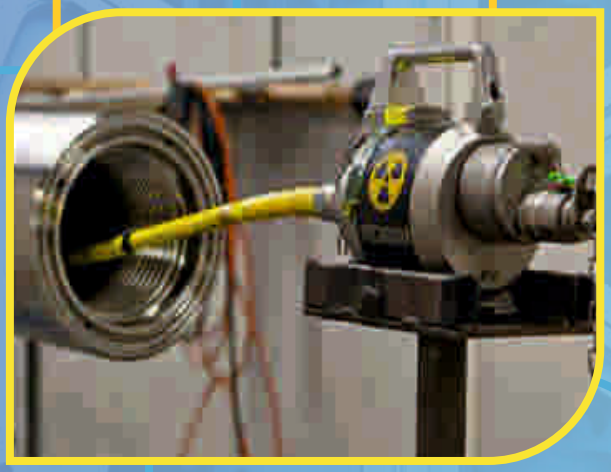
Integrated

The NDE Solution you can always trust....



NDT Services
Training & Certification
Sales & Distribution of NDT Products

About Us

We would like to introduce our companies "Integrated NDE Solution" & " Integrated Inspection Systems" that has been in business of "Non Destructive Testing" for the past 10 years.
At Integrated, we constantly endeavor to fulfill our customers varied testing needs and are deeply committed towards surpassing their expectations. We value & cherish their valuable suggestions & assistance in identifying important trends from time to time.
By virtue of our focus, core competencies, a committed team of professionals and our unrelenting quest for excellence, we are fully geared to meet future challenges
Team Integrated can carry out Non-Destructive Testing (NDT) using a wide range of modern Techniques & procedure.

Team Members

1) Mr. P. S. Kulkarni

i) Senior Certified Welding Inspector (AWS)

ii) Authorized Pressure Vessel Inspector as per API 510 & API 653

iii) ASNT NDT LEVEL III – RT + UT+PT+MT+VT

iv) ACCP Professional Level III –RT+UT+PT+MT

v) EN LEVEL III – PT+RT as per EN ISO 9712

2) Mr. Ashish Phadke

i) ASNT NDT LEVEL III – RT+UT+PT+MPT+VT

ii) EN LEVEL II – UT+ VT + MPT as per EN ISO 9712

3) Mr. Prashant Mhetre

Most experienced team member at "Integrated". He has vast experience of over 10 years in Conventional & Real Time Radiography Testing of Critical components.

4) Mr. Nilesh Mahind

i) CSWIP 3.1 Certified Welding Inspector

ii) EN LEVEL II – VT as per BS EN ISO 17637

5) Mr. C.V. Phadke

Most experienced Inspection team member at "Integrated". He has vast experience of over 39 years in Inspection & QA/QC at Walchandnagar Industries Ltd.

Our Activities Include :

- Providing Laboratory & On-site NDT Services
- ASME U & U2 Stamp NDE consultation
- Level III Consultation
- Third Party Inspections
- Welding Training & Procedure Development to ASME, EN & AWS
- Level II Training & Certification
- Sales and Distribution of NDT Product

ASNT Level I, II training for:

- Magnetic particle inspection
- Dye penetrant testing
- Radiographic testing
- Ultrasonic testing
- Visual testing
- Welding Inspector

We also offer bespoke training to meet your company's individual needs.

Our training is based on practical exercises and backed up by classroom teaching in accordance with the stipulations of SNT - TC - 1A training requirements.

Courses are conducted at our Integrated's offices in the Bhosari, which are equipped with lecture rooms and laboratories for practical exercises. Alternatively, training can be delivered at your company's premises.

NDT Level III Consulting Services

We provide you with our fullest support and necessary information to complete your assignment through our certified and well experienced Level III persons, within a specified time period.

- To help you in selecting the right non destructive testing method/s and techniques uitable for the application.
- Selection of suitable equipment for specific purpose.
- Preparation of NDT inspection procedures for various inspection methods & jobs
- Preparation of NDE technique sheet.
- Preparation of written practices as per ASNT recommended practice SNT-TC-1A/ CP 189.
- Validation of NDE Procedures.
- Review of all inspection procedures.
- Preparatory work of ASME certification U Stamp.

Sales & Distribution of NDT Products :

What You Need...When You Need It...At the Right Price

Serving the equipment, supply, and repair needs of Non destructive Testing (NDT) professionals in diverse industries for over 10 years. Our sales representatives and customer care team are veteran NDT professionals who can help you solve tough inspection problems. We are focused on timely and accurate order fulfillment. We truly value your business and know you have many choices when it comes to your NDT needs.

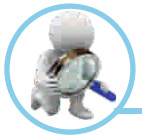
Products For

1. Liquid Penetrant Inspection 2. Magnetic Particle Inspection 3. Accessories for Ultrasonic Testing

Training & Certification

Integrated can provide non-destructive testing training in a wide range of disciplines - in conventional NDT techniques and specialist NDT processes .
All of our NDT training is provided by a team of fully qualified ASNT (American Society of Non-destructive Testing) Level 3 staff, all of whom have industry experience. We can provide NDT training to a wide range of industry sectors including oil, gas, power and chemical.

Our training is in accordance with European, international and American standards such as ASNT or PCN. We can provide training to Levels I and II based on ASNT SNT-TC-1A (with examination and certification in ASNT Levels I and II) and Our NDT training courses include:



Inspection Services

We provide 24 x 7 On-site inspection services.

We deploy world class equipments with trained man power as per various affiliations (like ASNT, AWS, ISNT, BS-EN etc) & customer requirements. Our team comprises of ASNT & EN Level III's Advanced NDT Inspection Engineers & NDT Technician's.

Our expertise is backed up with more than two decades of experience with the prominent industries in power sector, engineering components, pressure vessel manufacturing, pipe systems, process plant inspection & automobile sector.

Inspection Services

- Ultrasonic Testing
- Radiography Testing
- Magnetic Particle Inspection
- Liquid Penetrant Testing
- Ultrasonic Thickness Measurement
- Portable Hardness Testing
- Remote Visual Inspection - Borescopes
- Positive Material Identification
- Ferrite Testing
- Infrared Thermography Testing

Ultrasonic Testing :

This common form of ultrasonic testing is used to carry out inspection on castings, forgings, welded components and composite structures in all industry sectors.

The method can be performed on all types of materials and its applications include:

- Flaw detection such as inclusions, cracks and porosity – particularly for small flaws or flaws situated deep within a part
- Determining the thickness of test objects particularly in erosion or corrosion monitoring
- Assessment of bond integrity

The benefits of this method include quick accurate inspection and portable operation.

"Integrated" uses advanced ultrasonic equipment and we can inspect customers' components and structures to industry codes, standards or customer specifications, ensuring that your components and structures meet the highest standards for safety and reliability. We offer both laboratory and on-site manual ultrasonic testing.

Radiography Testing

Laboratory-based Radiographic Testing offered in our laboratory

Integrated's accredited laboratories are equipped with exposure bays that can support customers with radiographic testing on a 24-hour basis. Laboratory-based X-ray capability ranges from 10 to 25 0kV CP units and our gamma bay is equipped with an iridium source

We understand the pressures you face in fulfilling the production demands of your customers and to minimize delay we provide a fast reaction, round-the-clock radiographic testing at our laboratories as well as collection and delivery of parts and assemblies from clients around the local region.

On-Site Radiography Testing

If plant, infrastructure and pipe work require inspecting for corrosion, erosion, cracks and loss of wall thickness or weld quality, radiographic testing can provide the solution as it is portable and testing can be carried out effectively without the need to remove lagging. Integrated's on-site radiography testing can also include the use of close-proximity radiography (SafeRad).

Magnetic Particle Inspection (MPI) :

Magnetic Particle Inspection (MPI) is a non-destructive testing method that can detect surface and subsurface flaws in ferromagnetic materials.
Magnetic particle inspection is often carried out to help determine an item's fitness for use or conformity. This quick and relatively easy to apply technique is widely used in all industry sectors including aerospace, automotive, petrochemical, structural steel, and power generation to inspect a variety of products and equipment such as engine, suspension and braking system components, castings, forgings and weldments.
The method can detect surface or near-surface flaws such as cracks, laps, seams and inclusions in ferromagnetic materials such as iron and steel. One of the main advantages of magnetic particle inspection is that it can give an immediate indication of defects and discontinuities.

Our techniques for magnetic particle inspection include:

•Bench Type
(Direct current/Head shot/CentralConductor/AC/HWDC)
• Permanent magnetic
• Yoke (AC/HWDC)
• Coil/cable wrap technique
• prod technique

Integrated's skilled non-destructive testing personnel have years of experience in performing magnetic particle inspection and are Level 2 or 3 qualified ASNT and EN ISO 9712.

We can provide the testing both on-site at our customers' premises and in-house at our accredited laboratories.

Dye Penetrant Inspection (DPI) :

Dye Penetrant Inspection (DPI) is widely used to detect surface breaking flaws.
This non-destructive testing technique, also known as liquid penetrant inspection (LPI), is a cost-effective method used to locate surface breaking flaws such as cracks, porosity, laps, seams and other surface discontinuities. Dye penetrant inspection can be applied to both ferrous and non-ferrous materials and all non-porous materials (metals, plastics or ceramics). Our techniques for dye penetrant inspection include:
• Visible solvent removable
• Water washable
• Post emulsifiable

Integrated's well qualified personnel hold a minimum of Level II in EN ISO 9712, ASNT and are highly experienced in performing dye penetrant inspection.

Ultrasonic Thickness Measurement (UTM)

Ultrasonic thickness measurement (UTM) is a non-destructive testing method used to inspect the metal thickness of ship hulls, piping and structural steel.

Thickness measuring is essential across many industries to monitor corrosion, erosion and damage. Ultrasonic thickness measurement (UTM) is commonly used and the method can be applied to a wide range of structures and components that includes ship hulls, piping, pressure vessels and structural steel.

Integrated's inspectors are highly experienced in performing ultrasonic thickness measurements and corrosion evaluations for all industry sectors including oil and gas, power generation, structural contractors and foundries. In addition, Integrated provides solutions for all your thickness gauging and corrosion monitoring requirements.

Our commitment to responsive turn around times will ensure that we meet your schedules and our expertise means we guarantee your components are tested to industry standards, codes or customer specifications.

Remote Visual Inspection – By Means of Borescope

A borescope is an optical instrument designed to assist visual inspection of narrow, difficult-to-reach cavities, consisting of a rigid or flexible tube with an eyepiece or display on one end, an objective lens or camera on the other, linked together by an optical or electrical system in between. The optical system in some instances is accompanied by typically fiberoptic) illumination to enhance brightness and contrast. An internal image of the illuminated object is formed by the objective lens and magnified by the eyepiece which presents it to the viewer's eye.

Borescopes are commonly used in the visual inspection of aircraft engines, aero derivative industrial gas turbines, steam turbines, diesel engines, and automotive and truck engines. Gas and steam turbines require particular attention because of safety and maintenance requirements. Borescope inspection of engines can be used to prevent unnecessary maintenance, which can become extremely costly for large turbines.

“Integrated” uses advanced GE make borescope equipment and we can inspect customers' components and structures to industry codes, standards or customer specifications, ensuring that your components and structures meet the highest standards for safety and reliability. We offer both laboratory and on-site manual ultrasonic testing.

Positive Material Identification

Positive material identification (PMI) is used to analyse and identify material grade and alloy composition for quality and safety control.

A rapid, non-destructive method, positive material identification is performed on a wide range of components and assets, and provides a semi-quantitative chemical analysis. It is used for both material verification and identification.

The method is utilised for quality control and safety compliance, and is an integral part of both production and asset integrity management across many industries including oil and gas, power, chemical, pharmaceutical, nuclear, aerospace and fabrication.

Positive material identification can prevent potential product failure in manufacturing. At oil and gas, power generation and pharmaceutical plants, pre-service and in-service inspection of critical components and welds with PMI can prevent breakdown and its costly consequences.

PMI can:

- Ensure products/components have been manufactured using the correct alloy
- Find potentially mixed-up alloys
- Identify if the wrong material has been used
- Ensure material conforms to the correct standard and specification (both customer and industry)
- Ensure welded components have used the correct filler material

Positive material identification is performed using either of the two techniques below:

- X-ray Fluorescence (XRF) analyser: This is the most common method and the portability of the hand-held equipment allows Integrated to perform PMI on-site at our customers' premises. The device scans the metal material and identifies its key elements. However, it cannot detect carbon and some lighter elements and is not suitable for identification of pure carbon steel materials.
- Optical Emission Spectroscopy (OES): This method can detect almost all types of elements including carbon and lighter elements and carbon steel. Although not as portable as XRF analysers, the equipment can be transported to sites and used at high elevations with proper lifting arrangements.

Integrated's highly experienced PMI inspectors can provide on-the-spot results followed by the certification of results in a written report. We also interpret and advise on the results.

In addition, our responsive turnaround times ensure that we meet your production or inspection schedules and if further analysis is required, Integrated's can provide the fully quantitative laboratory techniques to corroborate findings.

By coming to us for your positive material identification, you can be assured of a rapid, reliable service with accurate results that will provide Total Quality Assurance that your products or assets meet the required quality and safety standards in today's markets and industries.

Ferrite Testing

Ferrite content analysis is a non-destructive testing method which provides critical data for austenitic stainless steel and duplex materials. The delta ferrite percentage or number allows a technical assessment of material corrosion susceptibility, mechanical properties, service suitability, and service reliability.

To perform properly ferrite testing, both a minimum material thickness and a minimum specimen size are required. Test results are interpreted in accordance with current specifications and/or customer requirements. Reports issued are accompanied when necessary by drawings to identify locations tested.

Integrated applies Ferrite Testing to inspect

- Austenitic stainless steel/Duplex stainless steels
- Welds (tubing, etc.)
- Normal construction steel with Austenitic chrome alloy steel welded cladding (Ex. Boilers, vessels, etc.)
  Weldments, Castings, Forgings, Weld Overlays,
- Wrought materials
- Weld materials
- Butt/fillet welds
- Category A-D welds
- Stainless weld overlays on non-ferrous interfaces
- In-service and in-construction components

Advantages

- Rapid and accurate analysis
- Highly portable digital technology
- Variable calibration in both Ferrite Number (FN) and % Ferrite (FN) using AWS Standards

Limitations

- Not recommended where the material is at temperatures greater than approximately 125 °F
- Surface preparation is very important for result accuracy
- Both a minimum material thickness and a minimum specimen size are required
- Shape of the specimen may have a negative effect on the results obtained. Correction calculations can be performed in some instances

Thermography Testing

Thermographic inspection refers to the nondestructive testing of parts, materials or systems through the imaging of the thermal patterns at the object's surface. Strictly speaking, the term thermography alone, refers to all thermographic inspection techniques regardless of the physical phenomena used to monitor the thermal changes. For instance, the application of a temperature sensitive coating to a surface in order to measure its temperature is a thermographic inspection contact technique based on heat conduction where there is no infrared sensor involved.

Thermographic testing, also known as infrared inspection, is a contact-free predictive maintenance method used to detect connections defects, system overloads, deteriorated insulation, and other potential problems in electrical components. Infrared thermography is used to find areas of excess heat so that problems can be corrected before they lead to excess power usage, increased maintenance costs, service interruptions, catastrophic equipment failure, and/or equipment damage.

How does thermographic testing work?

Thermography measures surface temperatures of electrical components by using highly specialized infrared visual scanning technology. During a scan, a thermal 'camera' is used to pick up traces of heat that otherwise do not appear on the visual light spectrum, allowing inspectors to easily identify heat anomalies by their color in the thermal image.

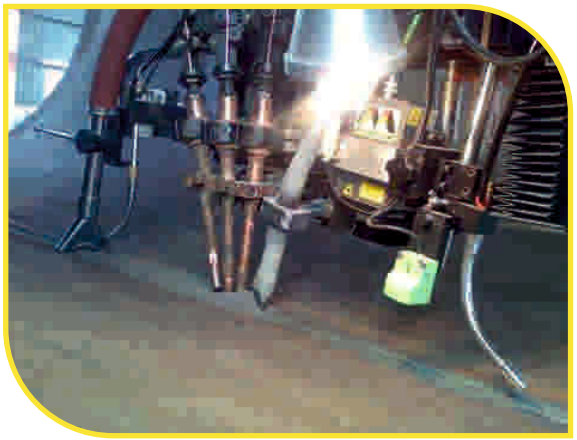
Why use thermographic testing ?

When current flows through an energized electrical system, it meets resistance from the individual connections and components within the system. As these components and connections deteriorate over time, their resistance increases, causing localized increases in heat. Whether it's due to an old connection or a poorly made component, these concentrations of heat can cause equipment failure and energy waste if left unchecked. Thermography can detect these temperature increases ahead of time, allowing you to address the issue before it becomes a serious problem.

Is thermographic testing necessary?

There are several risks associated with electrical equipment failure, some more serious than others. Equipment failure can be quite costly when you factor in repairs and work stoppages. But there are physical risks involved too. The National Fire Protection Association (NFPA) estimates that around ten percent of all fires that occur in manufacturing facilities are related to electrical system failures. Furthermore, component and connection failures can expose employees to live electrical circuits, putting them at risk of serious injury or death from electrocution. Predictive maintenance services such as thermographic testing can help you avoid these dangers long before they occur.

Welding Services :



Integrated offers a complete welding support service from weld procedure writing and welder training to welder qualification (welder coding), third party welder witnessing and mechanical (destructive) testing.
Integrated's welding services support customers in a diverse range of industries, all of whom share similar challenges in meeting quality, safety and compliance requirements. We provide highly qualified and experienced personnel who understand the processes involved in the supply chain and the frequent need for speedy turnaround times. Our experienced welding personnel aid customers in their production processes, quality control, welder training and welder certification to British, European and American standards. Welding services are provided by CSWIP (Certification Scheme for Welding Inspection Personnel); AWS (American Welding Society); ASNT (American Society of Non-destructive Testing) and ISO 9712 Level III qualified inspectors; both on-site, within our customers' premises.

Welding services include:

- Welder qualification codes and training
- Third Party Witnessing of welder qualification and welding procedure qualification
- Responsible Welding Coordinator

Our Major Clients

- Sulzer India Ltd.
- TATA Motors
- Thermax Ltd.
- Thyssenkrupp Industries India Ltd.
- Uniklinger Ltd. Ahmednagar.
- Walchandnagar Industries Ltd.
- Electromech Material Handling Systems (India) Pvt. Ltd.
- Intervalve Poonawalla
- HRS Process Systems Pvt. Ltd.
- Sharp Engineering Services
- Konecranes India Pvt. Ltd
- Tranter India Pvt. Ltd.
- M.E. Energy Pvt. Ltd.
- Bajaj Electrical Ltd.
- AT&F India Fabrication Pvt. Ltd.
- Ambuja Cement, Kodinar, Gujrat.
- Fabtech Projects & Engineers Ltd.
- Praj Industries Ltd.
- Mahindra Defence & Naval Systems Pvt. Ltd.
- ITD Cementation Pvt. Ltd.
- Kuhme Valves
- Rathi Transpowers Pvt. Ltd.
- Forbes Vyncke
- Shilpa Machinery Technologies Pvt. Ltd.
- Jollyboard Limited, Sangli
- De Nora India Ltd., Panjim, GOA
- D K Electromech, Bhopal
- Santo Engineering Co. Pvt. Ltd. , Gujrat
- New AVM Systems Pvt. Ltd.
- Ross Process Equipments Pvt. Ltd.
- Ravi Industries
- Proactive Engineering Services
- Quadrogen India Pvt. Ltd.
- Pressure Vessels (India)
- Zamil Steel Building India Pvt. Limited
- Dynaxcel Engineering Pvt. Ltd.
- Jindal Fittings Ltd.
- Finepac Structures Pvt. Ltd.
- JAYA HIND Industries Ltd.
- TUSAR FAB ENGINEERING
- KGC Engineering Project Pvt.Ltd.
- Krishnapatnam Port Company Ltd., Andhra Pradesh
- Kirloskar Brothers Ltd.
- Airport Authority of India

We are here to assist

Integrated NDE Solution
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