalli Dt. -531113



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNTUG VIZAYANAGARAM
NAAC Accredited with A+ grade and recognized under 2(f)&12(b) by UCG New Delhi)
Tamaram (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist, Pin-531113.

DEPARTMENT OF MECHANICAL ENGINEERING

NON-DESTRUCTIVE TECHNIQUES IN MANUFACTURING INDUSTRIES

19th FEB 2024 to 23rd FEB 2024

Schedule

Day-1 (19/02/2024)

- 9.00 AM to 11.00 AM – Introduction to NDT and Overview of NDT Platforms
- 11.00 AM to 11.15AM – Break
- 11.15 AM to 1.15 PM – NDT types
- 1.15 PM to 2.15 PM – Lunch Break
- 2.15 PM to 4.00 PM – Radiograph and X-rays ,Gamma rays (Hands-on training)

Day-2 (20/02/2024)

- 9.00 AM to 11.00 AM – Ultrasonic testing Liquid penetration in Aerospace and Defence
- 11.00 AM to 11.15AM – Break
- 11.15 AM to 1.15 PM – Magnetic Partical Testing
- 1.15 PM to 2.15 PM – Lunch Break
- 2.15 PM to 4.00 PM – Ultrasonic partical (Hands-on training)

Day-3 (21/02/2024)

- 9.00 AM to 11.00 AM – Multiphase Flows
- 11.00 AM to 11.15AM – Break
- 11.15 AM to 1.15 PM – Defects in material based on operations
- 1.15 PM to 2.15 PM – Lunch Break
- 2.15 PM to 4.00 PM – Theoretical procedures of NDT (Hands-on training)

Day-4 (22/02/2024)

9.00 AM to 11.00 AM – Visual testing method

11.00 AM to 11.15AM – Break

11.15 AM to 1.15 PM – Infrared and thermal imaging process

1.15 PM to 2.15 PM – Lunch Break

2.15 PM to 4.00 PM – Applications in automotive, railway, and tunnels (Hands-on training)

Day-5 (23/02/2024)

9.00 AM to 11.00 AM – Eddy current test process

11.00 AM to 11.15AM – Break

11.15 AM to 1.15 PM – Applications in marine and aerospace (Hands on Training)

1.15 PM to 2.15 PM – Lunch Break

2.15 PM to 4.00 PM – Valediction / Feedback session


COORDINATOR


HOD

Head of the Department
Department of Mechanical Engg.
Avanhi Institute of Engg. & Tech.,
Makavarapalem, Anakapalli Dt. -531113



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, Permanently Affiliated to JNTUG VIZAYANAGARAM
NAAC Accredited with A+ grade and recognized under 2(f)&12(b) by UCG New Delhi)
Tamaram (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist, Pin-531113.

DEPARTMENT OF MECHANICAL ENGINEERING

Workshop on “NON-DESTRUCTIVE TECHNIQUES IN MANUFACTURING INDUSTRIES”

From 19th FEB 2024 to 23rd FEB 2024

III B. TECHMECH Students Attendance list

S.NO	Roll Number	Name of the students	19-02-2024	20-02-2024	21-02-2024	22-02-2024	23-02-2024
1	21811A0301	J.N.DINESH GUPTHA	✓	✓	✓	✓	✓
2	21811A0303	M.KIRAN	✓	✓	✓	✓	✓
3	21811A0304	SAGARIKA NATH	✓	✗	✓	✓	✓
4	21811A0305	V.B.V.P.RAJU	✓	✓	✓	✓	✓
5	22815A0301	A.THARUN KUMAR	✓	✓	✓	✓	✓
6	22815A0302	B.THARUN KUMAR	✓	✓	✓	✓	✓
7	22815A0303	B.DINESH	✓	✓	✓	✓	✓
8	22815A0304	B.CHANDINI	✓	✓	✓	✓	✓
9	22815A0305	B.SAI RAM	✗	✓	✓	✓	✓
10	22815A0306	C.MANOJ	✓	✓	✓	✓	✓
11	22815A0307	CH.HEMANTH	✓	✓	✓	✓	✓
12	22815A0308	D.ANAND	✓	✓	✓	✓	✓
13	22815A0309	D.SAMUEL	✓	✓	✓	✓	✓
14	22815A0310	D.JAGADEESH	✓	✓	✓	✓	✓
15	22815A0311	E.Y.V.DURGA PRASAD	✓	✓	✓	✓	✓
16	22815A0312	G.CHANDU	✓	✓	✓	✓	✓
17	22815A0313	G.Y.R.V.S.GANAPATHI	✓	✓	✓	✓	✓
18	22815A0314	G.SAI KIRAN	✓	✓	✓	✓	✓
19	22815A0315	G.VARAHALA RAJU	✓	✓	✓	✓	✓
20	22815A0316	G.HARI KRISHNA	✓	✓	✓	✓	✓
21	22815A0317	G.SIVA PRASAD	✗	✓	✓	✓	✓
22	22815A0318	G.NIVAS	✓	✓	✓	✓	✓
23	22815A0319	B.HARSHA VARDHAN	✓	✓	✓	✓	✓
24	22815A0320	J.RAMA KRISHNA	✓	✓	✓	✓	✓
25	22815A0321	K.VASU	✓	✓	✓	✓	✓
26	22815A0322	K.ROHIT	✓	✓	✓	✓	✓
27	22815A0323	K.DIVAKAR	✓	✓	✓	✓	✓
28	22815A0324	K.DURGA PRASAD	✓	✗	✓	✓	✓
29	22815A0325	K.DINESH	✓	✓	✓	✓	✓
30	22815A0326	K.SIVA	✓	✓	✓	✓	✓
31	22815A0327	K.HEMANTH SAI	✓	✓	✓	✓	✓

32	22815A0328	K.VINAY	✓	✓	✓	✓	✓
33	22815A0329	K.LAXMI TEJA	✓	✓	✓	✓	✓
34	22815A0330	K.DINESH SAI KUMAR	✓	✓	✓	✓	✓
35	22815A0332	K.MANIKANTA	✓	✓	✓	✓	✓
36	22815A0333	M.ROHITH MANI SHANKAR	✓	X	✓	✓	✓
37	22815A0334	M.CHAITANYA	✓	✓	✓	✓	✓
38	22815A0335	M.AKHIL	✓	✓	✓	✓	✓
39	22815A0336	M.HEMANTH	✓	✓	✓	✓	✓
40	22815A0337	M.MANOJ	✓	✓	✓	✓	✓
41	22815A0339	M.KARTHIK	✓	✓	✓	X	✓
42	22815A0340	N.PRASAD	✓	✓	✓	✓	✓
43	22815A0341	N.SHREYASH	X	✓	✓	✓	✓
44	22815A0342	P.SAI RAM	✓	✓	✓	✓	✓
45	22815A0343	P.HARISH	✓	✓	✓	✓	✓
46	22815A0344	P.KURPA RAKSHANA	✓	✓	✓	✓	✓
47	22815A0345	P.VIJAY	✓	✓	✓	✓	✓
48	22815A0346	P.DURGA PRASAD	✓	✓	✓	✓	✓
49	22815A0347	P.PAVAN KUMAR	✓	X	✓	✓	✓
50	22815A0348	PRASANTH CHADARAM	✓	✓	✓	✓	✓
51	22815A0349	P.HARINADH	✓	✓	✓	✓	✓

AR

COORDINATOR

B

HOD

Head of the Department
Department of Mechanical Engg.
Avan'hi Institute of Engg. & Tech.,
Makavarapalem, Anakapalli Dt. -531113



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNTUG VIZAYANAGARAM
NAAC Accredited with A+ grade and recognized under 2(f)&12(b) by UCG New Delhi)
Tamaram (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist, Pin-531113.

DEPARTMENT OF MECHANICAL ENGINEERING

NON-DESTRUCTIVE TECHNIQUES IN MANUFACTURING INDUSTRIES

19th FEB 2024 to 23rd FEB 2024




COORDINATOR


HOD

Head of the Department
Department of Mechanical Engg.
Avanthi Institute of Engg. & Tech.,
Makavarapalem, Anakapalli Dt. -531113



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNTU G, Vizianagaram,
ACCREDITED BY NAAC and Recognized under 2(f) & 12 (b) by UGC, New Delhi)
Tamaram, Makavarapalem, Narsipatnam (RD), Anakapalli-531113

Certificate of Participation

This is to certify that Mr./Ms. _____ of
_____ has participated in the Certificate Course entitled
on "**NON-DESTRUCTIVE TECHNIQUES IN MANUFACTURING INDUSTRIES**"
during from 19th February 2024 to 23rd February 2024. _ was organised by the
Department
of MECHANICAL ENGINEERING at Avanthi Institute of Engineering and Technology

Coordinator

HOD

Principal



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNTUG VIZAYANAGARAM
NAAC Accredited with A+ grade and recognized under 2(f)&12(b) by UCG New Delhi)
Tamararam (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist, Pin-531113.

DEPARTMENT OF MECHANICAL ENGINEERING

Date:26/02/2024

BRIEF REPORT

Department of Mechanical Engineering, Avanthi Institute of Engineering and Technology had organized a certificate course on **“NON-DESTRUCTIVE TECHNIQUES IN MANUFACTURING INDUSTRIES”** during from 19th Feb 2024 to 23rd Feb 2024

We had Mr MD. FAROOQ LEVEL2 Expert, Megha NDT as the speaker to explain detail Introduction of NDT and overview of NDT platforms. He started off with the need of Radiograph and X-rays, Gamma rays, he extensively explained the plus points of this technology, one of the major advantage is increased Product Reliability, less down time.

We had Mr. D.Samule, LEVEL 2 Expert, Megha NDT He started off with detail information about Ultrasonic testing, Liquid penetration. Then after he gave the limitations that it can only detect defects open to the surface, consuming time, they are generally used for Automotive, Aerospace applications. Later he discussed some of the topics during the course are visual testing methods, Thermal imaging process, Magnetic Partical Testing, Annotations Toolbar. He concluded with the real time applications like Automotive, Railway and Tunnels and in various Industries.


COORDINATOR


HOD

Head of the Department
Department of Mechanical Engg.
Avanthi Institute of Engg. & Tech.,
Makavarapalem, Anakapalli Dt. -531113