



JMD Industrial Solution Services
www.jmdiss.com

NDT INSPECTION SERVICES 24 X 7

Remote Visual Inspection (RVI) / Boroscopy,
In-Service Boiler Tube Inspection
Hardness Testing, Ultrasonic Flaw Detection
Ultrasonic Thickness Gauging,
Magnetic Particle Inspection
Liquid Penetrant Testing,
Coating Thickness Measurement (WFT, DFT)
Radiography Testing, Thermo graphic Testing

TRAINING AND CERTIFICATION

Level I and Level II Training and Certification as per SNT-TC-1A
UT, MT, PT, RT
Customised Training in NDT
Customised Training in welding

SOURCING SOLUTION

INSPECTION SERVICES

Dimensional Inspection
Witness Test Destructive Testing and NDT
Vendor Evaluation
Welder Testing
WPS, PQR & WPQ
First Piece Qualification
Performance Test
Routine Test
Type Test
Functional Test

CONSULTANCY

Level III NDT Services
Process Development
Product Development
WPS, PQR, WPQ
Dynamic Balancing
In-situ balancing
ISO 9001
ISO 14001
Fabricated and Machined Component
Design & capacity of Quenching Tanks

REPRESENTATION

Forging
Stampings

Company Profile

JMD Industrial Solution Services years ahead of time began unleashing the full potential of the technology to provide cost-effective, quality oriented Sourcing, Training & Certification, Inspection, Non Destructive Testing, Quality Management System, Environment Management System, Product and Process Development solutions to clients across the globe.

Customised Training on NDT and Welding, Process development, Product development, Identification of Suppliers, Cost Effective Sourcing Solution, First Piece Qualification, Level III NDT services, technical support to suppliers and maintenance of Quality Management System and Environment Management System are among our core specialties and form the crux of our services.

JMD Industrial Solution Services also possesses expertise in developing NDT Process and giving solutions for Forging Development. We're here not only to execute your outsourcing projects but also to ensure your venture fulfils your business goals. Any outsourcing venture brings about numerous benefits to everyone involved.

OUR VISION

To emerge as the most admired, trusted and sought-after world class inspection & other engineering services provider and to be the most preferred destination for every customer and a place of pride for its employees.

OUR MISSION

To be No. 1 service provider to achieve sustained Growth and profitability, fulfilling socio-environmental obligations, excellence in inspection & other engineering services, through up gradation of skills and making use of state of art technology.

OUR GOAL

At JMD Industrial Solution Services, our goal is to deliver premium Inspection & Testing services, NDT services and sourcing solutions that execute the strategic business objectives of our clients. We want to be the partner that empowers businesses to succeed.

Whether you need any type of Inspection & Testing related services we have what you need at prices you can afford. Our aim is to provide you with courteous, expedient, professional service of the highest calibre. At JMD Industrial Solution Services, the customer always comes first and we know that we can serve you better than anyone else.

OUR FOCUS

Our focus is to serve the most professionally managed Companies / Leading Power sector Companies / MNC's / Entrepreneurs / Business owners / Busy individuals and a company, who keeps Quality as it's utmost focus and demands Quality services in Inspection & Testing of highest standard & wants to avail the same with a difference.

WHO WE ARE

JMD Industrial Solution Services is group of Mechanical Engineers, Metallurgist and Heavy /Medium/Light engineering process consulting company providing Sourcing process re-engineering consultancy and Training & Certification services. Quality Management, Environment Management system Consultancy are our key strengths.

JMD Industrial Solution Services was incorporated with the prime objective of providing onsite and off-site professional services specializing in Inspection & Testing, Non Destructive Testing, Sourcing Solution, Consultancy and Training & Certification. Today we have a team of experienced people and are still growing.

We accurately reflect your business vision through our services. JMD Industrial Solution Services Group was initially formed to leverage our experience solving complex NDT issues. Designing, developing and delivering solid solutions has become our forte. Custom Process development is our specialties. Today we continue with the same methodology to allow our customers to achieve their strategic goals.

By assembling staff of the best Engineering professionals available, forming strategic alliances with leading technology companies, and using proven methodologies, we will deliver the best solutions possible.

JMD Industrial Solution Services

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Remote Visual Inspection (RVI) / Boroscopy

Remote Visual Inspection (RVI) is used to visually inspect plant components for surface defects, general condition, degradation, blockages & foreign Material. It can be used as stand alone inspection or as a complement to other NDT techniques, such as eddy current, ultrasonic or x-ray, in order to qualify nuclear signals or pinpoint where a more thorough inspection is needed. We offer a turnkey inspection solutions, whether it is inspecting high energy piping, performing a loose part, retrieval or diagnosing an operational problem, we will bring the right equipment to visually inspect (or retrieve) it, record it, and report it back to you.



Applications: ♦ Electrical Generator & Transformer ♦ Gas, Steam & Wind turbine ♦ Boiler water piping & components ♦ Nuclear reactor heads, reactor coolant pumps, demineralisers, containment structure & other components ♦ Piping systems such as service water, fire protection, oil, coal handling, steam generators & other heat exchangers ♦ Foreign material search and retrieval ♦ Sanitary piping

In-Service Boiler Tube Inspection



We provide In-Service Boiler Tube Inspection services using a portable system designed for measurement of thickness of In-Service Boiler Tube & detection of the most common failure modes with none or minimum surface preparation. The system uses Electro Magnetic Acoustic Transducer (EMAT) method to perform ultrasonic non-destructive measurements & detection.

During the inspection, the probe is manually scanned along the boiler tube while the system records the thickness & alarms if the tube is below a pre-programmed threshold or other defect conditions are triggered. The system saves a complete record of each tube & the whole boiler for later post-analysis & tracking.

Material Inspected:

- In-Service carbon steel boiler tubes
- Tube thickness from 0.0150" (3.8mm) to 0.500" (12.7mm)
- Minimum tube diameter 0.875" (22.2mm)
- Surfaces can be oxidised, rough or pitted (scale-free)

Inspection Technique:

- Electro Magnetic Acoustic Transducer (EMAT) ultrasonic non destructive test method
- Pitch-Catch sensor configuration produces and measures the time-of-flight (TOF) arrivals of ultrasound reflections between the ID/OD surfaces.

- Magnetic field created from pulsed DC electromagnet.
- Maximum scanning speed of 20" per sec. (0.5m/s) approx

Thickness Measurement and Defect Detection:

- Thickness measurement using Time-of-Flight (TOF) measurements with accuracy of $\pm 0.005"$ (0.127mm)
- Hydrogen damage, pitting & caustic gauging defect detection by measuring signal attenuation.

Hardness Testing

We offer on site testing of heavy or large components difficult to access having confined test locations before or after installation by using state of the art portable hardness testing equipments.



Ultrasonic Flaw Detection

In Ultrasonic Testing, high frequency sound waves, created by a vibrated crystal in probe, are transmitted into a material to detect imperfections or to locate changes in material properties. The most commonly used ultrasonic testing technique is pulse echo, where sound is introduced into a test object & reflections (echoes) from internal imperfections or the parts geometrical surfaces are returned to a receiver. This method is very sensitive to detect crack type defects but requires extensive training for operator to interpret the results.



Application: ♦ Raw Material (Lamination in plates) ♦ Inspection of welds in fabricated structures, piping, pressure vessels, nuclear parts etc. ♦ Forgings Inspection i.e. shafts, rings, flanges etc. ♦ General Engineering components

Ultrasonic Thickness Gauging



Ultrasonic waves are used to determine the thickness of metallic parts and of non metallic parts like plastic, glass etc. It is extensively used to measure thickness reduction due to erosion & corrosion of components, structures etc. With advantage that it requires access to only one surface of the test object.

Magnetic Particle Inspection

This NDT method is accomplished by inducing a magnetic field in a ferromagnetic material & then dusting the surface with iron particles (either dry or suspended in liquid). Surface and near surface flaws produce magnetic poles or distort the magnetic field in such a way that the iron particles are attracted & concentrated. This produces a visible indication of defect on surface of the material. Therefore, method is most applicable for detecting the surface or sub-surface defects. Magnetic particle can be applied in various types depending on the application required. It could be visible or fluorescent.



Application: ♦ Super Finished components to check surface cracks ♦ weld seams ♦ castings ♦ forgings ♦ aircraft parts.

Liquid Penetrant Testing



It works on the principle of capillary action. The test object is coated with a solution that contains a visible or fluorescent dye, excess solution is removed from the surface of the object but leaving it in surface breaking defects.

A developer is then applied to draw the penetrant out of the defects. With fluorescent dyes, ultraviolet light is used to make the bleedout fluoresce brightly, thus allowing imperfections to be readily seen. With visible dyes, vivid colour contrasts between the penetrant & developer make "bleedout" easy to see. This method is only applied to direct the defects so called open-to surface.

Coating Thickness Measurement (WFT, DFT)

Coating thickness is an important variable that plays a role in product quality, process control, and cost control. We offer DFT & WFT coating measurements on magnetic and non magnetic materials.



Radiography Testing



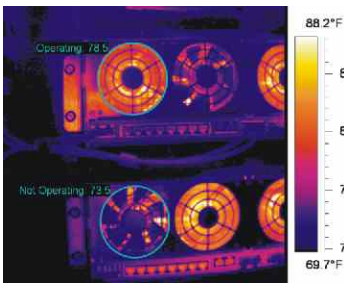
Radiography uses ionizing radiations to view objects in a way that can't be seen otherwise. It is a method of inspecting materials for hidden flaws by using the ability of short X-rays and Gamma rays to penetrate various Materials. We use high energy X-ray machine.

It is often important to use a high accelerating voltage to provide the electrons with a very high energy. This is because in a braking radiation source the maximum photon energy is determined by the energy of the charged particles. We also use Gamma radiation sources, most commonly Iridium-192 and Cobalt-60, are used to inspect a variety of materials.

Applications: ♦ Testing and grading of welds on pressurized piping ♦ Pressure vessels ♦ High-capacity storage containers ♦ Pipelines and some structural welds. ♦ Other tested materials include concrete (locating rebar or conduit) ♦ Welder's test coupons ♦ Machined parts ♦ Plate metal & pipewall (locating anomalies due to corrosion or mechanical damage).

Theoretically, industrial radiographers could radiograph any solid, flat material (walls, ceilings, floors, square or rectangular containers) or any hollow cylindrical or spherical object.

Thermographic Testing



We offer thermographic testing & for this we use infrared cameras to locate problems or to detect hot spots and other problems before they turn into costly failures and production downtime or dangerous electrical fires. We also offer our services to locate hot spots on electrical units such

as Transformers, Motors, Hydro Generators, and Thermal generators in plant and at site.

Applications: ♦ Manufacturing Industries such as refineries ♦ Power plants ♦ Utility Companies ♦ Distribution Companies ♦ Large Buildings ♦ Electrical Contactors ♦ Automation ♦ Medical ♦ Research & Development ♦ Armed forces etc.

Training and Certification

We offer Level I & Level II Training and Certification according to SNT-TC-1A in following Methods

UT
MT
PT
RT

Customised Training in NDT
Customised Training in Welding

Sourcing Solution

We offer turnkey solution to our customers to Locate & find the source as per product requirements, evaluation of supplier, finding the gap, fulfilling the gap and manufacturing of prototype till first Piece Qualification (FPQ)

CONSULTANCY

- Level III NDT Services
- Process Development
- Product Development
- WPS, PQR, WPQ
- Dynamic Balancing
- In-situ balancing
- ISO 9001
- ISO 14001
- Fabricated and Machined Component
- Design & capacity of Quenching Tanks

INSPECTION SERVICES

Dimensional Inspection



Our professional inspection team uses cutting-edge measuring devices and technology to quickly generate accurate verification of your designs and manufacturing processes, and then compiles your data into professional, detailed reports.

We can help you shorten production cycles, identify and correct component problems, and improve quality control.

Witness Test Destructive Testing and NDT

Our certified team of inspectors witness Destructive testing as per specified code for product conformance at site. Our certified team of inspectors Witness / perform non-destructive testing on project sites to evaluate the integrity of large structures. Our team has performed such analyses nation and worldwide, and will travel to your project site at a moment's notice for emergency evaluations. Such large structure evaluations can include off-shore oil platforms, wind power generation towers, large underground cooling systems, and large elevated water towers.

Vendor Evaluation

JMDISS provide personnel to conduct audits of vendors and/or sub-contractors regarding weld- related activities or projects. For instance, compliance with ISO 9000 could be ascertained.

Welder Testing

JMDISS provide a full-time welding engineer at your facility to test welders to the applicable code. Test plates will be evaluated by destructive and/or non-destructive methods. Results will be documented on your company letterhead as required by code.

WPS, PQR & WPQ

JMDISS provide a full-time Welding Engineer at your facility to develop and document required welding procedures. Documentation will be on your company letter head, as required by code. JMDISS will arrange for full testing and evaluation of the welded test plates, including chemical, physical and non-destructive means of study. Typical means of testing:

- Radiographic, ultrasonic, MT, dye penetrant inspection.
- Microscopic and metallurgical examination.
- Corrosion and stress-corrosion testing.
- Tensile tests, bend tests, charpy impact and hardness tests.
- Prepare Procedure Qualification Records (PQR's) and Weld Procedure Specifications (WPS's).

First Piece Qualification

We take the assignment & responsibility to develop the product and supplier. During execution we employ our engineer at your suppliers facility to follow the process and point out any process deviation & get it corrected to ensure the qualification of First piece from end customer. We take care of complete documentation for this process.

Performance Test

We offer Performance Testing to our customers. It covers a broad range of engineering or functional evaluations where a material, product, system, or person is not specified by detailed material or component specifications rather, emphasis is on the final measurable performance characteristics. Generally Tailor made items are tested for their performance.

Routine Test

JMDISS extend its services for witnessing of routine test of fully assembled products and Balance of plant items.

Type Test

We offer our services to witness type testing of Rotating electrical machines, Transformers, auxiliaries and Balance of plant items.

Functional Test

Based on current best practice, Our Experienced people include all of the following components in functional test:

- Test name
- General documentation of the system, actual test conditions, personnel involved, time, date, etc
- Conditions under which the test is to be performed
- Test duration
- Data to be gathered
- Instrumentation methodology and locations
- Data acquisition requirements including tolerances, number of samples, etc
- Results to be obtained, including some method of documentation and any analytical calculations required
- Measurable acceptance criteria
- Precautions associated with executing the procedure
- Description of the test procedure steps in the order they are to be performed including:
 1. The prerequisites required to be ready to perform test.
 2. The steps necessary to prepare for the test.
 3. The actual steps in the test process.
 4. The steps necessary to return the system to normal operating status.
- Instruction regarding information that needs to be documented and a place to record this information.

MAJOR SECTORS WE SERVE

Power Sector

- Hydro Power
- Thermal Power
- Wind Power

Oil and Gas Sector

General Engineering Sector

Process Industries

Heavy Engineering Industry

Automobile Sector

Motors

REPRESENTATION

We represent Forging Companies in INDIA.

Open Forging

Up to 40 Ton Single Piece



Ring Rolling

Up to 6000mm

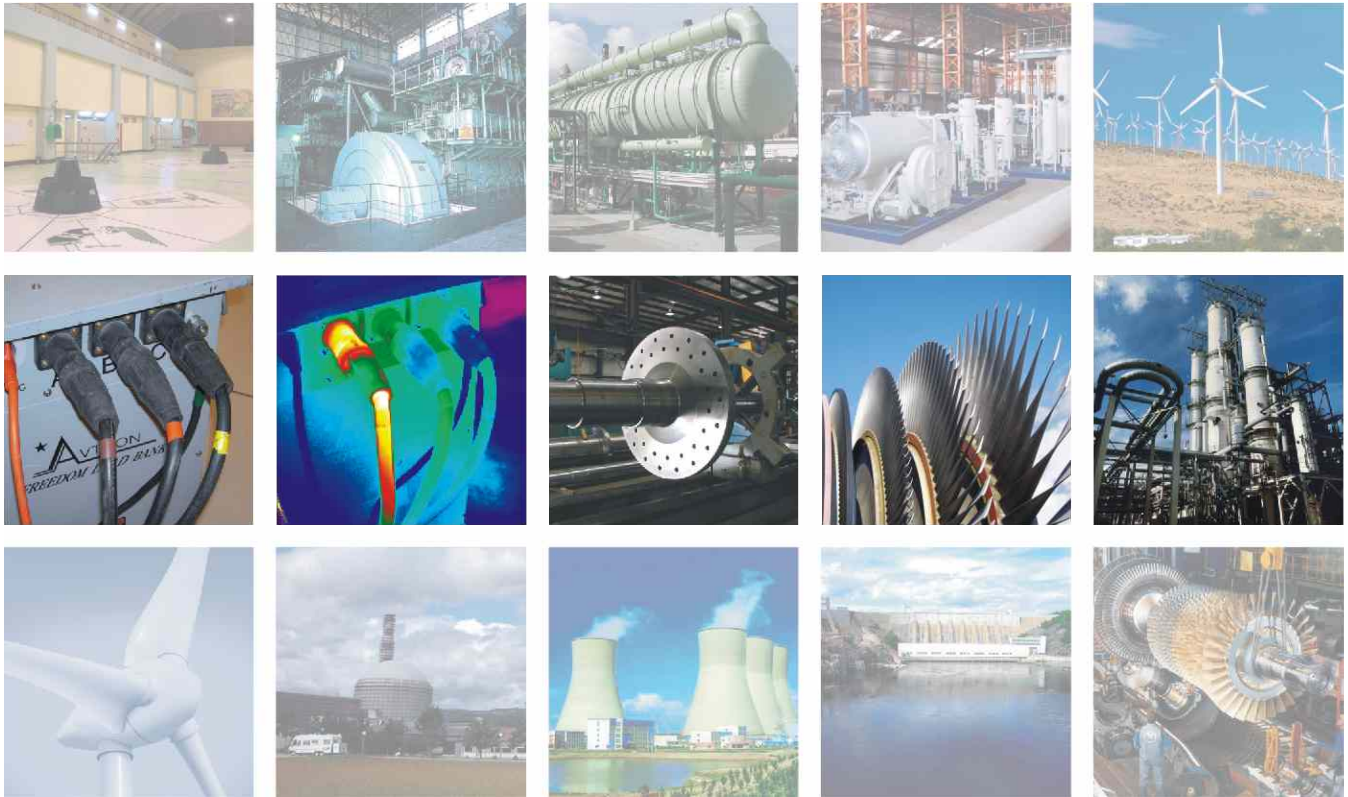


ISO 9001 & ISO 14001 CERTIFICATION SUPPORT



FINE WORKING EQUIPMENT





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