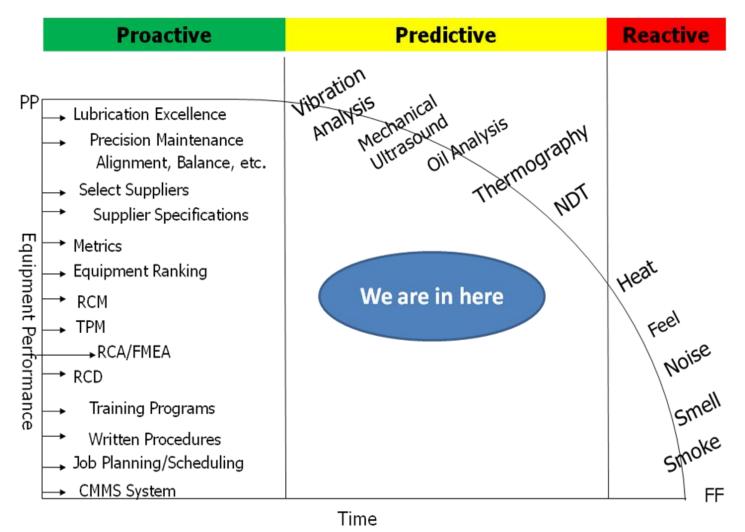


**Q&T Industrial Inspection Company** is an ISO 9001:2015 Certified Company. Established in 2019, Which was formerly **SAJ Industrial & Inspection Company. We started our journey in 2007 to** provide the **Non-Destructive Testing (NDT)** and **Condition Monitoring (CM)** solution in Bangladesh industrial Market. Since then we are providing the NDT and CM solution in different types of industries like power generation, fertilizer, chemical, oil & gas, aviation, shipbuilding, gas production and distribution, cement, welding, paper, sugar, pharmaceuticals, research and educational institutions, Garments & Textile, Boiler Industries, Pre-Engineering Steel Building Structure.

Non-Destructive Testing and Condition Monitoring technology is the major component of Predictive Maintenance (PdM). Till now we have completed 500+ inspection projects in Bangladesh.







#### **Industrial Services:**

We have the full range of Non Destructive Testing (NDT) and Condition Monitoring (CM) services. We are using world latest and renowned manufacturer's technology for our services.

Our Industrial Services are:

- 1. Non-Destructive Testing (NDT) Services.
- 2. Condition Monitoring Services.
- 3. Electrical Safety Inspection.
- 4. Training and Consultancy Services.

#### Non-Destructive Testing (NDT) Services:

Non-Destructive testing is the use of noninvasive techniques to determine the integrity of a material, component or structure or quantitatively measure some characteristics of an object. It is the testing of materials, for surface or internal flaws or metallurgical condition, without interfering in any way with the integrity of the material or its suitability for service.

#### **Our NDT Services are:**

- 1. Visual Testing (VT).
- 2. Radiography Testing (RT).
- 3. Ultrasonic Testing (Conventional UT).
- 4. Advanced Phased Array Ultrasonic Testing (PAUT).
- 5. Ultrasonic Thickness Gauging (UTG)
- 6. Magnetic Particle Testing (MPT).
- 7. Liquid Penetrant Testing (LPT).
- 8. Positive Material Identification (PMI/XRF).
- 9. Industrial Endoscopic/Video Borescopic Inspection.
- 10. Eddy Current Testing(ET).
- 11. Coating Thickness Measurement.
- 12. Hardness Testing
- 13. Post Weld Heat Treatment (PWHT).
- 14. Hydraulic Pressure Testing (HPT).
- 15. Safety Valve Testing (SVT)
- 16. Load Testing (LT).

#### **Condition Monitoring Services:**

The object of 'Condition Monitoring (CM)' is to reduce the unplanned shutdown and speed loss, Extend machine life and to find the root cause of failure in your machine, reducing overall bearing and spare parts consumption.

#### The Condition Based Monitoring Cover following areas:

- 1. Vibration Analysis.
- 2. Oil Analysis.
- 3. IR Thermography.



#### **Our Vibration Analysis Services are:**

- 1. Routine Vibration Analysis
- 2. Vibration Base Line Development
- 3. Dynamic Mass Balancing

#### **Our Oil Analysis service parameters:**

- 1. Viscosity (cSt)
- 2. Total Acid Number (TAN) (mg KOH/g)
- 3. Total Base Number (TBN) (mg KOH/g)
- 4. Water content (ppm)
- 5. Oxidation (abs/mm2)
- 6. Alien fluid (%)
- 7. Anti-Oxidant Additive (%)
- 8. Anti-wear Additive (%)
- 9. Nitration (abs/mm2)
- 10. Sulfation (abs/mm2)
- 11. Soot (%)
- 12. Glycol/Antifreeze (%)

#### **IR Thermography Service**

A very impressive technology, that is non-destructive, non contact, fast & does not affect the production process. Thermography is a type of infrared imaging science that using to identify variations in temperature and heat sources in day or night. The infrared camera allows us to see what our eyes cannot!

#### We are using this unique technology for

- 1. Detecting loose or corroded electrical connections.
- 2. Detecting Electrical unbalance and overloads.
- 3. Inspecting electric motors.
- 4. Inspecting Industrial gearboxes & Coupling.
- 5. Inspecting bearings and moving components.
- 6. Locating Levels In Tanks, Vessels & Silos.
- 7. Monitoring transformers.
- 8. Inspecting process industry to find leakages, blockages.
- 9. Inspecting insulation efficiency, etc.

#### **Electrical Safety Inspection:**

**Electrical safety** is a system of organizational measures and technical means to prevent harmful and dangerous effects on workers from **electric** current, **electric** arc, electromagnetic field and static **electricity**.

#### Our electrical Safety inspection services are:

- 1. IR Thermography Inspection.
- 2. Electric Cable Insulation Test.
- 3. Ground/Earth Resistance Test.
- 4. Lighting Protection System (LPS).
- 5. Single Line Diagram (SLD



#### **Training and Consultancy Services:**

For our customer we are providing training and consultancy services on Non-Destructive Testing (NDT) and Condition Monitoring Technology. Every year for the industrial engineering manpower development and knowledge sharing we are arranging seminars, exhibition, presentation and demonstration.

#### Day Long Programs:

- 1. Presentation and Demonstration on Non-Destructive Testing (NDT) Technology.
- 2. Presentation and Demonstration on Condition Monitoring Technology.
- 3. Presentation & Training on In-Service Boiler Inspection.

#### Training Programs on Non-Destructive Testing (NDT):

- 1. Fundamentals of NDT.
- 2. Training on Video-Borescope.
- 3. Training on Advanced Phased Array Ultrasonic Flaw Detector.
- 4. Training on Ultrasonic Thickness Gages.
- 5. Training on PMI/XRF.
- 6. Training on MagneticParticleTesting Equipment.

#### Training Programs on Condition Monitoring (CM):

- 1. Basics of Vibration Analysis.
- 2. Vibration Analysis ISO Category Level I.
- 3. Training on Vibration Analysis Equipments.
- 4. Basics of Oil Analysis.
- 5. Training on Oil Analysis Equipment.
- 6. Basics of Thermal Analysis.
- 7. Training of Infra-Red Thermal Camera.

#### Non-Destructive Testing (NDT) of In-Service Boiler:

A boiler is a system in which water is heated and converted into steam. It is like a bomb in an industry. And the Non-Destructive Testing (NDT) is very important for new and In-service boiler to ensure the safe and efficient operation. It is possible to avoid the costly damage and severe accident through these practices.

Periodic overhauls are vital for the safe operation of boilers. In order to minimize downtime during such overhauls, the inspections need to be carried out quickly and efficiently. Non destructive testing (NDT) is crucial in order to achieve this goal. Over the years, NDT techniques have been used to assess the condition of specific components and identify defects.

**Q&T Industrial Inspection Company** provides the service on all aspects of NDT for boilers by using latest NDT technology and certified-experienced NDT inspectors.



#### **Objective follow-up of NDT inspection**

**Q&T Industrial Inspection Company** can monitor the quality of the boiler by the NDT inspections carried out by the boiler manufacturer or contractor. We check whether the highest industrial quality standards have been followed and whether the test results have been interpreted correctly. At present we provide the NDT services to maximum numbers of boiler manufacturer.

#### **In-Service Boiler Inspection Services Are:**

- 1. Industrial Video Borescopic Inspection for Boiler Tube Inspection.
- 2. Advanced Phased Array Ultrasonic Flaw Detection of Welding Section.
- 3. Magnetic Particle Testing (MPT).
- 4. Liquid Penetrant Testing (LPT).
- 5. Ultrasonic Thickness Gauging for Shell Plate & Tube Thickness Measurement.
- 6. Positive Material Identification (PMI/XRF) for Material Composition Check.
- 7. Hardness Testing.
- 8. Natural Gas Energy Audit by Certified Energy Auditor.
- 9. Remaining Life Assessment (RLA).
- 10. Descaling.
- 11. Hydraulic Pressure Testing (HPT).
- 12. Safety Valve Test (SVT) & Settings.



### **Our Using Equipment List:**













## Some of our Completed Project

	T
GPH Ispat Limited	Meghnaghat 450MW Power Plant
Client: GPH Ispat Limited	Client: Dossan Skoda-Czech Republic
Project Name: 0.8 MTPY Integrated Steel Plant Project Chittagong	Project Name: Restoration of 190MW Power Plant
Inspected Object: Oxygen Piping Welding Joint. Hydraulic Piping Welding Joint Bunker Grinder Welding Joint	Inspected Object: Power Piping Welding Joint. Method: Radiography Testing & Phase Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testing
Method: Radiography Testing & Phased Array Ultrasonic Testing	
United Ashuganj Power Limited	Ashuganj Fertilizer & Chemical Company Limited
Client: United Ashuganj Power Company Limited	Client: Ashuganj Fertilizer & Chemical Company Limited.
Project Name: UEPSL Ashuganj Project	Inspected Object: Gas Air Cooler Pipe Welding
Inspected Object: Welding Joint of Boiler Tube	Joint.
Method: Radiography Testing	Method: Radiography Testing.
Shikalbaha 150 MW Power Plant	Summit Meghnaghat Power Company Limited
Client: Siemens Bangladesh	Client: GE Bangladesh
Project Name: 150MW Power Plant Duel-Fuel	Inspected Object: Turbine Combustion Chamber, Filter System, Atomizing Air System.
Inspected Object: Welding Joint of Boiler Tube	Inspection Method: Video-borescopic
Method: In this project we used Radiography Testing	Inspection & Phased Array UT.
Bhola Shabazpur Gas Plant-BAPEX	Navana LPG Cross Country Pipe Line Installation & ancillary works
Client: Bangladesh Petroleum Exploration & Production Company Limited	Client: THE ROYAL UTILISATION SERVICES (PVT) LTD.
Inspected Object: Gas Flow Pipe Line Inspection Method: Phased Array Ultrasonic Testing Lieu of Radiography Testing	Inspected Object: 10″ API-5L- Gr-B- Cross Country LPG Pipe Line
	Inspection Method: Phased Array Ultrasonic Testing Lieu of Radiography



Meghna Ship Building & Dockyard Limited Client: Meghna Group of Industries Inspected Object: Hull Welding Joint Inspection Method: Phased Array Ultrasonic Testing Lieu of Radiography Testing.	Khan Brothers Ship Building Limited( A Concern of city Group) Client: City Group Inspected Object: Hull Welding Joint Inspection Method: Phased Array Ultrasonic Testing Lieu of Radiography Testing.
Haripur 360MW Power Plant- Shut Down. Client: Haripur Power Company Limited. Inspected Object: Turbine Blade, Rotor Wedges. Inspection Method: Phased Array Ultrasonic Testing.	Client: Bureau Veritas Bangladesh PVT Limited Inspected Object: Boiler Component( Tube, Boiler Header) Inspection Method: Phased Array Ultrasonic Testing, Ultrasonic Thickness Gauge, Liquid Penetrant Testing, Magnetic Particle Testing
Akhaura-Laksham Double Line Project- Bangladesh Railway Client: Max Infrastructure Limited Inspected Object: Bridge Girder Welding Joint Inspection Method: Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testing	Bhola Rental Power Plant Client: Venture Energy Recourses Limited Inspected Object: Pipe Welding Joint, Turbine Blade Inspection Method: Phased Array Ultrasonic Testing & Borescopic
Max Kusiyara Power Client: Max Kusiyara Power Company Limited Inspected Object: Gas Turbine Inspection Method: Video Borescopic	Max Power Ghorashal Client: Max Power Inspected Object: Gas Turbine Inspection Method: Video Borescopic
Khulna Ship Yard Limited Client: MST Marine Services & Traders Ltd. Inspected Object: Hull Welding Joint. Inspection Method: Phased Array Ultrasonic Testing & Liquid Penetrant Testing	Summit Meghnaghat Power Company Limited Client: GE Bangladesh Inspected Object: Gas Turbine Component Inspection Method: Liquid Penetrant Testing



Summit Bibiyana-II	Cemex Cement
Client: GE Bangladesh	Client: Cemex Cement Bangladesh Limited
Inspected Object: Gas Turbine Component Inspection Method: Liquid Penetrant Testing.	Inspected Object: Ball Mill, Separator, Crane, Girth Gear
	Inspection method: Phased Array Ultrasonic Testing, Liquid
Engine Base HFO Power Plant	Engine Base HFO Power Plant
Client: Orion Power Meghnaghat Limited (100MW)	Client: DUTCH BANGLA POWER & ASSOCIATES LTD ( 100MW)
Inspected Object: Engine Component	Inspected Object: Engine Component
Inspection method: Magnetic Particle Testing,	Inspection method: Magnetic Particle Testing,
Liquid Penetrant Testing Penetrant Testing	Liquid Penetrant Testing Penetrant Testing
British American Tobacco	Engine Base HFO Power Plant
Client: Bureau Vertitas Bangladesh PVT Limited	Client: DIGITAL POWER & ASSOCIATES LTD (100MW)
Inspected Object: High Pressure Steam Piping Weld	Inspected Object: Engine Component
Joint	Inspection method: Magnetic Particle Testing,
Inspection method: Radiography Testing	Liquid Penetrant Testing Penetrant Testing
Engine Base HFO Power Plant-EPV Chittagong	Engine Base HFO Power Plant-Midland Power Ashuganj
Client: Rolls-Royce -BERGEN ENGINE BANGLADESH PVT Ltd	Client: Rolls-Royce -BERGEN ENGINES BANGLADESH PVT Ltd
Inspected Object: Engine Component	Inspected Object: Engine Component
Inspection method: Magnetic Particle Testing, Liquid Penetrant Testing	Inspection method: Ultrasonic Testing, Magnetic
-	Particle Testing, Liquid Penetrant Testing.
Engine Base HFO Power Plant-Akij Cement	Steel Building Structure Inspection for Shiddirganj 335MW Power Plant
Client: Rolls-Royce -BERGEN ENGINES BANGLADESH PVT Inspected Object: Engine Component	Client: Isolux Corsan Bangladesh
Inspected Object: Engline Component Inspection method: Magnetic Particle Testing, Liquid Penetrant Testing	Inspected Object: Steel Structure
	Inspection method: Visual Inspection, Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testing.



Steel Building Structure Inspection for Ashuganj Power Station Company Limited TSH North 450MW	Steel Building Structure Inspection for BSRM Client: Bureau Vertitas Bangladesh PVT Limited
Client: TSK/TR	Inspected Object: Steel Structure
Inspected Object: Steel Structure Inspection method: Visual Inspection, Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testing.	Inspection method: Visual Inspection, Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testing
Steel Building Structure Inspection for British American Tobacco	Steel Building Structure Inspection for British Holcim Bangladesh Limited
Client: Bureau Vertitas Bangladesh PVT Limited	Client: Bureau Vertitas Bangladesh PVT Limited
Inspected Object: Steel Structure	Inspected Object: Steel Structure
Inspection method: Visual Inspection, Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testingv	Inspection method: Visual Inspection, Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testingv
Steel Building Structure Inspection Shanta Glass House	Steel Building Structure Inspection for Square Denim Limited
Client: Bureau Vertitas Bangladesh PVT Limited	Client: Bureau Vertitas Bangladesh PVT Limited
Inspected Object: Steel Structure Inspection method: Visual Inspection, Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testingv	Inspected Object: Steel Structure Inspection method: Visual Inspection, Phased Array Ultrasonic Testing, Liquid Penetrant Testing, Magnetic Particle Testing
Bangladesh Boiler Industries Client: All Boiler Company of Bangladesh Inspected Object: Boiler Shell Welding Joint	600 Garments Factory Client: Bureau Vertitas Bangladesh PVT Limited Inspected Object: Electrical System
Inspection method: Radiography Testing & Phased Array Ultrasonic Testing	Inspected Method: IR Thermography for Electrical Anomaly Check



#### **Training Services:**

Chevron Bangladesh Name of the Course: Vibration Analysis ISO Category Level-I, CSI 2130 Vibration Equipment & Analysis Software Course Duration: 9 days	
Meghnaghat Power Limited Name of the Course: Basics of Vibration Analysis Course Duration: 4 days	
Karnaphuli Fertilizer Company (KAFCO) Name of the Course: CSI 2140 Vibration Equipment & Analysis Software Course Duration: 4 days	
<b>Ghorashal Training Center</b> Name of the Course: Application of Non- Destructive TestingCourse Duration: 2 days	



Training Institute For Chemical Industries (TICI) Seminar on Plant Condition Monitoring & Non- Destructive Testing	
Bangladesh Atomic Energy Commission Workshop On Non-Destructive Testing & Plant Condition Monitoring	
Biman Bangladesh Airlines Training on Non-Destructive Testing	
Islamic University & Technology Training on Non-Destructive Testing	





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