

# ESSEX LLOYDS BROCHURE

**Multi-Technical  
Services & Solutions**



إسكس لويڤس انجنيئرنگ سروسز  
**Essex Lloyds**  
Engineering Services



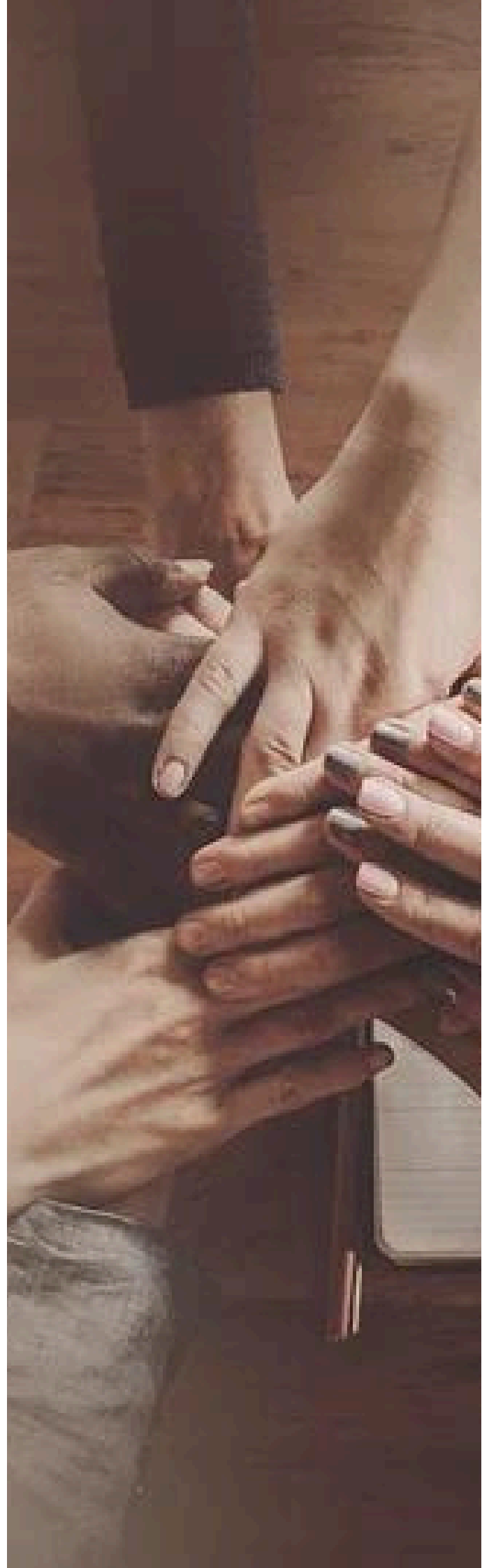
# Who we are?

## MISSION

Essex Lloyds Engineering Services is committed to provide technically excellent, innovative smart solutions and studies, offering engineering services throughout the project lifecycle for the benefit of our customers to meet their operational and business objective in terms of sustainability, profitability, reliability and safety.

## VISION

Essex Lloyds Engineering Services aspires to be a globally recognized engineering concern consistently delivering excellence in offering service with comprehensive solutions through building robust client loyalty, adopting optimal engineering methodologies, empowering effective communication and endorsing proactive planning.





**ESSEX LLOYDS IS IMS CERTIFIED  
BY BUREAU VERITAS**

**ISO 9001 / ISO 14001 / ISO 45001**

**ISO 9001** is defined as the international standard that specifies requirements for a quality management system (QMS).

**ISO 14001** is an international standard for designing and implementing an environmental management system(EMS).

**ISO 45001:2018** is one of the International Standards for Occupational Health and Safety.

**WE ARE ICV CERTIFIED HAVING  
SCORE OF 11.18**



# OUR BUSINESSES

- Support for Oil & Gas EPC contracts
- Installation & Commissioning Support Services
- Preservation Services
- Equipment Reliability
- Electrical Testing Services & Electrical Equipment Supplies
- Variable Frequency Drives
- Chiller & Cooling Tower Services & parts supplies
- Energy Audits & Efficiency Improvements
- Engineering Services
- NDT
- Safety Studies
- PPM Services (Pumps, Motors, Panels)
- Mechanical Maintenance & Overhauling
- Lubrication Management
- Engineering Consultancy & Project Management
- Instrumentation Supplies, rentals & services
- Industrial Gas Chromatograph/ Analyzers
- Data Acquisition Services & Supplies
- Environmental Monitoring
- MEP, Consumables & other services & supplies



# **SUPPORT FOR OIL & GAS EPC CONTRACTS**

## **STATIC**



- Static Equipment Erection
- Torquing & Tightening
- Cleaning (Mech, Hydro jetting, Chemical)
- Supply, installation, testing & commissioning of pipe line.
- Piping replacement
- Welding fabrication / Weld build up / Weld repair
- Valves replacement (PSV, Control Valves, etc.)
- NDT services
- Preservation & Protection Services
- Tank Maintenance
- All types of Pressure Testing
- QC package preparation
- Supply of specialized manpower (Welding, Piping, API, Painting, NDT - QC)



# **SUPPORT FOR OIL & GAS EPC CONTRACTS**

## **ROTARY**

- Installation of Pump / Compressor
- Pump / Compressor Alignment Services
- System Supply, Commissioning & Troubleshooting
- Vibration Analysis, Dynamic Field Balancing, Workshop Balancing of Rotors
- Turbine Lube Oil filtration for treating varnish, particle & moisture to reach ISO cleanliness level.
- Pump & Motor Overhauling
- Motor Rewinding
- Laser Alignment
- Geometric Alignment
- Lubrication Monitoring System, Handling products
- Shaft Voltage Monitoring
- Gear Box Overhauling
- Air & Gas Leak Detection
- Shaft / Bearing replacement
- Operational Deflection Shape



# COMMISSIONING & INSTALLATION SUPPORT SERVICES



We provide commissioning & installation support for:

- Valves
- Pumps
- Motors
- Panels and
- Process Instrumentation



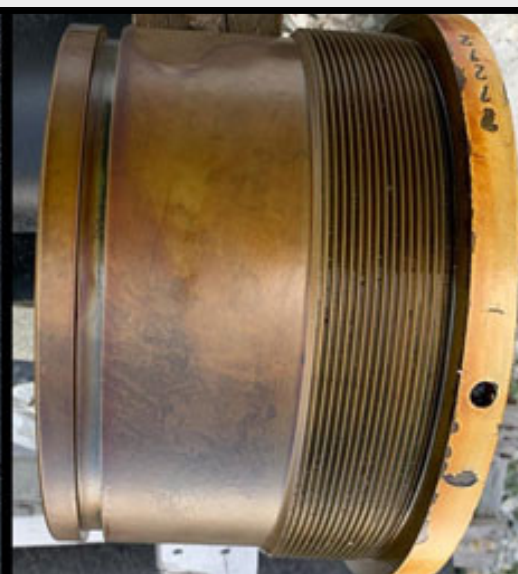
# PRESERVATION SERVICES



## With Traditional Preservation Corrosion still Happens.

Leveraging the expertise of our esteemed partners, Deva Preservmetals from Singapore, we specialize in employing cutting-edge technologies to safeguard and preserve your valuable assets.

TECHNOLOGIES	APPLICATIONS	PRODUCTS
Advanced VCI (Volatile Corrosion Inhibitors)	Production Units	Internal Preservation
Special Coatings	Modular	External preservation
Film Forming	Supply & Support vessel	Anti Corrosive Paints
Restoration	Tanker	Restoration
	Shipyard	Degreaser
	Warehouse	Machining Solutions



# EQUIPMENT RELIABILITY

## OUR SERVICES IN EQUIPMENT RELIABILITY

- Vibration Data Collection & Analysis
- Ultrasound Data Collection & Analysis
- Shaft Alignment
- Belt Alignment
- Balancing
- Motor Current Signature Analysis
- Varnish Removal & Filtration Services
- Valve Pass & Steam Trap Monitoring
- Thermography
- CM of Static Equipment
- Operational Deflection



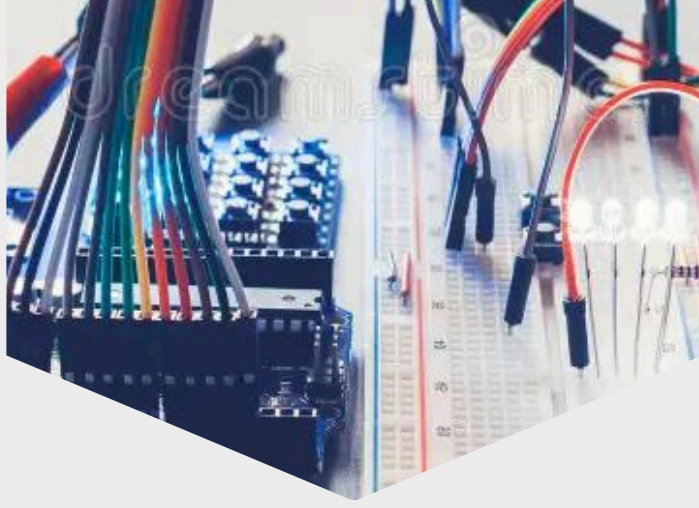
## PRODUCTS WE OFFER IN EQUIPMENT RELIABILITY

- Vibration Analyzers
- Accelerometers & Proximity probes
- Ultrasound Devices
- Laser Alignment Kits
- Lube/ Transformer oil Filtration Systems
- Breathers
- Oil Condition Monitoring
- Motor Condition Monitoring System



acoem





# ELECTRICAL TESTING SERVICES & ELECTRICAL EQUIPMENT SUPPLIES

## SERVICES

- Lightning Protection System Verification and Earth Pit Testing and certification
- Testing and troubleshooting of all types of electrical LV/HV (up to 132 kV) equipment including transformers, switch gears, panels, relays etc.
- Partial Discharge Monitoring System services
- Condition Monitoring of Sub-stations
- Cable / Jointing / Replacement and Termination up to 132 KV
- Servicing/maintenance of RMUs, transformers and reactors, including cables termination, primary / secondary HV bushings checks, tap-changers, oil leaks repairs, topping up of oil, reconditioning and reclamation of used oil for RMU, transformer oil filtration
- Thermal Imaging of Electrical Systems like transformers and troubleshooting
- Cable Splicing and Termination of all electrical cables
- Transformer Testing
- Switchgear Panel Testing
- Motor & Generator Testing
- Cable Testing
- Harmonic Analysis & Power Quality Analysis

## PRODUCTS

Transformers  
Motors  
UPS  
Cables  
Various Electrical equipment



# VARIABLE FREQUENCY DRIVES

## We represent ABB and offer a whole range of VFD's

- Dedicated drive solutions for industries such as HVACR, water and wastewater, elevators and escalators.
- Purpose-designed software features for added value to your business.
- User interfaces that speak your language.
- Energy efficiency features that help you save and manage energy.

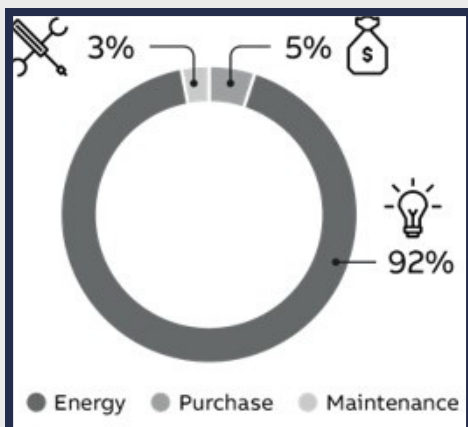


Essex Lloyds offers ABB VFD's & we can help you improve plant energy efficiency



## Improving Energy Efficiency Using VFD's

Main elements of life cycle costs for a mechanically controlled pumping system



92% of lifecycle cost is contributed by energy losses.

Use the right VFD's for your systems to improve energy efficiency of your system.

- Nearly 70 percent of all electrical energy in industry is used to power motors.
- Lowering CO<sub>2</sub> emissions and increasing energy efficiency is critical for our planet, but also for ensuring stable and productive industry operations.
- We offer a wide portfolio of ABB developed fit-for-purpose low and medium voltage AC and DC variable speed drives.
- The VFS's control the speed and torque of motors that could increase energy efficiency up to 80%.
- Add a Drive to the Motor, ensure accurate industry operation, reduce stress on machines, optimize speed and lower energy consumption.
- Use Energy Efficiency Calculators

# CHILLER & COOLING TOWER SERVICES & PARTS SUPPLIES

## Services we offer are

- Cooling Tower repairs
- Pump, Motor & panel Maintenance
- Chiller & Cooling Tower Assessment
- Water & Air Balancing

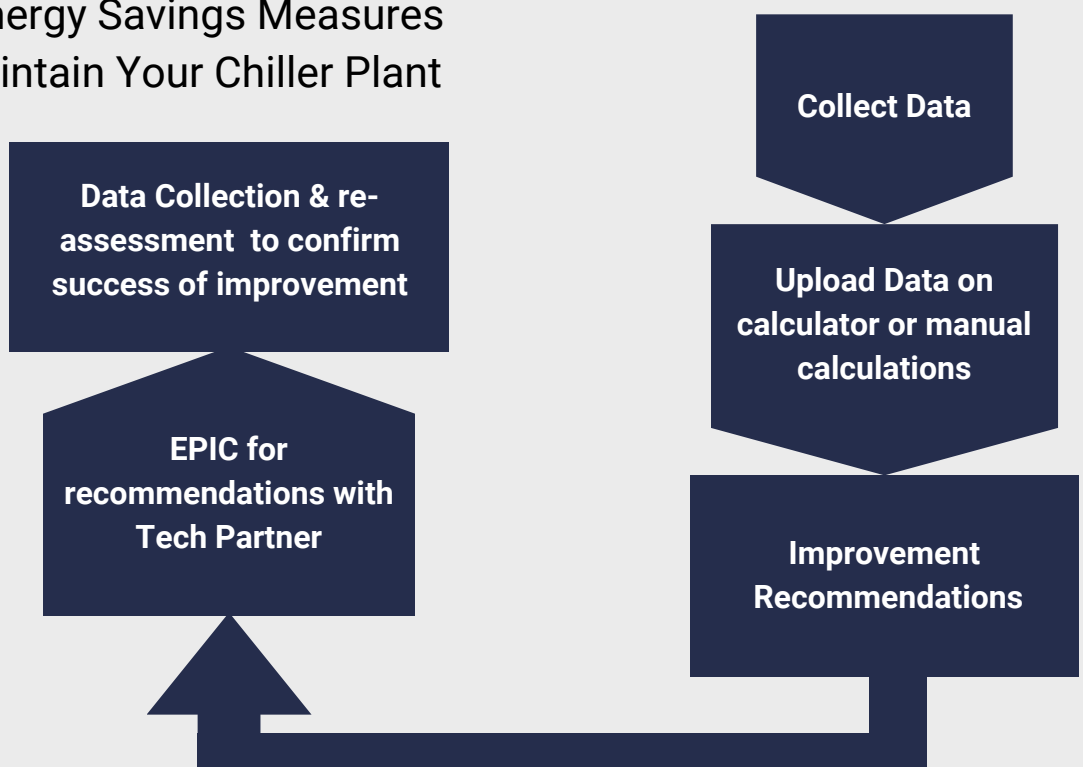
## Improving Energy Efficiency of Chiller Plants



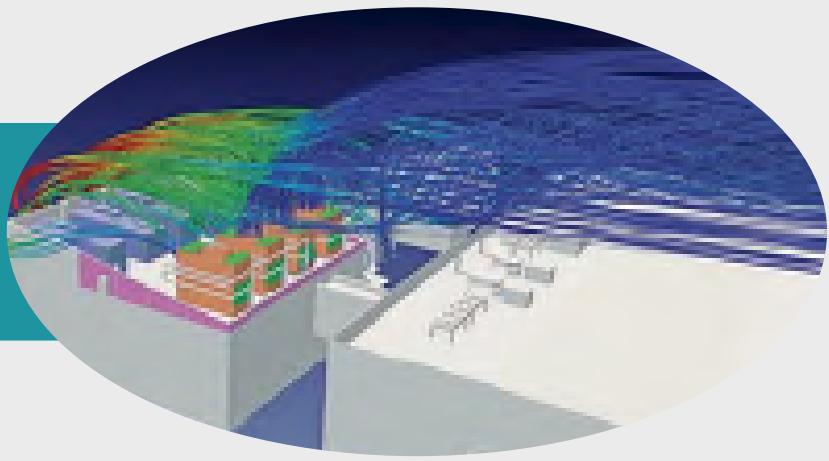
- HVAC systems consume around 70% of a base building's energy usage
- 25-35% of energy is consumed by Chillers producing chilled water for air conditioning.
- Energy Audits of Chillers and cooling towers help to understand the current conditions of the plant, make improvements and reduce energy losses thus reducing the carbon footprint and achieving high performance

## How to improve energy through energy audits

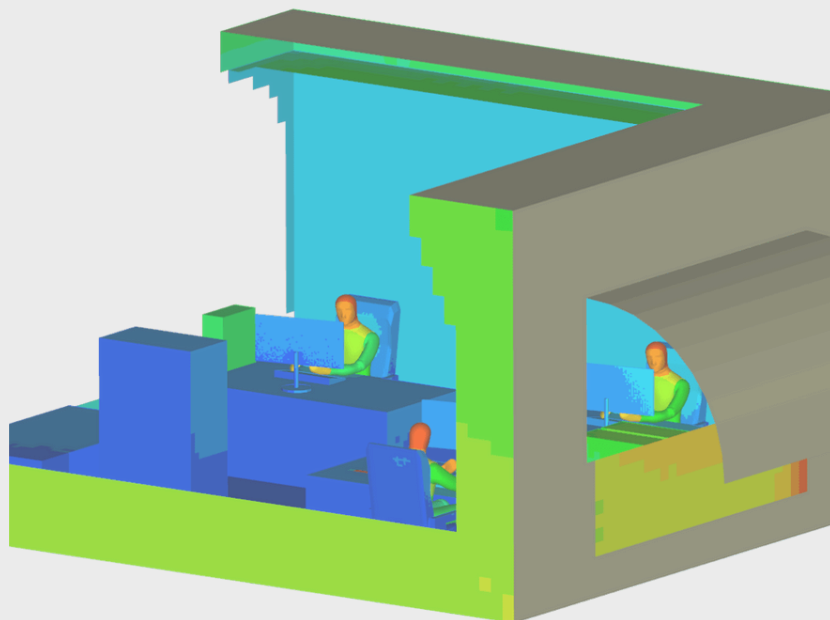
- Assess Current situation of your plant
- Implement Energy Savings Measures
- Monitor & Maintain Your Chiller Plant



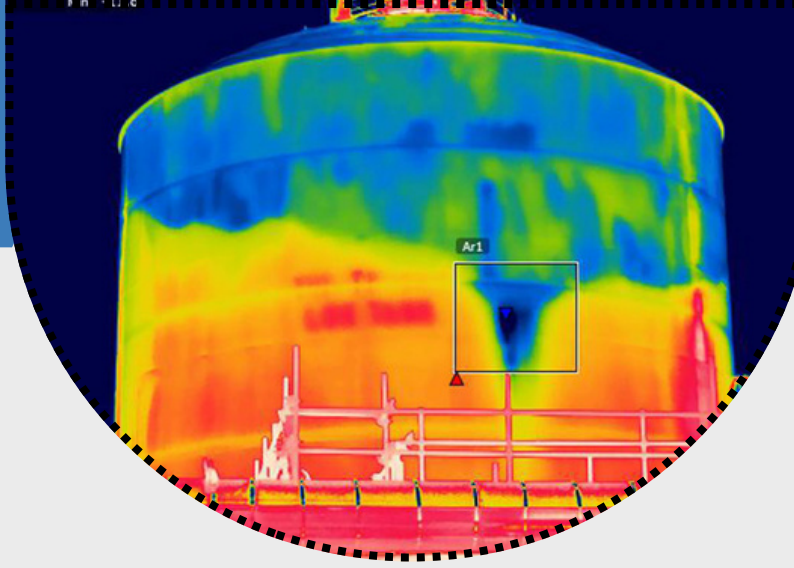
# ENGINEERING SERVICES



- Finite Element Analysis ( FEA)
- API 579 Fitness for Service (FFS) Analysis
- Computational Fluid Dynamics (CFD) Modeling
- Thermal Comfort Analysis
- Thermal Energy Storage Tank (TES)
- Cooling Tower / Chiller Yard CFD study
- Transformer / generator room Ventilation CFD Study
- Wind Impact CFD study
- Smoke/Fire Modeling
- Evacuation Modeling
- Design Verification
- Pipe Stress Analysis & Support Design
- Surge Analysis
- Seismic Analysis
- Structural Stress Analysis
- Stack Effect Study
- Hydraulic Analysis
- Vibration Analysis



# NDT



- Ultrasonic Testing (UT)
- Ultrasonic Thickness Gauging (UTG)
- Time-of-flight diffraction ultrasonics (TOFD)
- Phased array ultrasonic testing (PAUT)
- Magnetic Particle Testing (MT)
- Liquid Penetrant Testing (PT)
- IR/ Thermography Inspection (Electrical / Mechanical)
- Magnetic Flux Leakage (MFL)
- Eddy Current Testing (ET)
- Remote Filed Eddy Current Testing (RFET)
- Internal Rotary Inspection System (IRIS)
- Alternate Current Field Measurement (ACFM)
- Advanced Ultrasonic Backscatter Technique (AUBT)
- Acoustic emission testing (AET)
- Positive Material Identification (PMI)



## SAFETY STUDIES

**We provide services in the field of safety & environmental studies.**

## Services in Safety Studies include:

- Hazard & Operability Studies (HAZOP)
- Hazard Identification (HAZID)
- Hazard & Effect Register (H&E)
- MAH Register
- Environmental Aspects Identification (ENVID)
- Safety Integrity Levels assessment, Verification & Validation
- Simultaneous Operations (SIMOPS)
- Matrix of Permitted operations (MOPO)
- Project Health Safety & Environmental Review (PHSER)
- Bow-tie Analysis
- Fire Explosion and Risk Analysis (FERA)
- Quantitative and Qualitative Risk Assessment (QRA)
- Escape Evacuation and Rescue Analysis (EERA)
- Thermal Radiation and Flare/Vent Dispersion Studies
- Hazardous Area Classification (HAC) Reviews
- GLC Modelling
- Consequence Analysis



# PPM SERVICES FOR PUMPS, MOTORS, PANELS

## PANELS

Monthly, Quarterly or half yearly maintenance that includes inspecting of wiring, checking grounding, checking worn or damaged cables & cords, replace outdated parts etc.

## MOTORS

**Static Tests:** Motor terminal connections, mounting bolts, belts and pulleys, motor/fan bearings greased, and all surfaces cleaned.

**Dynamic Tests:** Vibrations noted, fan assembly noises noted and visual checks for any abnormalities.

## PUMPS

Monthly, Quarterly or half yearly checks that includes vibration checks, leakage checks, replacement of bearings & seals, checking for overheating etc.



## MECHANICAL MAINTENANCE & OVERHAULING

We have solved some of the most chronic issues in our customer's cooling tower fans & gear boxes as well as pumps.

We have the capability to do repair & overhauling of various equipment like:

- Pumps
- Motors / Rewinding of Motors
- Transformer repairs & refurbishment
- Cooling Tower Fans
- Blowers
- Gear Boxes
- Valves



# LUBRICATION MANAGEMENT - SERVICES

## Lubrication Services we provide includes:

- Varnish & Moisture removal services.
- Varnish Mitigation
- Oil sampling & analysis.
- Oil Flushing
- Oil purification
- Tank integrity testing
- Tank decontamination
- Particulate removal
- Field Varnish & particulate testing
- Tank tightness testing
- Installation, Start-up, & Commissioning Services
- Maintenance & Repair Services
- Condition monitoring and field-based corrective action to enhance your fluid system reliability
- Comprehensive facility audits



# LUBRICATION MANAGEMENT- PRODUCTS

## **DESCASE** *LUBRICATION SOLUTIONS AT VARIOUS STAGES*

### **STORAGE**

- LT-LMS Bulk Storage
- Mobile Utility Cart
- Drum Adapter Kit
- Tote Adapter Kit

### **TRANSFER**

- Oil Transfer Containers
- Mobile Utility Cart
- Drum Filter Cart
- Top-Off Tank
- Drum Topper
- Panel Units
- Filter Cart

### **FILTRATION**

- Portable Filtration
- Dedicated Filtration
- Vacuum Dehydration
- Filter Elements
- Adapter Kits

### **VISUAL OIL ANALYSIS**

- 3-D BullsEye
- Oil Tank Sight Glasses
- Oil Level Gauge Indicators
- Oil Sight Glass Level Monitor

### **CONDITION MONITORING**

- Connected Solutions
- Particle Counter
- Sensors



### **BREATHERS**

- COLORASSIST™ High-Capacity Breather
- Standard Series Desiccant Breathers
- Extended® Series Desiccant Breathers
- VentGuard™ Desiccant Series Breathers
- ACM / ACL Breathers
- KL Breathers
- TDB Series Breathers
- HydroGuard® Breathers
- Extreme Duty Breather
- Rebuildable Steel Breathers
- Non-Desiccant Breathers
- Connected Breathers

### **LUBRICATION TRAINING COURSES**

- Learning Management System (LMS)
- Advanced Oil Analysis (MLA II)
- Advanced Machinery Lubrication (MLT II)
- Practical Machinery Lubrication (MLT I and MLA I)

# LUBRICATION MANAGEMENT- PRODUCTS

## OIL FILTRATION SYSTEMS (OFS)

- Vacuum Dehydration Oil Purification Systems
- Varnish Removal Systems
- High Flow Filter Skids
- Bearing Lube Oil Systems
- Filters
- Handheld Systems



## SDT LUBEXPERT

- To Grease the bearings
- To Monitor and optimize greasing while manually greasing
- ON-Guard Online auto bearing lubrication system.



# ENGINEERING CONSULTANCY & PROJECT MANAGEMENT

**We offer comprehensive engineering consultancy services spanning from FEED to handover, covering conceptual design, detailed engineering, construction, and pre-commissioning.**

## **Our expertise includes:**

- Process design
- Static equipment design
- Pipeline design
- Instrumentation engineering
- Telecommunication systems
- Automation engineering
- Electrical design engineering
- We specialize in:
  - Document management and tracking
  - Utility Calculations Reports
  - Stress and Surge Analysis Reports
  - Electrical Load List
  - UPS Sizing Calculation
  - Cable Sizing Calculations
  - Protection and Material Schematics
  - Relay Coordination Study Reports
- Additionally, we provide:
  - Technical and commercial bid evaluations for vendor products
  - Support for ongoing asset management services
  - Review and approval of vendor engineering and contractor deliverables
  - Preparation of project closeout reports, project dossiers, SPIR, and asset management services.

# INSTRUMENTATION SUPPLIES, RENTAL & SERVICES

Essex Lloyds supply a wide range of equipment including flowmeters, transmitters, valves, gauges, and more. Our offerings encompass various makes and models to suit diverse project requirements. As part of our commitment to providing cutting-edge solutions, we proudly represent Coltraco, UK, offering their state-of-the-art Ultrasonic Flowmeters and Ultrasonic Level devices. With these advanced technologies, we ensure the highest standards of accuracy, reliability, and efficiency in flow measurement and level monitoring applications.



## INDUSTRIAL GAS CHROMATOGRAPHS & GAS ANALYZERS

We are partnered with Orthodyne, Belgium, as their trusted representative for Industrial Gas Chromatographs and Gas Analyzers. These cutting-edge analytical instruments cater to various industrial applications, ensuring precise and reliable gas analysis. To further enhance our service offerings, we provide dedicated local support in Qatar through Essex Lloyds for these analyzers. With this collaboration, we are committed to delivering top-notch solutions and comprehensive support to our clients in their gas analysis requirements.

**He, Ar, N<sub>2</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>, H<sub>2</sub>, CH<sub>4</sub>, NH<sub>3</sub>**



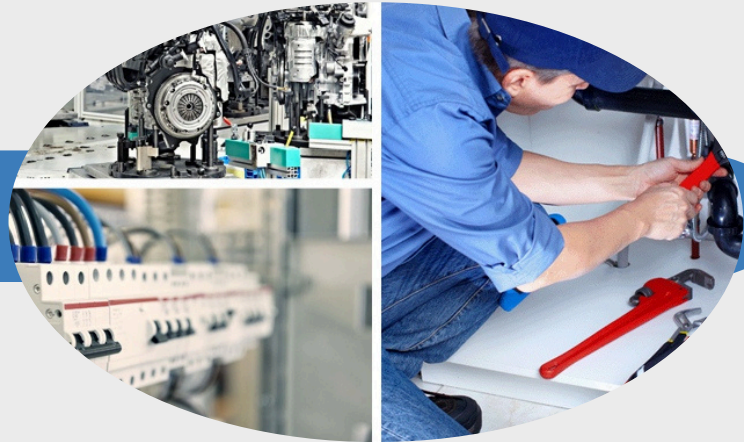
**ORTHODYNE**  
GAS CHROMATOGRAPHY

# DATA ACQUISITION



- Are you seeking to gather essential data from your facility for in-depth studies or analyses?
- Essex Lloyds is here to assist you in acquiring the necessary data to drive informed decisions and optimize operations.
- Leveraging IMC, Germany's state-of-the-art Crosnos Flex modular system.
- We offer a customizable solution tailored to meet your specific requirements.
- With its flexibility and adaptability, Crosnos Flex can be seamlessly modified to align precisely with your needs.
- Ensuring accurate and comprehensive data acquisition.
- Trust Essex Lloyds to empower your facility with the insights needed to excel in today's dynamic industrial landscape.

## MEP



- We undertake all kinds of Mechanical, Electrical, Plumbing supplies and services
- Supply, installation, testing, and commissioning of the MEP projects
- Efficiently install and integrate MEP systems into your facility, ensuring seamless operation and optimal performance.
- Thoroughly test and commission MEP systems to guarantee functionality, reliability, and compliance with industry standards and regulations.

•Benefit from comprehensive maintenance services to keep your MEP systems running smoothly, coupled with responsive support to address any issues promptly.

# ENVIRONMENTAL MONITORING

**Environmental monitoring encompasses observing and characterizing an environment to quantify the impact of activities, with results analyzed statistically and published in a comprehensive risk and impact assessment report.**

In CEMS(Continuous Emission Monitoring System)	Opacity Monitors, Particulate monitors, Dust Monitors, Marine Smoke Monitors
Air Quality Monitoring	Air particulate monitors, Nephelometers, Aerosol Monitoring, Air Quality Gas Monitors, Green house Gas Monitors
Dust & Blast Monitoring	Blast Monitors, Dust Samples, Real Time Dust Monitors
Tunnel Sensors	Tunnel Visibility Monitors, Tunnel gas Monitors, Tunnel Air Flow Monitors, Tunnel luminance monitors
Noise & Vibration Monitoring	Noise & Vibration Monitoring Stations, Acoustic Cameras, Noise & Vibration Software, Dosimeters

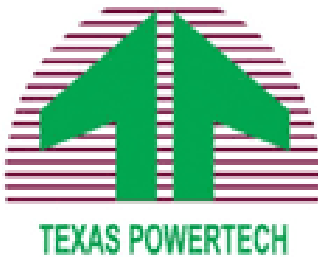
# **SUPPLY OF CONSUMABLES & OTHER PRODUCTS & SERVICES**

- Discover a comprehensive range of solutions and services tailored to meet your industrial needs.
- From consumables such as welding rods and brazing rods to essential products like pumps, motors, and instrumentation.
- Our services extend to:
  - Motor rewinding
  - Installation and commissioning of motors, generators, and valves
  - PLC installation, commissioning, and revamping
- Additionally, we provide:
  - Manufacturing control panels
  - Conducting repairs and revamping
  - Performing load tests for cranes

## **TRAINING**

We conduct Vibration, ISO & ASNT Level 1, 2,3 courses  
We also conduct Level 1 Ultrasound Certification Training,  
Lubrication Training courses from Descase.

# CLIENTELE





ONLINE, OFFLINE, WIRELESS VIBRATION ANALYZERS,  
LASER ALIGNMENT KITS



ACCELEROMETER, PROXIMITY PROBES, HARDWARE



Ultrasound Solutions

ULTRASOUND DEVICES



MOTOR CONDITION MONITORING SYSTEMS



BREATHERS, OIL FILTRATION SYSTEMS, BULK  
STORAGE TANKS, PARTICLE COUNTER AND MUCH  
MORE



VARIABLE FREQUENCY DRIVES



ULTRASONIC FLOWMETERS, ULTRASONIC LEVEL  
DEVICES ETC.



INDUSTRIAL GAS CHROMATOGRAPHS & ANALYZERS



VARIOUS TYPES OF TRANSFORMERS



DATA ACQUISITION SYSTEMS



PRESERVATION SERVICES & PRODUCTS

For more information, please contact us at

**ESSEX LLOYDS ENGINEERING SERVICES**

**P.O Box: 39143|Arkkan Building | Office Number 203-204| Block  
16 | Second floor**

**Barwa Commercial Avenue| Doha | Qatar**

**Mob: +974-31222945 | Tel: +974-4450 9374**

**Fax: +974-4435 7712**

**Web: [www.essexlloyds.com](http://www.essexlloyds.com)**



اسيكس لويذر للخدمات الهندسية  
**Essex Lloyds**  
Engineering Services