



ENGINEERING
SOLUTIONS
FOR THE
OIL AND GAS INDUSTRY

TREXTM

CHANNEL PARTNER



GE
Measurement & Control

INTRODUCTION

TREXM is a project delivery company with vast experience in the oil and gas, infrastructure and power sectors, having operations in Nigeria & USA

TREXM provides leading professional services in Electrical & Instrumentation Engineering Services, Metering & Measurement Solutions, Systems Integration & Automation, Safety & Security Services, Power Engineering Systems and Cathodic Protection, Inspection & Testing Services, Specialty Engineering Product Units, Quality Assurance Services, Operations & Maintenance Services.

Our goal is to deliver a timely, cost-effective, innovative and sustainable solutions to the satisfaction of our client's requirements.

To achieve this, **TREXM** has partnered with best-in-class service delivery companies and OEMs which has positioned TREXM as the company of choice to our clients.

We are committed to the Nigerian Local Content Act, and aim to develop and build Nigerian capacities and capabilities with a robust personnel training program.



CORPORATE SUMMARY

CORE AREAS:

- ❖ Electrical & Instrumentation Engineering
- ❖ Metering and Measurement Solutions
- ❖ System Integration and Automation
- ❖ Safety & Security Services
- ❖ Power Engineering Systems
- ❖ Cathodic Protection Systems
- ❖ Inspection and Testing Services
- ❖ Specialty Engineering Product Units
- ❖ Quality Assurance Services
- ❖ Operations & Maintenance

CAPABILITIES:

- ❖ Turnkey Instrumentation & Electrical projects
- ❖ E&I Engineering Design, Modelling and System Analysis
- ❖ Procurement, Construction, Commissioning, Operations & Maintenance

MAINTENANCE SERVICES

- ❖ Calibration and Certification
- ❖ Fire & Gas Systems
- ❖ Plant Maintenance with back - to - back assignments
- ❖ Personnel Training and Manpower Supply
- ❖ Panel Building – UL Panels, LV Panels, Metering Panels etc
- ❖ Systems Automation, Distribution Management Systems
- ❖ Access Control Systems
- ❖ Metering Skids, LACT, PRMS units, etc
- ❖ Plant Design, modeling, Analysis and Engineering
- ❖ Rotating Equipment Maintenance
- ❖ Pipeline Integrity: in-line inspection, pressure tests and direct assessment

AREAS OF ACTIVITY

- ❖ Upstream Oil Sector - Production facilities, onshore/offshore.
- ❖ Power Sector - Generation, Transmission and Distribution
- ❖ Downstream Oil Sector – Tank farms & Terminals,
- ❖ Refineries, Petrochemical plants, etc.
- ❖ FCMG – Breweries, Food processing, manufacturing etc.
- ❖ Gas Industry – LPG Plants, Mini-LNG Plants, CNG Mother & Daughter Stations etc
- ❖ Telecoms: Base Stations and NOC facilities



A full-page background image featuring a large offshore oil rig silhouetted against a bright, golden sunset. The sun is a large, glowing orb on the left side, partially obscured by clouds. The rig's complex lattice structure and various platforms are visible on the right side of the frame. The sky is a deep orange and yellow, with some white clouds catching the low light.

**We are dedicated to service delivery towards
improving plant efficiency and optimizing
business opportunities through technology**

The background of the entire image is a low-angle shot of industrial structures, likely oil refineries or gas processing plants, with tall distillation columns and complex piping. Overlaid on this are green, semi-transparent digital wireframe graphics that resemble architectural or engineering blueprints. In the bottom foreground, there are white silhouettes of oil pumpjacks (nodding donkeys) against a dark blue gradient.

WHO WE SERVE

Our Client base consist of companies in Oil & Gas,
Power, FMCG and Telecoms Industries

OUR MISSION

To provide top of the range project delivery services using creative solutions driven by professionalism, integrity and tenacity with a keen focus on safety, quality, and cost and operations optimization.



OUR VISION

To be a world class energy Service Company and our clients global and locally trusted partner.



OUR VALUES

In conducting our business, **TREXM** is inspired by and committed to upholding the principles of integrity, respect, loyalty, efficiency and transparency.

The dedication and professionalism of our employees reflect our values and are the decisive factor in ensuring **TREXM's** continuing success.





CLIENTS – WE WILL:

- ✦ Always listen to and learn from them
- ✦ Tailor our services to their specific requirements
- ✦ Offer effective industrial operation & maintenance solutions
- ✦ Employ state-of-the-art but field-tested technology and leading edge working practices
- ✦ Continuously improve in everything we do
- ✦ Meet or exceed their expectations under optimal cost/benefit conditions
- ✦ Be truthful in all advertising and communications



EMPLOYEES – WE WILL:

- ✦ Provide a safe and rewarding working environment
- ✦ Ensure equal opportunity
- ✦ Foster an atmosphere of teamwork and mutual respect
- ✦ Motivate, empower and foster creativity and innovation
- ✦ Facilitate and manage local and international career opportunities



SOCIETY AT LARGE – WE WILL:

- ✦ Strictly apply the highest ethical standards
- ✦ Respect and care for the environment
- ✦ Strive to be a good corporate citizen



OUR CORE SERVICES



ELECTRICAL AND INSTRUMENTATION ENGINEERING SERVICES

TREXM specializes in process control optimization via electrical and instrumentation engineering (E&I) services. We have been involved in instrumentation projects from design, specification, selection and supply to installation, calibration, commissioning, maintenance and modification of existing plant and equipment.

Our services are tailored to match client's specific needs, consistent with international standards and our hands-on approach ensures prompt delivery and high level of customer satisfaction.

E&I SYSTEMS ENGINEERING DESIGN ENGINEERING

- ✦ Develop Control & Instrumentation (C&I) system architecture, hardware, software, and applications
- ✦ Develop P&IDs
- ✦ Design Process Control Logic (PCL)
- ✦ Develop detailed specifications and drawings
- ✦ Estimate construction costs
- ✦ Develop procedures for Maintenance of Plant Operations (MOPO) during construction

CONSTRUCTION AND STARTUP

- ✦ Field inspections of C&I and electrical work
- ✦ Factory tests, calibrations, and loop checkout
- ✦ DCS/PLC programming/configuration testing
- ✦ Multimedia electronic O&M manuals
- ✦ Preparation of standard operating procedures
- ✦ As-built documentation
- ✦ Training

INSTALLATION SERVICES

- ✦ Rotating Equipment: (turbines, compressors, pumps) installation, servicing, and diagnostic solutions.
- ✦ Plant equipment skids
- ✦ E&I support services on the skid
- ✦ Calibrations of bi-directional or uni-directional

PROVER LOOP

- ✦ Prover tank
- ✦ Pulse counter
- ✦ Routine maintenance check.

CALIBRATION AND RE-CERTIFICATION SERVICES

- ✦ Hydraulic field instrument devices
- ✦ Pneumatic field instrument devices
- ✦ Electronic field instrument devices

WELL HEAD HOOK-UP SERVICES

- ✦ Hook up, pre-commissioning and commissioning of well head platform
- ✦ ESD and fusible Loop instrumentation
- ✦ Loop test and trip test for well head Instrumentation
- ✦ Instrument hook-up services for well head pneumatic control systems
- ✦ Instrument hook-up services for well head Control Panel (WHCP).



METERING AND MEASUREMENT SOLUTIONS

TREXM is a channel partner to Baker Hughes General Electric-Measurement and Controls product line, offering a suite of flow meters, products and services covering:

- ✦ Liquid & Gas Flow Metering solutions (for production operations, allocation metering, leak detection and custody transfer): for Upstream, Mid-stream and Downstream
- ✦ GE -Flare Meters (BHGE has the largest installed base of flare metering products across Africa) – we offer procurement, installation and maintenance services
- ✦ Liquid flow meters for: process, custody transfer, allocation and Leak detection
- ✦ Gas flow meters for: steam, process, custody transfer and flare.

Our flow meters are provided in any of the three varieties: wetted/ (in-line), clamp-on and portable versions.

Thus, **TREXM** helps our clients to succeed in complex operating environments, cut across the following flow application streams.
Liquid/Gas Flow Meters for Upstream Applications

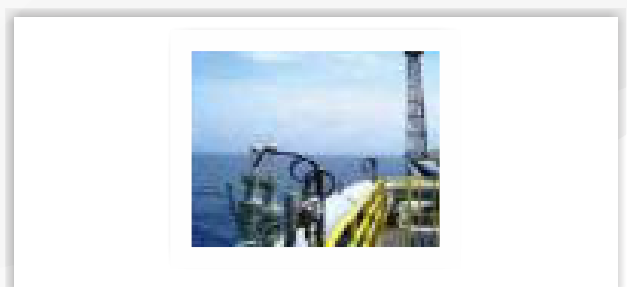
- ✦ Hydrocarbons (Liquid & Gas)
- ✦ Custody transfer
- ✦ Well testing
- ✦ Production Allocation
- ✦ MPFM Net Oil / water cut/ gas
- ✦ Natural gas gathering
- ✦ Natural gas treating
- ✦ NGL processing
- ✦ Chemical treatment
- ✦ EOR injection / recovery
- ✦ Gas lift
- ✦ Compression & utilities
- ✦ Flare & Vapor recovery
- ✦ Liquid/Gas Flow Meters for Midstream and Downstream Applications
- ✦ Liquid custody transfer flow meter
- ✦ Liquid/Gas flow meters for allocation/monitoring
- ✦ Leak detection in partnership with ATMOS

VORTEX MASS FLOW METERS

TREXM's Multi-variable vortex flow meter with built-in flow computer for measuring volumetric flow, temperature, pressure, density, energy, and mass flow using a single meter

APPLICATIONS

- ✦ Ideal for high temperature and high velocity steam
- ✦ Power Generation— fuel and steam applications
- ✦ Industrial—HVAC, district energy management
- ✦ Commercial—building, campus and facility energy management
- ✦ Oil & gas—allocation of natural gas
- ✦ Petrochemical—mass balancing, reaction processes heating



SOFTWARE

- ✦ Flare.IQ Ultrasonic Flare Gas Software is a complete turnkey hardware and software solution to improve the control of
- ✦ The entire flare system and reduce the operational cost by optimizing the use of steam and supplemental gas flows.
- ✦ PanaView Flow Meter Interface Software allowing access to many product features from your compute



GAS AND MOISTURE ANALYZERS

- ✦ Tunable Diode Laser
- ✦ Moisture analysis from low ppm to percentage for hazardous areas installation.
- ✦ Sampling System
- ✦ For gas and moisture analysis
- ✦ Calibration System
- ✦ Hygrometer calibration equipment



SENSORS, PROBES AND TRANSDUCERS

TREXM vibration sensors, position sensors, speed sensors, pressure sensors and power sensors or transmitters, and rugged probes of various tip diameters and thread sizes/configurations.

Our sensor, probe and transducer solutions are built on a legacy of premier condition monitoring from heritage companies like Druck, Bently Nevada and Naxys and are designed to last even in the harshest industrial environments

- ✦ Vibration and Thrust
- ✦ Ultraviolet Flame Sensors
- ✦ Depth Level



PRESSURE TRANSDUCERS/TRANSMITTERS

- ✦ Acoustic Sensors
- ✦ Acceleration and Velocity
- ✦ Optical
- ✦ Proximity Probes



SPECIALTY ENGINEERED PRODUCT UNITS

METERING SKIDS

A Complete Solution for all fiscal metering requirements in Oil & Gas Industry

LEASE AUTOMATED CUSTODY TRANSFER (LACT) SKIDS

Design and installation of LACT units for client's, to ensure that each and every drop of crude oil and gas are carefully and accurately measured when it is being transferred from one party to another to ensure that everyone gets the compensation that they deserve.

Design, fabrication and installation of modular (skid mounted) crude oil and gas LACT units.

Skids offering a quick plug and play solution to ensure minimal disruption to the operation.

LACT/ACT skids providing precision measurement and quality control to ensure that merchantable oil is accurately measured at the point where ownership is transferred facility.

PRESSURE REDUCING METERING SYSTEM (PRMS)

TREXM's PRMS units are designed, built and installed to meet individual customer requirements and specifications. The typical scope of supply includes:

COMPLETE ENGINEERING PACKAGE

- ✦ Procurement and project management
- ✦ Station gas inlet line, including isolating coupling and inlet MOV
- ✦ Process equipment
- ✦ Instrumentation tubing between primary instruments.
- ✦ Supports where required to fix piping and tubing.
- ✦ Steel structures, ladders and platforms.
- ✦ Electrical, control and fire protection designs.
- ✦ Electrical, control and fire protection Sequence of Operation (SOO).
- ✦ Instruments, vents and drain connections
- ✦ Supply and installation on site of emergency shutdown switches (ESD's
- ✦ Control/power cables).
- ✦ Stainless steel equipment/instruments
- ✦ Coating, painting, packing and transport protection

SURGE RELIEF SKIDS

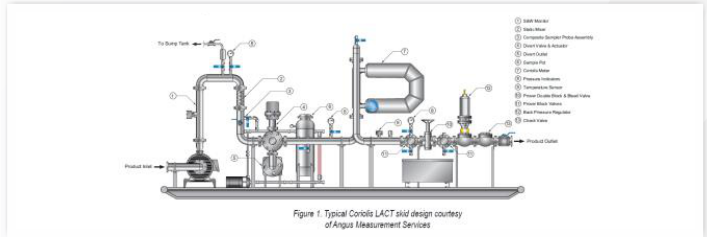
TREXM's surge relief skid units are designed, built and installed to meet individual customer requirements and specifications

- ✦ Complete engineering package
- ✦ Procurement and project management

FLOW METERING PANELS

TREXM's flow metering skids solutions and flow metering panel units are designed, built and installed to meet individual customer requirements and specifications

- ✦ Complete engineering package
- ✦ Procurement and project management

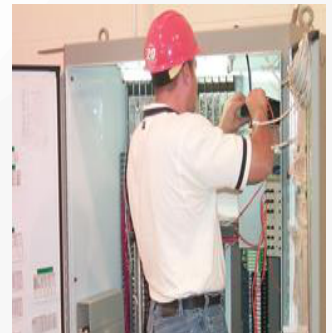
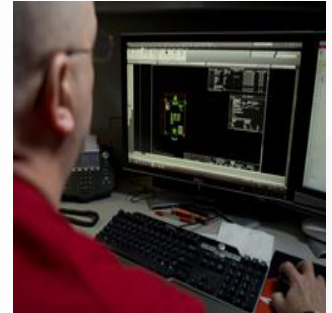


SYSTEMS INTEGRATION AND AUTOMATION

TREXM provides tailored automation solutions and integration of disparate systems to attain greater operational and process efficiencies

TREXM provides complete solutions or systems that involve:

- ✦ Evaluating/documenting of complex processes: identifying customer requirements
- ✦ Providing proposals appropriate to the requirements
- ✦ Implementing systems involving the following technologies:
 - ✦ Supervisory control and data acquisition (SCADA), human machine interface (HMI) systems
 - ✦ Distributed control systems (DCS), Programmable logic controllers (PLC)-based distributed process controls
 - ✦ Field devices, sensors, and instrumentation
 - ✦ Industrial networking to connect shop floor PLCs with SCADA workstations
 - ✦ Bridging process networks with business networks
 - ✦ Telemetry over radio, leased lines, CDMA/GSM, and POTS
 - ✦ Providing thorough and detailed documentation
 - ✦ Training personnel not only to operate the system effectively, but also to troubleshoot any problems in a systematic manner
 - ✦ Providing post-installation system quality assurance and support as necessary.
 - ✦ Rotating Equipment: (turbines, compressors, pumps) installation, servicing, and digital diagnostic solutions.
 - ✦ Asset Monitoring: Real-time asset monitoring via the Bently Nevada suite of products and services especially for rotating equipment and automation services. This optimizes the uptime of mission critical assets.



SAFETY AND SECURITY SERVICES

FIRE ALARM SYSTEM

TREXM designs and selects OEMs for Fire & Gas safety projects. We supply parts, install and commission the most suitable fire alarms (detection, notification & control) system as per projects, by selecting the right sensors/detectors (flame, smoke, heat, combined, gas), Fire Alarm Control panel, Call Points/Pull -Stations and a wide range of Suppression Systems.

GAS DETECTION AND CONTROL SYSTEM

Our team installs gas detection and control systems with project specific considerations, we install gas detectors depending on clients' interest and also select best products for Hazardous areas. We install gas systems that do not only alarm on gas detection but are also capable of taking certain control actions such as gas shut-off shut down of certain processes

SECURITY SYSTEM

We supply parts, install and maintain Access Control Systems, CCTV Surveillance System, Intrusion Detection & Control System, Perimeter/Electric Fencing, Metal Detector, Bomb Detector Systems, Time and Attendance System and many more.



POWER ENGINEERING SYSTEMS

PROTECTION AND CONTROL

- ✦ Building and retrofitting power protection and control systems
- ✦ Supplying MCCs, protection Relays, Circuit Breakers, Voltage Transformers etc.
- ✦ EXM designs and selects OEMs for Fire & Gas safety projects.

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- ✦ Asset Monitoring: Real-time asset monitoring via the Bently Nevada suite of products and services especially for rotating equipment and



CATHODIC PROTECTION SYSTEMS

TREXM provides full design, service, equipment, materials and personnel for Cathodic Protection systems and commissioning

TREXM designs and selects OEMs for Fire & Gas safety projects

CATHODIC PROTECTION DESIGNS

- ✦ Field Surveys
- ✦ System Specifications and Designs
- ✦ Plans and Detail Drawings
- ✦ Power Engineering Systems

INTERFERENCE CONTROL SYSTEMS

- ✦ Bond Stations
- ✦ Auxiliary Drainage Systems
- ✦ AC Interference Mitigation
- ✦ DC Interference Mitigation
- ✦ Fault Current Protection

SYSTEM MATERIALS AND CONSTRUCTION

- ✦ Conventional Groundbeds
- ✦ Deep Anode Groundbeds
- ✦ Distributed Anode Systems
- ✦ Cathodic Protection Test Stations

POWER SUPPLIES

- ✦ Transformer – Rectifiers
- ✦ Solar Power Systems
- ✦ Thermoelectric Generators



INSPECTION AND TESTING SERVICES

TREXM offers quality inspection and testing services to support and optimize clients operations. TREXM operates across the under-listed

- ✦ service areas:
- ✦ Asset Integrity Audit and Flaws Remediation
- ✦ Assets Integrity Monitoring using intrusive or non-intrusive methods
- ✦ Equipment Certification
- ✦ Non-Destructive Testing
- ✦ Rope access service that offers safe inspection, testing and structural surveys at heights or in areas where access is difficult.
- ✦ Critical Power and Lighting
- ✦ Alternative Energy Solutions
- ✦ Electrical Network Modelling & Analysis
- ✦ Power Testing and Commissioning



TREXM - FABRICATION FACILITIES

HOUSTON FABRICATION YARD

- ✦ 38,000 Square facility which includes 2x10 ton overhead cranes and is located on 2 acres
- ❖ ASM EU and R stamps to Fabricate & Repair pressure vessels
- ❖ ASM E Section VIII Div. 1
- ❖ Rigorous Safety, QA/QC Standards
- ❖ All Equipment Test-fit and Hydro-tested Prior to Shipment



NIGERIA FABRICATION YARD

TREXM has a strategic partnership with a Fabrication Yard in Warri that is situated on the river front side on the Express way. The Total area is 32 000 m2 and has:

- ✦ 350 m2 of office space
- ✦ 170 m of marine facilities (jetty and slipway)
- ✦ 1800 m2 of Pre fabrication Workshops
- ✦ Jetty of 160 Meters length with water draft up to 7 mts



OUR CLIENTS

UPSTREAM



GAS & POWER COMPANIES



DESIGN / EPC COMPANIES




OUR PARTNERS



GE
Measurement & Control

CONTACT US


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