

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.

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NDT Inspection Services

➤ NDT Services :-

Non-destructive testing (NDT) is a noninvasive technique for determining the integrity of a material, component or structure. Because it allows inspection without interfering with a product's final use, NDT provides an excellent balance between quality control and cost-effectiveness. The main goal of NDT is to predict or assess the performance and service life of a component or a system at various stages of manufacturing and service cycles. NDT is used for quality control of the facilities and products, and for fitness or purpose assessment (so-called plant life assessment) to evaluate remaining operation life of plant components (processing lines, pipes and vessels). NDT inspection of industrial equipment and engineering structures is important in power generation plants, petroleum and chemical processing industries, and transportation sector. State-of-the-art methodology is applied to assess the current condition, fitness-for-service, and remaining life of equipment. NDT inspection provides basic data helping to develop strategic plans for extending plant life. The need for quality based Non Destructive Inspection in various industries by technically competent and experienced persons had led to the foundation of this company. The experience gained from allied industries for a decade from different continents in onshore and offshore based projects has helped us immensely in providing the technical inputs required by various industries.

Accuracy, precision and personnel integrity are essentials for each quality control – QA/QC function to maintain the safety and reliability of product manufactured. Nondestructive testing - NDT Inspections are being carried out at various stages to assess the integrity of component manufactured for Aerospace, Nuclear, pressure vessels, Construction of Boilers, Power plants, refineries, cross country pipe line and critical in-service applications of process plants and structures. As the NDT test results in most NDT methods are majorly indirect in nature, interpretation of test results, large depends on the proficiency, familiarity with the test conditions and experience level of the NDT Level I or II inspectors. We pick the professionals with high integrity and train them to deliver reliable test results.

➤ THIRD PARTY INSPECTION AND EXPEDITING SERVICES:-

1. Thanki Engineering Solutions offers a complete range of services that include certification, quality assurance, vendor inspection, surveillance and expediting. These services include design review and certification of equipment, material certification, quality assurance services including vendor audits and engineering inspection of mechanical equipment at vendors' works.

➤ OUR MAIN FOCUS INDUSTRIES :

1. Oil, gas and energy (Pipelines, Refineries, Petrochemical Plants, Chemicals Plants)
2. Power (Thermal, Hydro and Nuclear)
3. Heavy Engineering , Fabrication , Infrastructure and transportation
4. We are all equipped with manpower and machinery to provide professional services as mentioned above through our most competitive and competent manpower.

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➤ EQUIPMENT / ITEMS HANDLED :-

<u>Equipments :-</u> <ul style="list-style-type: none">• Pressure Vessels.• Storage Tanks.• Petroleum Tanks.• Bullet Vessels.• Reactors, Autoclave.• Heat Exchangers.• Columns.• Chimney.• Railway wagons.	<u>Utilities :-</u> <ul style="list-style-type: none">• Boilers Chillers• Cooling Towers• Water Purification plants• Nitrogen Plants• RO (Reverse Osmosis) System• Chlorinators• Compressors• Fire Fighting Equipment.• Cylinders
<u>Plates, Pipes, Fittings :-</u> <ul style="list-style-type: none">• Ejectors• Strainers• Valves• SRVs• Plates• Pipes• Pipe fittings• Flexible Hose• Ducting	<u>Pipe Lines :-</u> <ul style="list-style-type: none">• API Line Pipes• Coated Pipes• Underground Pipe Lines• Petroleum Pipe Lines• Chemical Plant Piping• Plate & Pipe Mill inspection• Laboratory Equipment• R & D Equipment• Offshore Equipment

➤ **SHUT DOWN INSPECTION :-**

1. Inspection at GCTPCL , Dahej , IOCL Hazira , Which includes supervision and Inspection
2. Inspection of columns, vessels, heat exchangers, piping.
3. Piping inspection includes Ultrasonic Flaw Detection , Ultrasonic Thickness Gauging , Visual inspection, Hardness Testing , corrosion, pitting support and other mechanical damage. Repair and replacement of parts, Hydro test etc.
4. Painting, wrapping coating and refractory coating inspection.
5. Internal and external visual inspection of all components of Pipe Rack , Pipe Outer Surface , Welding area , tray support, tray segment, demister pad, separators, distributors, gunniting and structural support. Review of thickness survey report. Repair replacement parts, Hydro pneumatic testing. NDT like PR, RE, WFMPI and UT.

➤ **TANK Inspection :-**

1. Inspection of Tanks , Vessels , Heat Exchangers as per API 650, OISD 129 which includes Raw material inspection, welder qualification, fabrication inspection, RT, Visual and dimensional inspection, Pneumatic and Hydro test, Cleaning, Epoxy painting marking etc.
2. Also includes Inspection of ladder, stairway, platforms and structural, foundations, tank fittings, insulations, tank bottom heating coils, earthing connection, fire fighting systems, painting etc.
3. Testing includes vacuum testing, hydro testing, NDT settlement test etc.
4. Inspection of SS tanks for GCTPCL , DAHEJ.

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➤ IBR ACTIVITIES :-

1. INSPECTION OF BOILERS of Baxter Pharma at Ahmedabad.
2. INSPECTION OF BOILERS at Baroda Sugar Mills , Abelon Power Plant at Junagarh , Sanasara , Botad , Tata Chemicals – Dwarika FOR Hertz Testing , Ahmedabad under Manpower supply.
3. INSPECTION OF BOILERS at Relaince Industries (IPCL) - Vadodara , Grasim , Birladham FOR TCR under Manpower supply.
4. INSPECTION OF BOILERS at For Shree Vallabh NDT Services.

➤ Windmill Inspections :-

1. Windmill Main door frame inspection as per EN Standard for GRI Renewable Energy at Power High Engineers, Ahmadabad.
2. Visual Inspection of Windmill Tower Sections for Vestas at Windar Renewable Energy, Halol.
3. Windmill Door Frame with K Joint for INOX at Narayan Engineers, Por.
4. Ultrasonic Testing of Windmill Tower Inspection for Vestas at Windar , Halol.

➤ Manpower Details:-

We are backed by a team of qualified and talented personnel that allows us to offer a wide range of industrial testing and inspection Services as per the National / International standards. With the help of our dexterous team, we have succeeded to provide NDT Services. They have sound industry experience and expertise in the domain that helps them to carry out any task assigned to them proficiently and meets the set target within stipulated time frame.

Sr No.	Name	Designation	Educational Qualifications	NDT Qualifications	Exp. (Years)
1	Mr. Viral Thanki	Proprietor	B.E. + PGDME (Mech)	ASNT NDT (Level II in LPT ,MPT,UT,RT)	18
2	Mr. Bimalendu Saha	NDE Level III	B.Sci.	ASNT NDT (Level III in LPT ,MPT,UT,RT)	36
3	Mr. Sagar Joshi	NDT Engineer	B.E. (Prod.)	ASNT NDT (Level II in LPT ,MPT,UT,RT,PAUT , TOFD)	8
4	Mr. Naman Makwana	NDT Engineer	Diploma (Mech.)	ASNT NDT (Level II in LPT ,MPT,UT,RT)	7
5	Mr. Jaimin Jogani	NDT Engineer	B.E. (Metallurgy)	ASNT NDT (Level II in LPT ,MPT,UT,RT)	4
6	Mr. Harsh Patel	NDT Engineer	Diploma (Mech.)	ASNT NDT (Level II in LPT ,MPT,UT,RT)	2
7	Mr. Ajay Modha	NDT Engineer	B.E. (Mechanical)	ASNT NDT (Level II in LPT ,MPT,UT,RT)	2
8	Mr. Soham Makwana	NDT Engineer	Diploma (Mech.)	ASNT NDT (Level II in LPT ,MPT,UT)	1