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# 1.INDUSTRY – BUSINESS LINE: SERVICES

For oil and gas, petrochemicals, power and utilities, manufacturing, mining and minerals, transport and logistics, processing industries, we maintain the safety, reliability and integrity of industrial assets throughout their life cycles, and assess compliance with national, international and voluntary QHSE standards. We create and implement Quality Assurance Processes to reach to the desired level of quality.

Innovative Solutions provides a wide range of services that are listed hereunder

- Asset Integrity Management [Risk Based Inspection (RBI), Reliability Centered Maintenance (RCM), Corrosion Management program (CMP), Failure mode and effects analysis (FMEA), Fitness for Service (FSS), etc.]
- Failure analysis & corrosion testing
- Fire safety Inspection
- Fugitive Emission Monitoring (FEM)
- Hazard and Operability Study (HAZOP) / Hazard Identification Studies (HAZID) /
- Reliability, Availability and Maintainability (RAM), Quantitative Risk
- Assessment (QRA), and Safety Integrity Levels (SIL)
- Industrial hygiene
- Leak Detection and Repair
- Metering & calibration
- Noise & vibration management
- Periodic inspections of static equipment
- Process Safety Management (PSM)
- Regulations conformity management
- Risk & reliability assessment
- Risk-Based Inspection & Reliability Centered Maintenance (RCM)
- Energy Efficiency Services
- Acquisition & Divestiture Due Diligence
- Product Certification (CE Marking, ASME)
- Pre-Shipment Inspections
- Supplier Technical Assessment
- expediting service
- Shop inspection (QA / QC Supervision)
- Project site inspection
- Inspection services during shutdown
- Welder Qualification

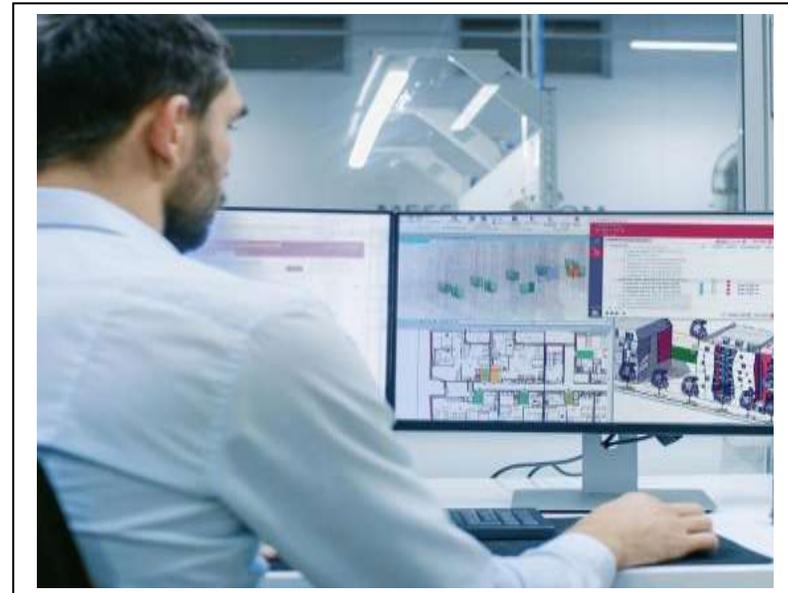


- Design review and validation
- Risk analysis & Safety studies
- HSE supervision
- Environment impact study
- Assistance commissioning
- Industrial hygiene
- Corrosion solutions by innovative methods such as Cathodic protection, industrial protective coating, inhibitors.
- Firefighting design and installation solutions.

## 2. TECHNICAL CENTER – BUSINESS LINE: SERVICES

The Innovative Solution's Regional Technical Center with its team of experts, supported by an international network, is available to serve clients throughout India. We provide rapid response to your requirement with customized technical solutions. Our in-house developed advanced & internationally reputed software for engineering

- Our service are made available for the following sectors:
  - Oil & gas exploration & production
  - Refining
  - Oil & gas pipelines, storage & distribution
  - Power Generation
  - Oil & gas production & transport
  - Lifting (gantries/cranes) appliances
  - Independent Verification and Design Review
  - Independent Verification of CAPEX & OPEX Industrial
  - Projects (according to UK HSE Safety Case requirement or equivalent



- Design Review & Certification of industrial projects (according to projects specifications, industry codes, & standards, client requirement, etc...)
- Independent analysis of Jackets, Topsides, pipelines, and piping using industry recognized tools (SACS, ABACUS, CAESAR, FEA...)
- Design review and certification of natural gas piping in high rise buildings.
- Integrity Management, including Risk & Safety
- HAZOP, HAZID, SIL Assessment, Project, Health, Safety & Environment Review (PHSER) & As low as reasonably practicable (ALARP) workshops
- Quantitative Risk Assessment (QRA), & Qualitative Risk Assessment
- Escape, Evacuation, & Rescue Analysis (EERA)
- Control of Major Accident Hazards (COMAH)
- HSE Case Preparation
- Safety Audits on Drilling Rigs (onshore & offshore) & offshore facilities
- Fitness for Service (according to API 579) of Pressure Vessels & Tanks
- Process System Integrity (PSI) – Review of flow/process induced vibration
- in process piping & small bore connections
- Review of HSE Management Systems
- Preparation & review of Integrity Assurance Schemes
- Selection of Health Safety and Environment Critical Equipment Systems (HSECES)
- SCE & preparation of Performance Standards
- Risk Based Inspection Planning for static equipment
- Offshore Structural Integrity Management
- Technical Training

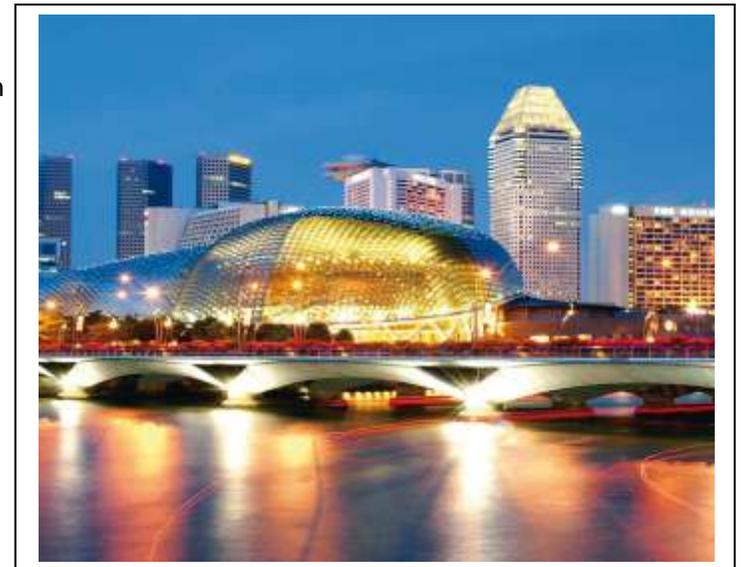
- Qualitative / Quantitative Risk Assessment, Hazard Recognition
- Control & Inspection Techniques for :
- Construction, Oil & Gas , Operatives, Guidance for Safety &
- Health Protection on Constructions sites, Rigging, and Slings,
- Scaffolding training, etc....
- Facility sitting review.

### 3.BUILDINGS & INFRASTRUCTURE – BUSINESS LINE: SERVICES

Residential and commercial buildings, industrial facilities, public infrastructure and equipment in-service equipment in buildings and environmental analyses. We provide assurance that buildings and infrastructure in use or under construction are compliant and energy-efficient. We ensure the business continuity and environmental protection by assessing the safety and performance of in-service facilities, and by analyzing air and water quality

- Innovative solutions delivers services that cover different business needs along projects life cycle that are listed hereunder

- ❖ **Technical Control**
  - Technical Studies
  - Design and Document Review along with site inspection during the whole construction life cycle.
- ❖ **Construction Safety Services**
  - 100% Full Time Employment (FTE) HSE Manager /Officer, etc.
  - ISA – Independent Safety Assessment
  - TSI – Interoperability Certification
- ❖ **Environmental Impact Assessment**
  - Energy/Waste Management Monitoring
  - Periodic Site Safety Audit
  - Fire Life Safety (FLS) Drawing Review & Stamping
  - On-Site HSSE Training
- ❖ **Fire fighting solutions**



- Sprinkler system design and installation
- Deluge system design and installation
- Fire suppression systems for control buildings, substations, security buildings
- ❖ **Project Management Related Services**
  - Time. Quality & cost Monitoring
  - Feasibility Survey
  - Planning
- ❖ **Building in One**
  - Facility Management
  - Assets Management
- ❖ **Green Building & Sustainability Services**
  - LEED Consultancy
  - LEED Certification
- ❖ **QA/QC Services**
  - 100% FTE QA/QC Team on Project Site (Manager/Inspector, etc.)
  - Test Witnessing & Document Review
  - PCA – Property Condition Assessment
  - QS – Quantity Surveying & Quantity Verification
  - T&C – Testing & Commissioning / T&C Witnessing
- ❖ **Design Verification**
  - Structural Design Verification ( Civil, MEP)
  - Drawing Review (CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL AND FLS)
- ❖ **Building & Infrastructure Performance & Compliance Monitoring**
  - Building Monitoring Tools
  - Maintenance Audit
  - Regulatory Compliance Monitoring: License To Operate (LTOs),
  - Facilities Classified for Environmental Protection (ICPE) Files,
  - French regulations for HSE (Amadeo)
- ❖ **Technical Diagnosis & Consultancy**
  - Building Condition Assessment
  - Remaining Life Cycle assessment
  - TDD – Technical Due Diligence
  - Risk Assessment & gap Analysis
  - Voluntary Technical Control for Inherent Defect Insurance (IDI)

❖ **Environmental Assessment & Surveys**

- Energy & Carbon Audit
- Environmental Impact Assessment
- Environmental Due Diligence
- Energy Performance Certificate
- Hazard Analysis

## 4. IN-SERVICE INSPECTION & VERIFICATION–BUSINESS LINE: SERVICES

Initial & periodic inspection of equipment & facilities to comply with regulations and local authorities' requirements or client specific standards. Innovative Solutions mission includes checking compliance status and certification based on visual examination, witnessing functional tests and witnessing load test in line with recognized international standards and local codes.

Innovative Solutions provides a wide range of services that are listed hereunder

- Inspection & Certification of Elevators and Escalators
- Inspection and Certification of Crane & Lifting Equipment Inspection
- In service inspection of all pressure vessels, tanks, piping using applicable codes such as API 510, API 653, API 570.
- Inspection of LPG Tank and Network
- Thermal Imaging Inspection of Electrical Panels & Circuits using Infrared Camera
- Inspection and Testing of Lightening (Surge) Protection & Grounding System
- Inspection of Electrical Rooms



- Inspection of Generators & Automatic Transformer Switch (ATS) Panel
- Inspection of Fire Safety System
- Inspection & Certification of Building Maintenance Unit (BMU) / Safe working Pressure (SWP) Inspection and Certification of Air Compressor
- Indoor Air Quality Assessment
- Inspection of HVAC (Heating, Ventilation, & Air conditioning System)
- Indoor Noise Level Assessment
- Inspection of Steam & Hot Water Boilers
- Inspection of Swimming Pool
- Inspection and Certification of guy wire ropes for cable car projects
- Training, Assessment and Certification Services
- Inspection of tanks using robotic methods
- Under water structure inspection by using rovers.

## 5. NON DESTRUCTIVE TESTING – BUSINESS LINE: SERVICES

Providing Non Destructive Testing Services for the Oil and Gas, petrochemical, power industry in India covering large Petrochemical Plants, Cross Country Pipelines and Storage Tank farms. Additionally, having enriched experience of working in Offshore Platforms and Offshore Barges for NDT of Subsea Pipelines, Risers etc.,

➤ Innovative Solutions provides a wide range of services that are listed hereunder

❖ **Conventional NDT Services**

- Radiography Testing
- Gamma Radiography
- Internal X-Ray + Crawler System
- External x ray System
- SCAR System

❖ **Ultrasonic Inspection**

- Thickness Measurement / Local Scanning
- Lamination check
- Weld Inspection



- Magnetic Particle Testing
- ❖ Magnetic Particle Testing
  - Visual Particle Testing
- ❖ Liquid Penetrant Testing
  - Visual & Fluorescent
- ❖ Hardness Testing
- ❖ Ferrite Content Measurement
- ❖ Holiday Detection
- ❖ Positive Alloy Material Identification
  - Normal
  - Carbon Analyzer
- ❖ Post Weld Heat Treatment
- ❖ Advanced Ultrasonic Testing
  - Pipeline Automated Ultrasonic Welding
  - Phased Array
  - Time of Flight Diffraction
  - Long Range UT
  - Short Range UT
  - Internal Rotary Inspection System
  - B Scan Corrosion Mapping
  - P Scan Corrosion Mapping
  - Electro Magnetic Acoustic Testing
  - Creeping Head-Wave Inspection Method
- ❖ Advanced Radiography Testing

- Digital Radiography Testing
- Computed Radiography Testing
- Real Time Radiography Testing

#### ❖ Tube Testing

- Eddy Current Testing
- Internal Rotary Inspection System
- Remote Filed Electro Magnetic Testing
- Magnetic Flux Leakage Testing
- Near Field Testing
- Acoustic Eye

#### ❖ Magnetic Flux Leakage Inspection

- Tank Bottom Plate
- Wire Rope
- ❖ Remote Video Inspection/Internal Video Inspection
- ❖ Eddy Current Testing Weld Service Inspection
- ❖ Thermography Testing (Infrared)

#### ❖ Saturated Low Freq Electromagnetic Testing

- Tank Bottom Plate
- Pipe

- ❖ Pulsed Eddy Current Testing
- ❖ Acoustic Emission Testing
- ❖ Online Tank Inspection (OTI)
- ❖ External Corrosion Mapping
- ❖ Leak Testing (LDAR)

## 6. CERTIFICATION – BUSINESS LINE SERVICES

International QHSE standards (mainly ISO), industry management systems (agri-food, aeronautics, automotive, etc) and sustainable development (CSR, climate change). We certify that quality, health, safety and environmental management systems comply with international national or industry standards or Company-specifics standards in order to improve risk management and performance.

Innovative Solutions provides a wide range of services in partnership with international certification bodies that are listed hereunder



### POPULAR MANAGEMENT SYSTEM CERTIFICATION

#### Standards

ISO 50001:2018  
ISO 9001:2015

#### Certification Title

Energy management systems -- Requirements with guidance for use  
Quality management systems -- Requirements

ISO 14001:2015	Environmental management systems -- Requirements with guidance for use
ISO/IEC 27001:2013	Information technology -- Security techniques -- Information security management systems -- Requirements
ISO 45001:2018	Occupational health and safety management systems -- Requirements with guidance for use
ISO 55001:2014	Asset management -- Management systems -- Requirements
ISO 22004:2014	Food safety management systems -- Guidance on the application of ISO 22000
RC 14001	Responsible Care Management System -- RC14001
ISO 22301:2012	Societal security -- Business continuity management systems --- Requirements
ISO 37001:2016	Anti-bribery management systems -- Requirements with guidance for use
ISO 41001	Facility management -- Management systems -- Requirements with guidance for use
ISO 22000	Food safety management systems -- Requirements for any organization in the food chain
ISO 13485:2016	Medical devices -- Quality management systems -- Requirements for regulatory purposes
ISO 10004:2012	Customer satisfaction -- Guidelines for monitoring and measuring
ISO/IEC 20000-1:2011	Information technology -- Service management -- Part 1: Service management system requirements
ISO 29001	Petroleum, petrochemical and natural gas industries -- Sector-specific quality management systems -- Requirements for product and service supply organizations
ISO31000	Risk management System

**Some certification courses are being offered at Innovative Solutions are as under**

**API 510          Pressure vessel inspector certification**

**API 653          Tank inspector certification**

**API 570**      **Piping inspector certification**

**API 580**      **Risk based inspection certification**

**ASNT Level II American society of nondestructive testing (Radiography, penetrant testing, ultrasonic, Magnetic particle testing)**

**CP Level 1**    **Cathodic protection level 1 Certification**

**CP Level II**   **Cathodic protection level II certification**

**AWS CWI**    **American welding society (Welding inspector program)**

**CSWIP 3.1**   **TWI Cambridge welding inspector certification**

**ASNT**        **Eddy current testing, MFL**

**ASNT**        **Advanced UT such as PAUT, TOFD**

## 7 . AGRI FOOD & COMMODITIES – BUSINESS LINE : SERVICES

Oil & petrochemicals, metals and minerals, coal, agricultural and agri-food products and imported goods. We improve transparency and we verify the composition, quality and quantity of commodities throughout the value chain, from drilling to trading, and from farm to fork. We facilitate international trade and protect citizens from poor quality products by verifying import conformity

➤ Innovative Solutions provides a wide range of services that are listed hereunder

### ❖ Agri Food Services

#### ➤ Certification and Audits

Certify Food Facilities (factories, catering, central kitchens, hotels, hospitals, etc. against international standards including but not limited to :

- ISO 22000
- FSSC 2200
- Global Gap
- BRC
- Organic
- FAMI QS
- ISO 9001
- ISO 14001
- ISO 45001

### ❖ Government Services & International Trade

- Issuance of certificates of conformity (CoC–VoC) for regulated countries for exported food products
- Inspection of food & non-food items imported from countries around the globe

### ❖ Quality and Safety

- Suppliers audits
- Traceability audits
- Hygiene and Safety 2nd Party Audits

### ❖ Training :

- All subject related trainings from basic to intermediate to advance to lead auditor courses.

### ❖ Lab Testing

- Chemical & microbiological tests for food and food related products



## 8. CONSUMER PRODUCTS – BUSINESS LINE: SERVICES

Innovative solutions Testing Services (ISTS) was established in 2018 in India with the aim of providing professional testing services initially in the Textile & electrical fields.

- Innovative Solutions provides a wide range of services that are listed hereunder
- ❖ **Electrical Laboratory**
  - More than 350 up to date electrical testing equipment & benches calibrated & traceable to international standards
  - Capability to test more than 100 types of electrical & electronic fields
  - Eminent staff in testing services & quality management
  - Accredited for all activities by IS in accordance to ISO/IEC.
- ❖ **Testing Capabilities:**
  - **Batteries** : (car batteries, dry cells & similar products)
  - **Energy & Industry Products:** (circuit breakers, fuses, cables & wires, plugs, socket outlets, adaptors, switches, electric motors, pumps, transformers, watt-hour meters, etc...)
  - **Household Appliances:** (Refrigerators, air conditioners, kitchen machines, deep fat fryers, ovens & microwave ovens, fans, irons, washing machines, tumble dryers, dishwashers, vacuum cleaners, hair dryers, hair clippers, etc.)
  - **IT & Electronic Products:** (Computers, monitors, LCD screens, TVs, home theatre systems, fax machines, VCD & DVD players, radio, receivers, mobile phone chargers, etc...)
  - **Lighting Products:** (Luminaries, standard lamps, compact fluorescent lamps, ballasts, starters, lamp holders, etc)



## 9. GOVERNMENT SERVICES & INTERNATIONAL TRADE – BUSINESS LINE SERVICES

Innovative Solutions is one of the leading providers of import / export control and inspection services, performing tasks such as the pre- and post-shipment inspection of goods in various fields. We also implement and operate Trade Facilitation which automates, optimizes and secures business processes of public and private stakeholders as per the Indian and World Customs Organization recommendations.

- Innovative solutions provides a wide range of services that are listed hereunder
- Pre-shipment inspection Draft Survey
- Hold Inspection
- Sampling
- Lab testing
- Witness Testing
- Witness Loading



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