

## VISTON:

"To be the best in class asset integrity management services company delivering premium value to all our clients"

## **Introduction:**

"IBS provides complete lifecycle asset integrity management solutions for the fixed equipment and structures in the oil and gas, refining, petrochemical and fertilizer manufacturing facilities.

We have a core team of subject matter experts with in-depth experience of the asset integrity management systems and processes."

## MISSION:

"To exceed customer satisfaction expectations of our valuable clients"

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## **OUR COMMITMENTS**

## **Integrity**

We dedicate ourselves to acting with integrity at all times. Honesty, ethically, accountability, trustworthiness, truthfulness to ourselves and others. We will always do what is right, even when it is not easy. We are committed to the highest standards of business principles and professionalism.

#### Excellence

We dedicate ourselves to pursuing and empowering the exceptional and extraordinary. We are passionate, relentless always strive for excellence in everything we do to provide unparalleled, superior support to clients and our community.

## Respect

We dedicate ourselves to treating others as we wish to be treated. We lead not just with our words, but with our actions.

We value the differences between ourselves and those we come into contact with and we constantly strengthen our bonds with every client.

## Sustainable

Our commitment towards sustainability is addressed both by the solutions we deliver to our clients and in our company culture. We are continuously focusing on green initiatives to decrease our carbon footprint. Inovision Business Solutions sustainability professionals help clients understand how the three aspects of sustainability can be applied to their organization, whether it is municipal, commercial/industrial, small or large. The goal in sustainability is to understand and embrace social, economic and environmental responsibility in every facet of an organization.

#### **Solutions**

We continuously strive to be the environmental partner of choice. As environmental challenges for business becomes increasingly urgent, we respond and deliver solutions that make a positive and substantial contribution. We are committed to continually improving the effectiveness of our quality management system leading to improved level of services that we deliver and offer to our valuable Clients.





## **OUR SERVICES**

Our experts are qualified, certified and experienced in their respective fields. We have extensive industry experience and worked with prominent oil and gas Clients like CPECC, OGDCL, PARCO, MPCL and SNGPL.

Following services are offered by IBS:

- Asset Integrity Management
- Material Failure Investigations
- Risk Based Inspection Assessments
- Code Compliance Audits
- Fitness-for-Service Assessments
- Material Selection and Review
- Remaining Life Assessments and Life Extension
- Mechanical Integrity Programme Creation and Implementation
- Creation and Implementation of Corrosion Control Documentation
- Establishment of Integrity Operating Window
- Cathodic Protection Services
- Corrosion Engineering Consulting Services
- Oil & Gas Fields Chemical Treatment
- Crude Oil Testing services
- Inspection Services
- Heath, Safety and Environment (HSE) Services
- Environmental Services
- Training Courses
- Materials Supply



## **Asset Integrity Management:**

IBS is the premier asset integrity management solutions provider in Pakistan to the oil and gas, refining, petrochemical, and fertiliser manufacturing facilities. We help our clients to run their assets effectively, accurately, and to the optimum capacity without jeopardising the lifecycle integrity.

We can apply this approach to assets at any stage of their life from design, fabrication, installations, commissioning, operation to decommissioning.



## **Material Failure Investigations:**

An essential aspect of HSE and process safety performance improvement is learning from incidents (accidents as well as near hits/miss) and taking appropriate action to prevent their recurrence. In order for the asset owners to prevent recurrence of such incidents, it's imperative to ensure that incidents are consistently reported and investigated and that identified actions and learnings are implemented on a timely basis.

IBS helps its clients create the best practices for the material failure investigations, reporting and investigation of incidents, to ensure that root causes are identified, and that appropriate recommendations are identified and implemented to address these root causes in order to prevent recurrence of similar incidents.



## **Risk Based Inspection Assessments:**

IBS helps its clients with the creation of the basic minimum and recommended elements for developing, implementing, and maintaining an RBI programme. We can train the owner-users, operators, and designers of pressure-containing equipment for developing and implementing an inspection program. We also assess an existing inspection programne and its associated inspection plan for our clients.

Our philosophy emphasises safe and reliable operation through risk-prioritised inspection. A can deliver a spectrum of complementary risk analysis approaches (qualitative through to fully quantitative) as part of the inspection planning process.

Once delivered the RBI work we can help clients understand the concepts and principles of RBI for risk management, and the steps in applying these principles within the framework i.e.:

- understanding the design premise;
- planning the RBI assessment;
- data and information collection;
- identifying damage mechanisms and failure modes;
- assessing probability of failure (POF);
- assessing consequence of failure (COF);
- risk determination, assessment, and management;
- risk management with inspection activities & process control;
- other risk mitigation activities;
- reassessment and updating;
- roles, responsibilities, training, and qualifications;
- documentation and recordkeeping



## **Code Compliance Audits:**

Without carrying out the periodic reviews and audits of the asset integrity management systems, the operating organisation cannot be confident if their assets are safe to continue to operate.

Regular review and audit of performance of performance and compliance with the asset integrity management framework are vital to ensure that the HSE and process safety performance continues to meet the organisation's defined targets.

We help our clients establish if their asset integrity managment framework is code compliant and recommend any improvements to plug any gaps.

Where we can help our clients carryout code compliance audits are:

- NDT inspection procedures;
- Inspection reporting procedures;
- Non-intrusive inspection assessment procedures;
- RBI assessment procedures;
- Fitness for service assessment procedures;
- Temporary repair procedures;
- · Permanent repair procedures;
- Fabrication and construction QA / QC procedures;



## **Fitness-for-Service Assessments:**

Fitness-For-Service (FFS) is an essential methodology in the 'run-repair-replace' decision making process.

There are various methods to complete assessments, but the most used methods are contained with the American petroleum Standard API-579-1 / ASME FFS-1.

The Standard provides a means to assess damaged pressure equipment dependant on the mode of the damage. The damage is usually caused by some form of environmental degradation, however mechanical damage is also included. IBS help its clients provide the fixed equipment status assessments to the API-579-1/ASME FFS-1. If required by clients, we are able to select the correct inspection techniques and methods to be able to gather the pertinent equipment information that will aid complete the FFS assessment.



#### **Material Selection and Review:**

IBS helps it clients carryout audits of the materials that have been selected to construct a facility but not performing as expected.

We also help our clients select appropriate materials for a particular service environment to maximise the return on investment.

The corrosivity of the in-service equipment can vary considerably with a combination of degradation mechanisms.

We establish the dominant damage mechanism rate(s) or any combinations thereof, and help our clients chose the best available material for that service whilst considering the operational and capital implications.



## Remaining Life Assessments and Life Extension:

At IBS, we understand the material damage mechanisms, failure modes, probability of failure assessments and how to use various inspection techniques to establish the equipment conditions.

We help our clients with establishing and extending the life of fixed equipment without conflicting with the code and regulatory requirepments.

We can also help clients carryout fitness-for-service engineering assessment to extend operational life of aged plant.





## **Mechanical Integrity Programme Creation and Implementation:**

Asset integrity management is not the sole responsibility of the functional engineers but of the wider organisations.

The major consequence accidents in the recent history have demonstrated that having an optimised asset integrity management programme not only helps with the regulatory compliance but also results in improved return on investment.

We can help create and implement the mechanical integrity programmes that will not only by regulatory and code compliant but also maximise the investment returns.



## **Creation and Implementation of Corrosion Control Documentation:**

CCDs are a valuable addition to an effective Mechanical Integrity Programme.

They help to identify the damage mechanism susceptibilities of pressure piping and equipment, factors that influence damage mechanism susceptibilities, and recommended actions to mitigate the risk of loss of containment or unplanned outages.

We help prepare CCDs for our clients that contain all the necessary information required to understand materials damage susceptibility issues in a specific type of operating process unit at a plant site.

Upon client request, we can also integrate the CCDs with other plant integrity management programmes to overall improve the asset life.





# **Establishment of Integrity Operating Window:**

In order to maintain the integrity and reliability of pressure equipment in the refining and petrochemical industry, several process safety management systems are necessary.

Many of those management systems are oriented toward having a rigorous inspection program, as well as all the supportive engineering activities, to maintain pressure equipment integrity and reliability.

IBS helps its clients establish and implement an IOW programme for their facilities for the express purpose of avoiding unexpected equipment degradation that could lead to loss of containment.



#### **CATHODIC PROTECTION SERVICES:**

Our NACE certified experts are able to provide complete project management services for Cathodic Protection systems. We can provide best and cost effective solution to protect assets such as cross-country pipelines, buried plant piping, storage tanks and pressure vessels from costly corrosion damages by designing suitable CP system (ICCP and SACP).

Services include but not limited to:

#### **Engineering Services:**

- Detail design of Cathodic Protection System (Impressed Current Cathodic Protection and Sacrificial Cathodic Protection).
- Design calculations for recommended type, current requirement, power source, types and quantity of anodes, type of anode bed etc.
- Preparation of operational maintenance manuals.

## **Installation Services:**

- Installation of Power Sources like TR, TEG and solar Panel Units
- Installation of Ground beds
- Up-gradation of existing Cathodic Protection System
- CP Troubleshooting / Rehabilitations / Maintenance

#### **Surveys:**

- Soil Resistivity Survey
- Structure to Electrolyte Survey (PSP)
- Direct Current Voltage Gradient Survey (DCVG)
- Closed Interval Potential Survey (CIPS)
- Pipeline Current Mapping Survey (PCM)

#### **Inspection and Audit Services:**

- CP System Health/Remaining Life Assessment
- Structure to Electrolyte Survey
- Remote monitoring inspection
- Electrical isolation Survey
- Anode bed resistance calculation
- Transformer Rectifier inspection
- Solar power unit inspection
- Test Posts testing/troubleshooting
- AC (Alternating Current) interference testing
- Foreign structure interference testing
- Cased crossings testing







### CORROSION ENGINEERING CONSULTING SERVICES

Corrosion engineering consulting services for oil and gas, water, energy, transportation and chemicals industry. Services including but not limited to Feasibility study, Corrosion and Risk Assessment studies, Corrosion monitoring testing and evaluation, selection of corrosion monitoring techniques, installation, retrieval of monitoring tools. Study and evaluation of corrosion monitoring results, submission of reports, mitigation of corrosion. Industrial corrosion failure analysis for investigation of root cause.



## OIL & GAS FIELDS CHEMICAL TREATMENT

Oil & Gas Fields Chemical Treatment, (like Demulsifiers, corrosion inhibitors, scale inhibitors, pour point depressant, hydrate inhibitors and complete water treatment, etc.), complete backup (after sale)

services to oil and gas E&P as well as other Petrochemicals, Power plants, chemical industries. Including Initial chemical dosages, there optimization, Chemical Performance Evaluation, determination of Residual chemicals, Techno-Economical selection of the chemical treatment on actual on-site field conditions. Representation Services are also available for reputed chemical companies.



## **CRUDE OIL TESTING SERVICES**

Crude oil testing services (for dispatch quality check to refineries), complete crude oil stock evaluation through True Boiling Point and yield analysis. Complete petroleum products testing as per ASTM /IP and other international standards. Capabilities for making the proposals to setup a complete quality control Laboratories for crude oil, petroleum products including recommendations of the minimum/maximum quality tests.



#### **INSPECTION SERVICES**

Our inspection team can provide inspection services according to national and international standards. Our industrious inspectors are certified and well experienced in their respective fields. Our aim is to always exceed client expectations. We tailor our services to individual clients and take a proactive approach, investing in our people and resources to go beyond expectations. IBS is committed to delivering the highest quality of services ensuring safety, integrity and certainty across all our activities and those of our clients.

Our services help ensure: Quality, Cost Effectiveness, Adherence to Schedules and Reliability.

Our inspection services include but not limited to:

- QA/QC Inspection
- API Inspections
- NDT Inspections
- Third Party Inspection
- Lifting Equipment Inspection Services



IBS provides complete services for Electrical System design, safety Assessment and Energy Audit services. A properly designed, planned and executed electrical safety assessment programme can bring out many hazards that could save life & property of your workplace.

Electrical Safety is a concern in almost every organizations.

The risks related to electrical safety are often `managed in an isolated way.





### **ENVIRONMENTAL ASSESSMENT AND DOCUMENTATION**

Environmental Impact Assessment (EIA) is a statutory requirement for most developmental and industrial activities in our country. Its purpose is to identify, examine, assess and evaluate the likely and probable impacts of a proposed project on the environment and, thereby, to work out remedialaction plans to minimize adverse impact on the environment.

INOVISION experts have vast experience of providing EIA services and its purpose to identify impact of developmental activities on natural environment and provide advice on mitigation measures and management planning. EQMS has provided EIA services to various governments, private and international clients.

Our EIA service can benefit the client in the following manner:

- Associated environmental liabilities are identified and quantified so that they can be managed
- Suggesting efficient pollution control measures
- Makes your project more environment friendly

EIA provide services in following sectors

- Mining of minerals
- River Valley, Drainage and Irrigation projects;
- Thermal power plants
- Metallurgical industries
- Chemical Fertilizers
- Pesticides industry and pesticide specific intermediates
- Synthetic organic chemicals industry
- Isolated storage &handling of hazardous chemicals
- Industrial estates/ parks/ complexes/ Areas
- Common hazardous waste treatment, storage and disposal facilities (TSDFs)
- Highways, Railways, transport terminals, mass rapid transport systems;
- Building and large construction projects including shopping malls, multiplexes, commercial complexes, housing estates, hospitals, institutions.
- Townships and Area development projects.

Our experts have diverse experience in above mentioned categories. Transmission Lines, Hydropower, Renewable Energy, Construction of Roads/Buildings/ Flyovers etc. are some of the areas of study, our environmental experts have understanding in.



#### **HEALTH, SAFETY AND ENVIRONMENT (HSE) SERVICES**

We believe that effective management of HSE and implementation of its core values is an essential ingredient for meeting organizational goals. Meeting HSE

objectives and targets at all levels and functions of an organization can ensure a sustainable business growth while preventing and mitigating risks to life, property and environment due to business operations. We, at IBS, offer from development of HSE Management System (HSEMS) including Process Safety aspects to implementation from top to bottom tiers. Our Key services include but not limited to the following:



- HSE Management system
- Fire Safety Management system
- Process Safety Management system



### TRAINING SERVICES

**H2S TRAINING:** 

Hydrogen Sulphide (H2S) Awareness Safety Training: (Duration of course is one working day.)

The Instructor/Trainer is certified Trainer by National Safety Council (NSC)-USA as per ANSI/ASSE Z-390.1 2006 (R2010) having around 40 years diversified industrial experience of extreme Sour Oil & Gas production and processing facilities as well as of sweet oil and gas production and processing facilities, (Locally and Internationally). Instructor have been conducting this safety awareness training for the last 20 years to the Junior Engineers, Engineers, Senior Engineers, middle management and senior management cadre for Oil & Gas (E&P) companies. This certification is the mandatory and legal requirement especially for professionals plan to be exposed to H2S hazardous potential area or sour gas (Having H2S gas) containing oil and gas facilities. Drilling Rig related professionals are legally bound to first have the certified H2S awareness safety training than they are allowed to enter on the rig floor.



Other safety trainings by professional trainers are as under:

- Basic Fire Fighting
- Basic First Aid Services
- Hazardous Material handling
- PPES Usage and awareness

# CORROSION AND CATHODIC PROTECTION TRAININGS:

The Instructor/Trainer is certified by NACE and ICorr having multiple years of experience in the field of corrosion and cathodic protection. We offer following training programs:

- External and Internal Corrosion
- Basic Cathodic Protection System
- Corrosion Inhibitors

#### MATERIALS SUPPLY:

We supply complete range of materials from local and international market related to our services. The materials we supply includes but not limited to:

- Corrosion monitoring equipment (coupons, probes, access fittings, retrieval kits, service valves and related accessories
- Chemical injection quills
- · Corrosion inhibitors and biocides
- Coating materials for corrosion protection
- Complete Cathodic Protection materials like Anodes, Transformer Rectifier, Thermo Electric Generators, Specific Solar panel units for CP System, Cables, Junction Boxes (including shunts, rheostats, Copper connectors & Rheostats)
- Cathodic Protection related survey equipments.







