



ENGINEERING FOR
A SAFER WORLD

SINCE 1982



VELOSI
INTEGRITY & SAFETY
PAKISTAN (PVT.) LTD.



www.velosiaims.com

About **Velosi**

Velosi is a global leader in providing a broad spectrum of end-to-end Consultancy Services in the fields of Third Party Inspection (TPI), Vendor Inspection, Statuary Inspection, Certification, Testing, Asset Integrity Management, HSE, Engineering Services, Manpower Services and Software Solutions to clients in the FMCG, pharmaceutical, energy, mining, and oil and gas industries around the world.



Our **Services**

We offer a full range of specialist engineering consultancy services, incorporating our own proprietary software that is exclusively developed and tailor-made to match the needs of our increasingly diverse clients around the world in the energy sector.



INSPECTION, TESTING & CERTIFICATION

Third-Party Inspection (TPI)

- Project Quality Management System
- QC Surveillance
- Vendor Inspection/Surveillance & Expediting Services
- Pipe Mill Surveillance and Steel Mill Inspection
- Plant Condition Based Maintenance Monitoring (CBM)

Industrial In-Service Inspection

- Pressure Vessel In-Service Inspections
- Pipeline In-Service Inspections
- Storage Tank In-Service Inspections
- Corrosion Under Insulation (CUI)
- Evaluation and Monitoring of Cathodic Protection (CP) System

Technical Training

- Mobius Institute Vibration Analysis CAT II and CAT III
- Riggers Training
- Crane Operator Certifications & Training
- Fork Lifter Operators Certifications and Training
- Training on IMS (Integrated Management System)

Non-Destructive Testing (NDT) and Corrosion Monitoring

Conventional Non-Destructive Testing

- Ultrasonic Testing
- Magnetic Testing
- Dye Penetrant Testing
- Eddy Current Testing
- Radiographic Testing

Advanced Non-Destructive Testing

- Corrosion Mapping
- Time of Flight Diffraction (TOFD)
- A & B Scan Enhancement Imaging (ABI Scan)
- Floor Map Imaging
- Electro Magnetic Array Testing (EMA)
- Computed Radiography
- MFL Tank Floor Scanning
- Insulated Component Testing (INCOTEST)
- Phased Array
- Tube Inspection Services
- Electro-Magnetic Acoustic Transducer (EMAT)
- Long Range UT Guided Wave Inspection
- Remote Visual Inspection (RVI)
- Direct Current Voltage Gradient (DCVG)
- Close Interval Potential Survey (CIPS)
- Pipeline Current Mapper
- UT Crawler
- Non-Destructive Testing Pigs

Remote Visual Inspection (RVI)

- Inspections of Confined, Cluttered or Indoor Places
- Remotely Operated Aerial Inspections
- Telescopic Crane for Inspections of Hard to Reach Assets
- Borescope Inspection
- Piping Welding Inspection
- Turbine Visual Inspection
- Engine Visual Inspection

Statutory Inspection and Certification Services

- Tank Lorry Inspection as per OGRA Rules
- CNG Station Inspection as per OGRA Rules
- LPG Plant & Cylinder Inspection as per OGRA Rules

Lifting Equipment Inspection, Testing and Certification

- Mobile Cranes and Overhead Cranes Inspection as per LEEA
- Chain Blocks and Slings Inspection
- Forklifts and Racks Inspection
- CAT - V inspection for Mobile Cranes
- Elevators and Escalators Inspection

Testing/Analysis/Calibration

Testing and Calibration of:

- High and Low-Pressure Equipment
- Electrical Instruments
- Temperature Equipment
- Force and Torque Equipment
- Dimensional Equipment
- Miscellaneous Equipment
- Weighing Bridges
- Storage Tanks Approved by API Methods



ASSET INTEGRITY MANAGEMENT SERVICES

Risk Based Inspection (RBI)

- Corrosion Loop Drawings
- Inventory Group Drawings
- Corrosion & Inspection Strategy Document
- Risk-based Inspection (RBI) Findings
- Inspection Isometric Drawings for Equipment & piping
- Integrity Operating Window
- Asset Passports

Reliability Centered Maintenance (RCM)

- Asset Register as per ISO-14224
- FMECA (Failure Mode Effects Criticality Analysis) Study
- Job Plans
- Equipment Criticality Analysis (ECA)
- Preventive Maintenance Plans (PMRs), Task List and Identification of Spare Parts in line with PMRs

Reliability, Availability and Maintainability (RAM)

- Identification potential bottlenecks
- Estimating the on-stream availability of the unit
- Prediction the impact of equipment redundancy and sparing
- Development and mitigation strategies for expected failure modes
- Perform a preliminary equipment criticality analysis
- RAM study

Safety Integrity Level (SIL)

- SIL Methodology
- SIL Classification Study
- SIL Verification Study
- Safety Requirement Specification (SRS)
- Safety Life Cycle Document

Pipeline Integrity Management System (PIMS-Onshore & Offshore)

- Section Layout Drawings
- Mechanical Assessment Sheet
- RBI - PIMS Study
- Inspection Plan
- Integrity Operating Window (IOW)
- Asset Passport

Structural Integrity Management System (SIMS)

- Tag Marked Drawings
- Asset Register
- Inspection Plans
- Asset Passport
- RBI - SIMS Study

Wellhead Integrity Management System (WHIMS)

- Formulation of Asset Register
- Identification of Applicable Damage Mechanism / De-gradation Mechanism
- Risk Ranking & Calculation of Criticality Based on Calculated POF & COF
- Development of Inspection Plan Against Calculated Criticality Factors



HEALTH, SAFETY AND ENVIRONMENTAL (HSE) CONSULTANCY SERVICES

Process Safety & Risk Studies

Workshop Facilitation

- Hazard Identification (HAZID)
- Hazard and Operability (HAZOP)
- Safety Integrity Level (SIL)
- Simultaneous Operations (SIMOPS)
- Constructability Review
- Bow-Tie
- ALARP Demonstration
- Inherent Safe Design (ISD) Review

COMAH/Safety Case

Health Safety & Environmental Critical Equipment Systems (HSECES)

- Identification of HSECES
- HSECES Performance Standards for all Identified HSECES
- ICP Audit for HSECES Verification
- Quality Performance Standards

Risk Assessment

- Quantitative Risk Assessment (QRA)
- Fire & Explosion Risk Assessment (FERA)
- Building Risk Assessment (BRA)
- Fire and Gas Mapping Study
- Emergency System Survivability Analysis (ESSA)
- Evacuation Escape and Rescue Analysis (EERA)
- Dropped Object Study
- Hazardous Area Classification
- Pollution Prevention and Control (PPC) Compliance Study
- Emergency Response Plan (ERP)
- Air Dispersion Modeling Study
- Project HSE Plan
- Noise Assessment Study
- Waste Management Plan
- H2S Dispersion & Zoning Study
- Human Factor Engineering Assessment Study
- Ergonomics Study
- PHSER Workshops & Study
- Construction HSE Plan

Drilling HSE Consultancy Services (Onshore & Offshore)

- HSE Audit, Survey & inspection Study
- Complete Rig Inspection Study
- Rig Acceptance Survey Study
- Rig Condition Survey Study
- Drop Object Survey/Inspection/Audit Study
- Safety Case Study
- Working at Height Audit Study
- Rig Move Audit Study
- Noise Survey Study
- Environmental Impact Assessment Study
- Occupational Health Risk Assessment Study

Environmental Studies

Environmental Studies & Assessments

- Environmental Impact Assessment (EIA)
- Strategic Environmental Impact Assessment
- Preliminary Environmental Review (PER) Study
- Construction Environmental Management Plan (CEMP)
- Environmental Management Plan (EMP)
- Decommissioning Environmental Management Plan (DEMP)
- Operational Environmental Management Plan (OEMP)
- Environmental Permit Application (EPA)
- Environmental Action Plan (EAP)
- Environmental Audit Report (EAR)

Environmental Monitoring & Testing Services

- Indoor Air Quality Monitoring
- Ambient Air Quality Monitoring
- Particulate Matter Monitoring
- Noise Level Monitoring
- Stack Emission Monitoring
- Formaldehyde Monitoring
- Site Meteorological Data Monitoring
- Soil & Water Analysis

Estidama/Sustainability/Green Building Consultancy

Waste Management Consultancy

- Waste Reduction Report (WRR)
- Operational Waste Management Plan (OWMP)
- Decommissioning Waste Management Plan (DWMP)
- Waste Audit

Occupational Health Risk Assessment (OHRA)

- Emergency Management and Planning (EMP)
- Qualitative OHRA
- Quantitative OHRA
- Workplace Exposure Monitoring
- Industrial Hygiene Monitoring Plan
- Occupational Hazard Identification (OHID)
- Workshop and Study
- OHRA Study
- Noise Survey and Assessment
- Biological Agent Assessment



ENGINEERING SERVICES

Conceptual Design, FEED and Detailed Design

Process	Civil and Structural Design	Piping Design
<ul style="list-style-type: none">• Process Flow Diagrams (PFDs), Utility Flow Diagrams (UFDs) and Heat & Material Balances• Process Simulation Report Process Design Calculations• Process Simulation Report Process Design Calculations• Piping & Instrumentation Diagrams (P&ID's)• Data Sheets• Cause & Effects Diagrams• Process & Operational Control Description• Flare and Relief System Study/Sizing Calculations• Pre-commissioning and Commissioning Manual• Operating & Maintenance Manual	<ul style="list-style-type: none">• Civil Design Criteria• Structural Design Criteria• Civil Layouts• Structural Drawings• Underground Services Specification• Underground Services Layout• Underground Service Design Details Drawings• Cable Trench Layouts• Paving Plan and Details Drawings• Foundation and Concrete Structure RC Details• Road Layouts and Details	<ul style="list-style-type: none">• Overall Site Plot Plan• Piping Material Specifications• Heat Tracing/Jacketing Specification and Schedules• Piping General Arrangement Drawings• Isometric drawings• Material take-offs• Key Plans• Stress Analysis• Pipe Supports Design details• Special Pipe Support Register• Pipe Support Spring Register and Calculations
Electrical Design	Instrumentation and Controls	Firefighting and Safety
<ul style="list-style-type: none">• Area plans• Layout drawings• One line diagrams showing interlocks, inter tripping, system capacity, Voltage levels, currents, impedances, generation power levels etc.• Schematics• Equipment drawings with major tagged equipment such as Transformers, Switchgears, MCCs, UPS, Chargers, Generators, Power supplies, PTs, CTs, Control panels, packaged equipment etc.• Inter connection diagrams• Lists and Schedules• Calculations• Studies and reports	<ul style="list-style-type: none">• System Block Diagrams• Instrument Specifications for equipment and materials• Instrument Index• Relief and Safety Device Index• Alarm and Trip Schedule• Control Room and Control Building Layouts• Instrument Cable Routing• Instrument Power and Utility Requirements• Power Distribution Schedule• Instrument Junction Box Schedules• Loop Diagrams• Input/ Output Schedules	<ul style="list-style-type: none">• Safety Design Philosophy• P & ID for Fire Water Ring Main• Firefighting Equipment List / Requisitions• Fire and Gas Detection Equipment Schedule• Extinguishing Systems Design (Where/if applicable) of fixed fire extinguishing systems (e.g. foam, carbon dioxide, clean agent, and/or dry powder systems)• Mobile Fire Fighting Equipment Schedule• Safety Equipment Schedule

Engineering Consultancy Services

- Advice and supervision of all project phases from the earliest stages to start-up
- Direct assistance to client in project definition and prefeasibility stages
- Pre-FEED engineering and FEED tender production and bid evaluation
- FEED supervision and review
- Design and EPC tender evaluation, contract preparation and assistance during negotiation with contractors
- Provision of project management teams including project controls and engineering
- Provision of satellite teams to supervise design in contractor offices
- Value management
- Planning, schedule and logistics management
- Risk management
- Construction supervision and management
- QA/QC, inspection and safety management
- Commissioning, training and handover

Pipeline Integrity Services

- Pipeline Construction Quality Services
- External Corrosion Direct Assessment (ECDA)
- Guided Wave Pipeline Screening

Operating Manuals and Procedures

- Standard Operating Manuals
- Standard Operating Procedures

Fitness For Service (FFS)

Design Verification and Appraisal

- Design Verification Study

As-Built Drafting Service

- RLMUs
- Updated Drawings
- Updated Database/Model

Project Management Consultancy Services

- Project Execution Plan
- Health, Safety and Environment (HSE) Plans
- Document Control
- Procurement Expediting
- Logistics Support
- Project schedule



SOFTWARE SOLUTIONS

VAIL-Plant (Asset Integrity Management System)

- Pressurized Equipment Management System (PEMS)
- Pipeline Integrity Management System Onshore (PIMSON)
- Pipeline Integrity Management System Offshore (PIMSOFF)
- Structure Integrity Management System (SIMS)
- Pressure Safety Valve & Relief Valve Management System (PSVMS)
- Electrical, Instrumental and Rotary Management System (EIRMS)
- Lifting Equipment Management System (LEMS)
- Wellhead Integrity Management System (WHIMS)
- Civil Integrity Management System (CIMS)
- Cathodic Protection Management System (CPMS)
- Hull Integrity Management System (HIMS)
- Flexible Riser Integrity Management System (FRIMS)
- Computerized Maintenance Management System (CMMS)
- Asset Performance Management System (APMS)
- Inspection Scheduling Management System (ISMS)
- Enterprise Resource Planning System Interface (ERPI)

VAIL-PHA (Process Hazard Analysis)

VAIL-CRM (Customer Relationship Management)

VAIL-PSRA (Petrol Station Risk Assessment)

VAIL-HRMS (Human Resource Management System)

VAIL-MTS (Material Tracking System)

VAIL-Flow (Workflow Management)

VAIL-ERP (Enterprise Resource Planning)

VAIL-ORP (Online Reporting Portal)

VAIL-CTR (Cost, Time & Resources Management)

VAIL-Feedback



AUDITS AND ASSESSMENTS

OHSAS Safety Audits

Firefighting System Adequacy Audits

Technical Audits

Regulatory Compliance Audits

Environmental Audits

Flammable Storage Facility Audits

Process Safety Management (PSM) Audits

Electrical Audits

Structural Audits



DATA MANAGEMENT AND ANALYTICS

Data Management

Data Governance

Business Intelligence / Analytics

Enterprise Data Management



ISO CERTIFICATION AND TRAINING SERVICES

Certification and Training includes but not limited to:

ISO 9001	Quality Management System	HACCP	Hazard Analysis & Critical Control Points
ISO 14001	Environmental Management System	ISO 20000	Information Technology - Services Management System
OHSAS 18001	Occupational Health and Safety Management Systems	ISO 27001	Information Security Management System
ISO 45001	Occupational Health and Safety Management Systems	ISO 50001	Energy Management System
ISO 22000	Food Safety Management System	ISO 13485	QMS - Medical Devices Quality Management Systems

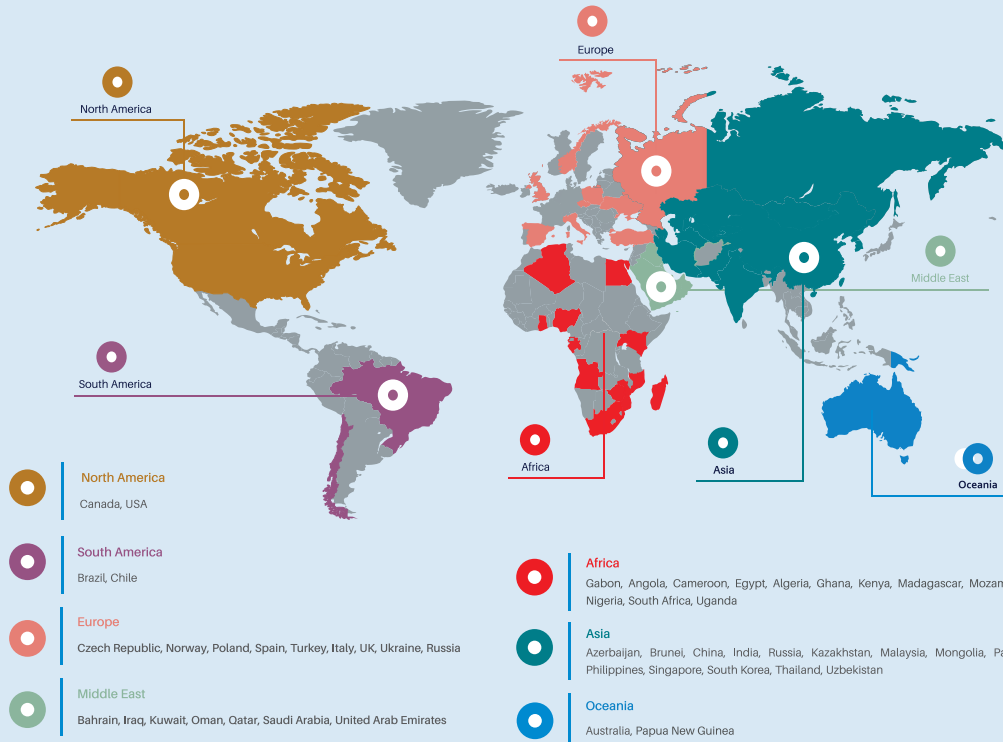


SOME OF OUR LATEST EQUIPMENT

Olympus 38DL Plus & GE DMS (Ultrasonic Thickness Measurement)	Eddyfi Lyft (Corrosion Under Insulation)
Elektro Physik MiniTest 745 (Coating Thickness Measurement)	Teletest FOCUS+ (Long Range UT/Guided Wave)
Eddify V750 Vacuum Box (Tank Weld Inspection)	Olympus XRF Analyzer (Positive Material Identification)
Nikon XF1" (Storage Tank Survey and Calibration Solutions)	Floormap3DiM-R (Magnetic Flux Leakage Tank Bottom Inspection)

Some of Our Clients

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GET IN TOUCH WITH US

