THANKI ENGINEERING SOLUTIONS

Delivering Excellence in NDT

TF – 28, Suner Complex, Harinagar Crossing, Gotri Road, Vadodara - 390 007, tesndt@gmail.com, 9428173351

Introduction : -

Thanki Engineering Solutions owned and managed by Experienced Professionals in the field of world-class NDT products and solutions. We believe in providing the best Products and Reliable Service to the Customers. We provide a range of technology products and value-added services towards economical engineering solutions, catering to most of the industry segments. We build good repro with beloved Customers by providing the best Products, reliable Service and Economical solutions.

We would like to enhance the customer base all over the Country. We committed to maintain a competitive edge, by constantly adding Innovative products to our portfolio and serve the Non Destructive Testing (NDT) Community in the State with the best Engineering Solutions.

Thanki Engineering Solutions – A Single Source to cater Industrial requirements of all Types of NDT (Non Destructive Testing).

1. Ultrasonic Testing & Ultrasonic Thickness Gauging.
2. Advanced UT With Phased Array Ultrasonic Testing (PAUT) & Time of Flight Diffraction (TOFD)
3. Oxide Scale Measurement on Boiler Tubes.
4. Magnetic Particle Testing.
5. Dye Penetrate Testing.
6. Hardness Testing.
7. Visual Testing - Remote Visual Inspection (RVI)
8. Eddy Current Testing & Pulse Eddy Current Testing.
9. Industrial Radiography Testing - Film Interpretation.
10. Positive Material Identification Testing (PMI).
11. Vacuum Box Leak Testing.

We have following Verticals in our feather.

1. **NDT Sales** - We supply All NDT Equipments , Calibration blocks , Accessories & Consumables.
2. **NDT Inspection Services** - We Provide Manpower for NDT onsite with Equipment & Accessories.
3. **Calibration** of all NDT Equipments as per National / International Standards.
4. **Training** - Level I & II , Certification & Renewal in all NDT methods as per SNT TC 1 A.
5. **Consultancy**, E-Guidance & AMC of all activity in eLora as per AERB.
6. **NDT Level III Services** - Recertification , NDE Written Practice as per SNT TC 1 A & Procedure Preparation as per ASME/EN Standards
7. Component Level Repairing & Servicing of NDT Equipments.
8. Customization of NDT Techniques for special jobs i.e. Bond Testing , Oxide Scale ,
9. Skilled Manpower supply for Third Party Inspection , Witness , Projects & Shutdown jobs.
10. Product inspection from Raw Material to Final Stage.

Warm Regards,

Viral Thanki (Proprietor)
URL - www.thankiengineering.com

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WHAT IS NDT?

Nondestructive Testing (NDT) plays an important role in assuring that structural and mechanical components perform their function in a safe, reliable, and cost-effective manner. NDT technicians perform the necessary tests to locate the indicators and discontinuities that may cause failures or shut downs in such systems. These tests are performed in a manner that does not affect the future usefulness of the object or material – hence, the name "nondestructive." NDT allows for careful and thorough materials evaluation without the need for deconstruction or damage. NDT is typically used at various points in a part's life cycle. NDT can be used prior to the use of a component for the sake of quality control. NDT is also employed while components are in use to detect service related conditions caused by wear, fatigue, corrosion, stress, or other factors which affect reliability.

NDT Technologies Include:

Visual and Optical Testing (VT) : -

Visual Examination can be an effective way to recognize surface imperfections that could adversely affect a part or component. Visual Examiners use knowledge of how a part is manufactured, the function of the human eye, lighting requirements, and precise measuring tools to evaluate materials. Computer controlled camera systems and optical aids such as borescopes may also be used to recognize and measure features of a component.

Radiography (RT) : -

Radiographic Examination involves using radioactive isotopes (gamma rays) or X-rays on materials to peer qualitatively for indications the same way a doctor looks for fractures or other conditions within the body. Radiation is directed through a part and projected onto film or a digital detection device leaving an image which can be examined by the qualified Radiographer.

Ultrasonic Testing (UT) : -

Ultrasonic Examination uses high-frequency sound waves which are transmitted into a material to detect discontinuities or locate changes in material characteristics. Sound is introduced into the object being examined and reflections from internal imperfections, areas of acoustic impedance, or varying geometrical surfaces are returned to a receiver.

Magnetic Particle Testing (MT) : -

Magnetic Particle Examination is accomplished by inducing a magnetic field into a ferromagnetic material and applying iron particles to the surface of the item being examined. Surface and near-surface discontinuities affect the flow of the magnetic field within the part causing the applied particles to gather at locations of flux leakage, thus producing a visible indication of the irregularity on the surface of the material.

Penetrant Testing (PT) : -

Penetrant Examination is performed with a dye solution. Once applied to the surface, the dye will effectively penetrate any surface-breaking cavity. Excess solution is removed from the object. A developer is then applied to draw out any penetrant that remains unseen. With fluorescent dyes, ultraviolet light is used to make the "bleed-out" fluoresce brightly, allowing imperfections to be readily seen. With visible dyes, a color contrast between the penetrant and developer makes the "bleed-out" easy to see.

TES Consultancy Services

- **NDT Consultancy:-**

We understand that not everyone is a NDT specialist, so sometimes help is needed to properly fit NDT activity into a wider quality system – into the business, That's why the qualifications, experience and quality of our consultants are critical to us. We ensure that the solutions we deliver are not only technically complete, but also fit the practical needs of your organization.

Knowing what to inspect, when to inspect, and what methodology to use not only improves asset integrity but also helps to reduce the total cost of ownership. We offer extensive Level III NDT consultancy services ranging from inspection planning, reviews of existing inspection schedules and NDT written practices, professional third party witnessing, and evaluation of collected NDT data.

We support you with a comprehensive portfolio of consultancy services for non-destructive testing (NDT) and provide advice tailored to your industrial sector, the type and purpose of your individual assets, the type of degradation to be expected and the age of your plant.

Our experts also review your NDT written practice, train and certify your staff and help prepare for plant life extension and asset fitness for service analysis. Furthermore, our unique computational engineering services will help you develop inspection procedures in accordance with international standards and processes. Our consultancy services are based on ultrasonic procedure validation and ultrasonic technique modeling, among others, We strive to provide know-how about specialized testing methods that require extensive expertise or need independent verification. Our experts are acquainted with international codes and specifications. What is more, our consultancy is accredited to Level III for various NDT techniques.

- **NDT Level III Consultancy Services :-**

1. Selection of right nondestructive testing method/s and techniques suitable for the application.
2. Selection of suitable equipment for specific purpose.
3. Preparation of NDT inspection procedures for various inspection methods, clients and jobs.
4. Preparation of procedures based on International, National or in-house Codes, Standards and specifications to meet customer requirements.
5. Preparation of Test report formats and NDE technique sheets.
6. Preparation of advanced NDT procedures such as Ultrasonic testing of TKY joints, Immersion Ultrasonic testing procedure and Aerospace NDT procedures.
7. Procedures for Advanced NDT methods such as Magnetic Particle Testing (MPT), Ultrasonic testing (UT), Liquid Penetrant Testing(PT), Radiographic Testing, Positive Material Identification (PMI) and Hardness Testing. Preparation of written practices as per ASNT recommended practice SNT-TC-1A
8. Review of all inspection procedures
9. Review of procedures based on International, National or in-house Standards & Specifications.
10. Training and certification of personnel as per employer's written practice
11. ASME code stamp certification consulting services
12. Selecting apt candidates for recruitment as Trainees, NDT Level 1, 2, 3 to fill job vacancies in NDT, material testing, welding inspection and other quality control related posts.

- **Setting Up New NDT Facilities At Customer Locations**

With in-house experienced NDT level III's Thanki Engineering Solutions can help you in setting up new facilities and can assist you in the following ,

1. Study of methods and techniques suitable for the components as per applicable codes, standards and specifications or client requirements
2. Feasibility study in selecting the right equipments suitable for the application
3. Purchasing appropriate equipment for use at competitive price
4. Layout making suitable for component inspection
5. Inspection and commissioning of equipments Calibration and maintenance of equipments and accessories

- **Guidance for eLORA :-**

eLORA (e-Licensing of Radiation Applications), an e-Governance initiative by AERB, is a web-based application for automation of regulatory processes for various Radiation Facilities in India. It is mandatory for all users/owners of Industrial Radiography (Gamma & X Ray)& Medical diagnostic X-Ray equipments to obtain Licence/Registration from AERB for Operation of the equipment as per Atomic Energy (Radiation Protection) Rules 2004.

We Can Offer Following Services through eLora : -

1. New Institute Registration & Radiation Professional (RP) Generation.
2. Layout approval of Enclosure & Approval of Source Storage Facility (Pit Room).
3. Guidance for Enclosure design and AutoCAD design of Enclosure / Pit room.
4. Renewal & Re approval of License to operate Radiography Facility.
5. NOC for Procurement of Radiography Exposure device, Source OR X-ray Device.
6. Add / Remove / Update Instruments. (Safety & Measuring Instruments).
7. Add / Remove / Designate / Nominate / Relinquish Employee in User management.
8. Approval / Decommissioning for Radiation Generation Equipment Movement.
9. Preparation of Security Plan & Safety plan as per AERB Requirement.

- **Servicing & Repairing of Any MAKE :-**

1. We Provide Servicing & Repairing of all type of NDT Equipment Like Ultrasonic Flaw Detector, Ultrasonic Thickness Gauge , Coating Thickness Gauge , Yoke , Prod , UV Black Light … Etc..Etc..
2. We are repairing All Types Of Cables used for Ultrasonic Flaw Detector, Ultrasonic Thickness Gauge as well as Ultrasonic Test Systems.
3. We are providing Accessories like Charger & Batteries of All types and any Make NDT Equipments.
4. We Can Provide Customize Solutions for Any type of Non Destructive Testing Technique for Any Make Equipment or System.