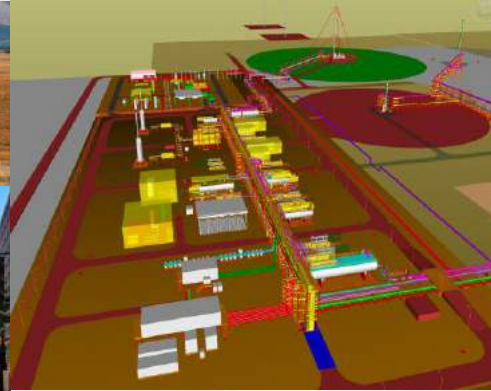




LOAD LINE ENGINEERING (Pvt.) Ltd.

Adding Value Through Engineering



Contents

1. [LLE At A Glance](#)
2. [Detailed Engineering Services](#)
3. [Discipline Level Expertise](#)
 - a) [Civil And Structural Engineering](#)
 - b) [Process Engineering](#)
 - c) [Mechanical Design And Engineering](#)
 - d) [Piping Design And Engineering](#)
 - e) [Electrical, Instrumentation & Control Design](#)
4. [Services To Construction Contractors / Fabricators](#)
5. [Engineering Value Centre](#)
6. [Commercial / Residential Buildings](#)
7. [Projects](#)
8. [Certifications](#)

LLE AT A GLANCE

LLE Supports its clients in completing their complex industrial and commercial projects successfully, appreciating value of time with no compromise on Quality.

We at LLE provide End to End Project solutions to our customers in **Oil & Gas, Power, Water Treatment, Cement, Petrochemical and commercial sectors** across all engineering disciplines like Process, Mechanical, Piping, Electrical, Instrumentation and Civil/Structures - no matter the scale, complexity or location of their project.

What makes us different is the way we work, the way we manage our resources to be commercially attractive and technically competent to our demanding clients

LLE is registered under the laws of Securities and exchange Commission of Pakistan (SECP)

OHS Policy

At LLE the health, safety and security of Humans and the environment have absolute priority over cost and productivity while commitment to a continuous improvement of a culture of intervention is second to it.



Quality Policy

We at LLE take level of client satisfaction as key indicator of project success with a commitment to adopt and establish procedures to do the things right at first time and continuously improve our system to suite our business and client needs.

Engineering Design Services

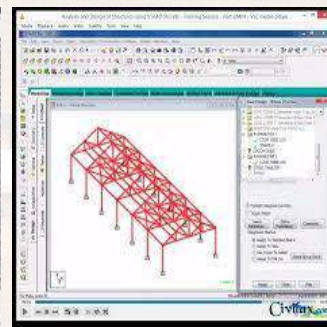
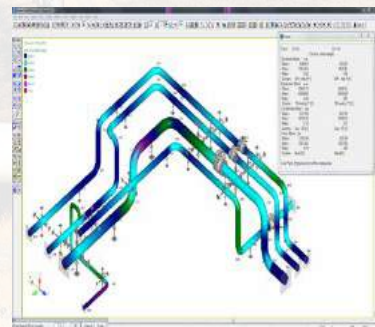
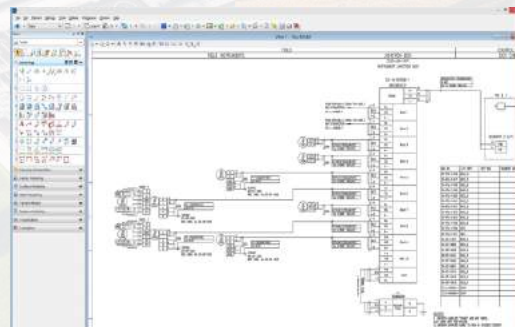
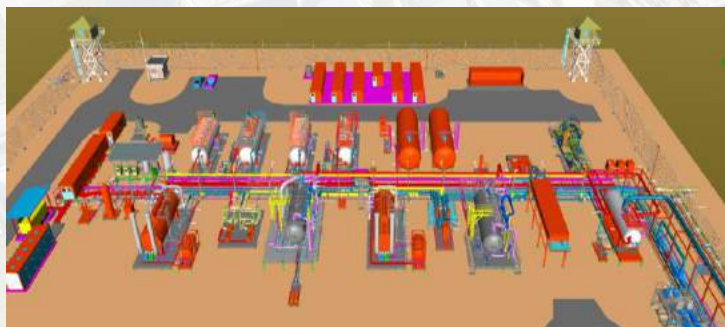
LLE provides detailed engineering design services for Oil & Gas facilities, Power Plants, water treatment plants, pipelines (Oil, Gas Water), Oil storage Terminals and Pumping Stations.

Our engineering unit combines practical experience with the latest advancements and utilization of technical innovation to provide a range of services including consultancy, Detail engineering design, construction supervision and inspections for comprehensive control on Quality.

LLE also provides services as offshore value centre to multinational engineering consultant companies by providing engineering manpower to work under direct supervision of their lead engineers.

LLE supports EPCC contractors during bidding stage performing proposal stage engineering including:

- ✓ Development of equipment Data Sheet
- ✓ Development of Material Requisitions (MRs) and evaluation of vendor offers
- ✓ Development of Civil, Electrical, Instrument, Structure, and Piping MTOs for cost estimation

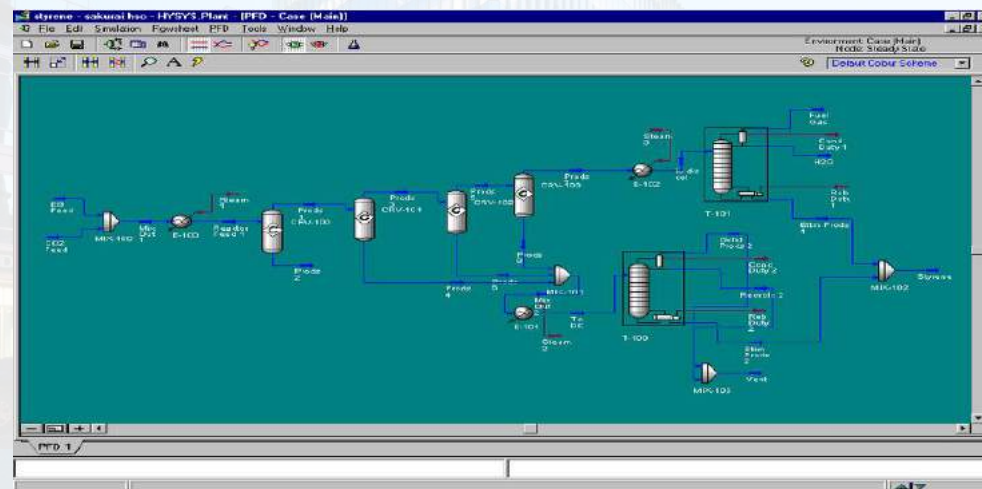


Discipline Level Expertise

Process Engineering

LLE is committed to delivering the best possible process design solution understanding that clients operate in extremely comparative business environments which require optimized design solutions. Using latest design software and international codes and standards LLE provides following services.

- Conceptual and FEED studies
- Process simulation
- Process Optimization studies
- Plant debottlenecking
- Complete process design for new plants
- Heat and material balance calculation
- Process flow diagrams (PFDs)
- Utility Flow diagrams (UFDs)
- Piping and instrumentation diagrams (P&IDs)
- Equipment sizing
- Hydraulic calculations (line sizing and pressure drop calculations)
- Process datasheets and specifications
- Flare and blowdown calculations



Discipline Level Expertise

Piping Design and Engineering

Well designed and efficiently laid piping systems reduce the amount of space required for setup, increase accessibility, enhance safety and are easier to maintain. LLE visualises piping layouts using AutoCAD software prior to installation to ensure optimum design. LLE also performs piping stress analysis in accordance with international codes and standards using the latest version of CAESAR II software. Our services include

- Piping Design Specifications
- Material Specifications
- Stress Analysis
- Pipeline Alignment Sheets
- Design Validation and Optimisation
- Plot Plans
- 3D Modelling
- Detailed Equipment and Piping Layouts

- Piping Isometrics
- Material Take-Off
- Valves And Special Items Datasheets
- Design Of Pipe And Spring Supports
- Review Of Technical Documents Submitted By Vendors

Discipline Level Expertise

Mechanical Design and Engineering

LLE provides detailed and accurate mechanical designs to ensure required efficiency and operational cost effectiveness. Our expert engineers can prepare equipment specifications, mechanical datasheets and material requisitions for:-. Conceptual and FEED studies

- Pressure Vessels (ASME and U-Stamped)
- Tanks (API and non-API)
- Pumps (API and non-API)
- Compressors
- Process Packages
- Flare Packages
- Heat exchangers (S&T and PHE)

We also provide services to evaluate technical offers from vendors (TBEs) and correctness / completion of their documents (VDR). LLE can provide services to review vendor documents including

- General arrangement drawings
- Equipment Data Sheets
- Material Selection
- Inspection and testing plans
- Procedures and test reports
- Vendor document records

Discipline Level Expertise

Electrical, Instrumentation & Control Design

- **Design Of Basic Process Control Systems (Bpcs)**

Specifications For The Design, Configuration, Installation And Commissioning Of Distributed Control Systems (Dcs) And Bpcs And Accessories Including System Cabinets, Marshalling Racks Operator Interfaces, Printers, Power Supplies And All Other Peripherals

System Drawings Including System Architecture, Loop Diagrams, I/O Lists And Panel Drawings.

- **Electrical Power System Design**

Load Calculations

Power cable Sizing and Layouts

Earthing Calculations and layouts

Lighting Calculations and Layouts

- **Design Of Safety Instrumented Systems (Sis)**

Preparation Of Shutdown Philosophy For Sis Systems As Per International Codes And Standards

Specifications For Dcs Based Combined Safety Systems (Css) And Emergency Shutdown Systems

Layout Drawings For Shutdown Valve Locations And Cause And Effect Diagrams As Per The Shutdown Philosophy.

Design of LV/MV switchgears and E-Houses

Specifications, Datasheets and MRs for Electrical equipment like Generators, Motors etc,

Discipline Level Expertise

Electrical, Instrumentation & Control Design

LLE has extensive experience in electrical, instrumentation and control design and engineering including design review, validation and optimisation.

- **Analysis And Establishment Of Electrical, Instrumentation And Control Systems:**

- Project Basis Of Design (Bod) And Specifications
- Computer Aided Modelling Of Lighting, Earthing And Load Calculations
- Plant Layout Drawings Showing Instrument Location, Cable Trays And Trenches, Junction
- Boxes And Lighting
- System Drawings Including Instrument Interlocking Diagrams, I/O Lists, System Architecture And Loop Diagrams

- Electrical Load Calculations
- Electrical Single Line Diagrams
- Electrical Reports Such As Short Circuit Analysis And Dynamic Stability

- **Design Of fire And Gas Systems:**

- Specifications For The Design, Manufacture, Supply And Testing Of Building fire Alarms□
- Material Take-Off And Bills Of Quantities
- Test Procedures And Installation Guidelines
- Selection Of Instruments And Instrument Cablings

Discipline Level Expertise

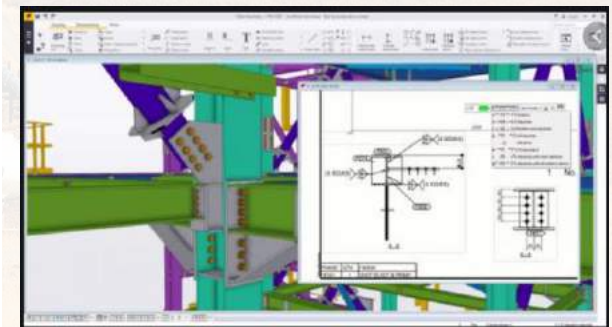
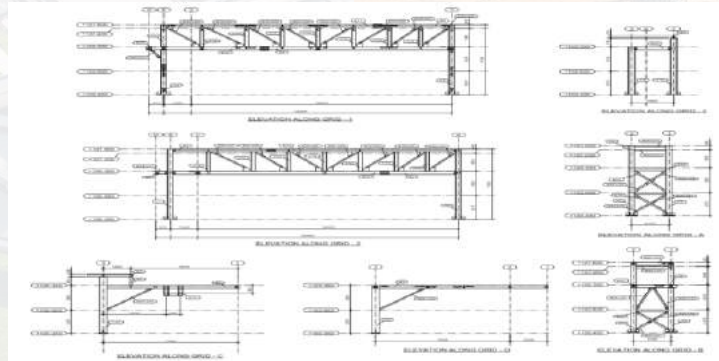
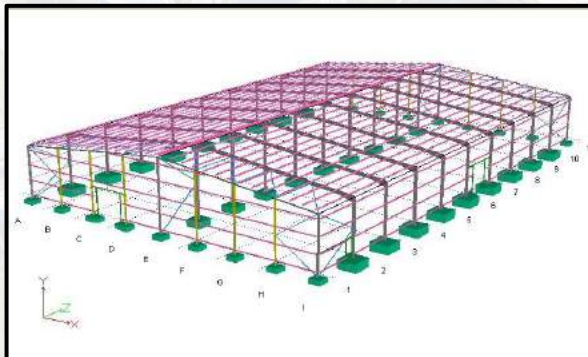
Civil and Structural Engineering

• Steel and Concrete Structure Design

- Industrial Sheds (Workshops, Warehouses, Compressor Sheds, Generator Sheds etc)
- Buildings like Control rooms, office complexes, Accommodation Camps
- Building Services like Electrification, Plumbing and HVAC
- Piperack
- Maintenance platforms
- Pipe Supports
- Pedestrians Bridges

• Structure Detailing

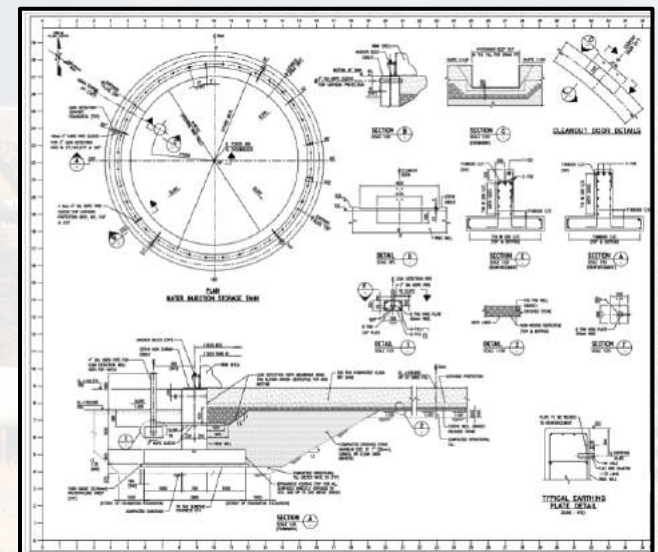
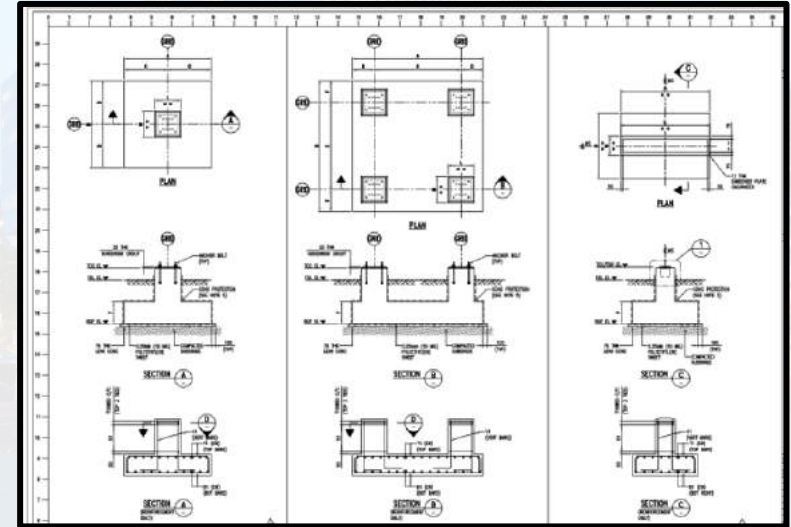
- Detailing / Shop drawing for Steel structure using TEKLA Structure
- Connection design
- Member drawings, fabrication assemblies with connection details and Material Take-offs (MTO)



Discipline Level Expertise

Civil and Structural Engineering

- Foundations / Underground Facilities Design
 - Soil Investigation Specification and Execution Management
 - Storage Tanks Foundations (Ring Wall, Soil pad)
 - Pressure Vessel Foundation
 - Heat Exchanger Foundation
 - Heavy Pump and Compressor foundations with dynamic analysis to control vibration limits
 - Underground storage Tanks
 - Underground Drainage Facilities



Services to Construction Contractors / Fabricators

LLE Provides engineering support services to fabricators and construction contractors no matter the scale of the services required. Such services include:-

- **Civil / Structure**

- Shop / Fabrication drawing for all types of Steel Structures with design of Welded and bolted connections
- Structural design (supported with calculation reports) for sheds, pipe Racks, Pipe Supports
- Structure design for piping and equipment skids
- Architectural drawings for Industrial building
- Detailed design of construction camps and temporary facilities
- Building Structure design and detail drawings (concrete frame)

- **Mechanical, Process and Piping**

- Pressure vessel design
- Design and drawings for steel tanks
- Design of complete piping skids
- Piping Isometric Drawings
- Design of water treatment packages

- **Drafting Services**

- As-built drawings
- Drafting PDFs or hard copies to AutoCAD
- Bulk drafting for industrial and Commercial projects

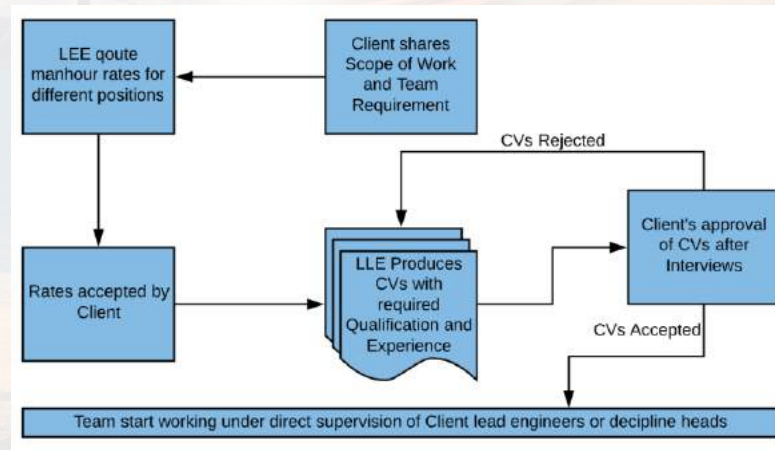
Engineering Value Centre

LLE provides services as a low cost engineering centre for EPCs or engineering consultants in Middle East and Europe. We provide engineering staff with required level of qualification and experience to work under direct supervision of Lead engineers / Discipline Heads of our clients in a very attractive budget.

Services of Lead engineers, Senior Engineers, Designers and drafts man for following are provided by LLE

- Process Engineering
- Mechanical Engineering (Static & Rotating)
- Piping and Pipeline Engineering
- Civil and Structural Engineering
- Electrical Engineering

- Instrumentation and Control Engineering
- HSE Experts
- Quality Management
- Project Engineers and Project Management Experts

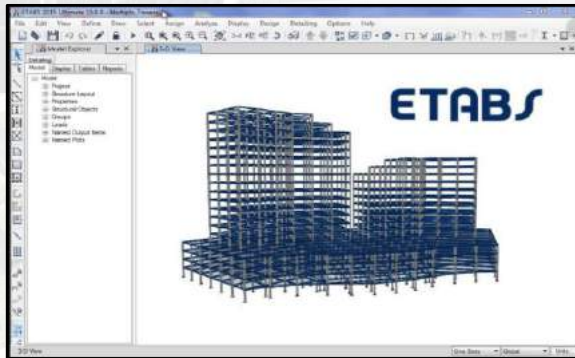


LLE currently working as Offshore Value Centre for Maplin Engineering UK.

Commercial / Residential Buildings

In Building Sector LLE provides services for

- Highrise Commercial Building
- Residential Towers
- Housing Projects
- Medical Facilities



LLE's expertise in building sector includes;

- Architectural Plans and details
- Structural Design and details
- Electrical, Mechanical and Plumbing Design (MEP)
- Material take-off for construction tendering
- Structural detailing (Shop drawings) for construction.
- Structural design for steel structure building, frames, Shelters, transmission towers etc,



LLE RECENT PROJECT LIST

Project	Client	End-User
Detail Engineering for EPCC Service for Sewage Water Intake Project	Al-Yarmuk Iraq	EBS Petroleum Co., Ltd (East Bagdad South (EBS) oilfield Iraq
Detail Engineering for EPCC Service for PTF Desalter Installation Project	Al-Yarmuk Iraq	EBS Petroleum Co., Ltd (East Bagdad South (EBS) oilfield Iraq
Bid Engineering for Flare Gas Recovery System Package for Majnoon Oil Field	Maplin Engineering UK	KBR/BOC Iraq
Detail Engineering for EPCC Services for PTF Upgrading	Al-Yarmuk Iraq	EBS Petroleum Co., Ltd (East Bagdad South (EBS) oilfield Iraq
Design of 150 Unit Housing Colony for Nasiriyah, Including Sewage Treatment, Water Treatment, Gas Transmission line	Al Bilal Group Iraq	Baker Hughes
ASME workshop (40m x 20m) Structural Steel Building	IKAN Engineering Services	IKAN Engineering Services Pakistan
Steel Structure Pedestrian Bridge (50m Long)	IKAN Engineering Services	City Government Abbottabad Pakistan
Steel Structure Building (50m x 30m) for Bhasha Site Office	IKAN Engineering Services	IKAN Engineering Services Pakistan
Structural Support System for 3-Phase Mobile Separator	IKAN Engineering Services	ENI Pakistan
Structural Skid design for Diesel Storage Tank	IKAN Engineering Services	Pakistan Tobacco Company
Structural and MEP design of Multistory Media House Building	Nadeem Architect Lahore	Khabrain Media House Pakistan
Structural Rehabilitation / Addition of Floors for City View Hotel 57 Roman Road London E3	Maplin Engineering UK	
Structure Design of Park Lane Hotel Building (12 Floors) 6/7 Park Lane, London E15 2JG	Maplin Engineering UK	
Heat Exchanger Coils Stress Analysis (first, second and 3 rd Stage)	MESCOS Engineering (Pakistan)	CHEMTED LLC USA
Stress Analysis of Compressor supporting Structure mounted on Separator (2 Projects)	MESCOS Engineering (Pakistan)	CHEMTED LLC USA

EXPERIENCE LIST

Our team members have been involved in execution of following projects;

Oil and Gas

- Detail Engineering for PTF desalter Installation at EBS oil Field Iraq
- Pre-Commissioning and Commissioning as a PACO (Process Automation and Control Optimization) Senior Engineer for BGC in Basra (WQ 7 and WQ 8), Iraq.
- Supporting CSU team as a PACO (Process Automation and Control Optimization) Senior Engineer for BGC in Basra (Khor Al-Zubair (KAZ), WQ 7 and WQ 8), Iraq.
- Supporting Commissioning team for SAT of BMS in Basra (WQ 8), Iraq.
- Supporting as a Construction and Supervision Team for different projects for BGC in Basra (Khor Al-Zubair (KAZ)), Iraq.
- Supporting as a Construction and Supervision Team of Tank Gauging System for BGC in Basra (Umm Qasar), Iraq.
- Supporting as a Construction and Supervision Team of for BGC in Basra (CS6, CS8 and NGL Plant), Iraq
- Consultancy Services for Selection, Evaluation, Facility Design and Installation Supervision of Turbo-Compressors (Sui Southern Gas Company Limited).
- FEED of Iran Pakistan Gas Pipeline Project (783Km long, 42" diameter, 96.6barg Pressure and 30 MMCMD Capacity), (Inter State Gas Systems)
- Detailed Engineering and Project Management of Surface Facilities of Disposal Well in Zam Zama Gas Field, BHP Billiton Pakistan.
- FEED for Surface Facilities of Disposal Well in Zam Zama Gas Field, BHP Billiton Pakistan.
- EPC Project of "25,000 BBLPD of Early Production Facility" NIGERIA (Sterling Oil Exploration & Energy Production Company).
- EPC project of Bulk Liquid Chemical Terminal - Phase-I, Arabian Chemical Terminals, KSA.
- EPC Project Management of Bulk Liquid Chemical Terminals, Phase-II (Arabian Chemical Terminals, KSA).

EXPERIENCE LIST

Our team members have been involved in execution of following projects;

Oil and Gas

- Review of Liquid Transmission System from SFGCS to Flash Vessel; Open Pit, Condensate Settling Tanks and Effluent Disposal Well (PPL Pakistan).
- Consultancy Services for Pressure Vessel design study / review & designing of pipe support and structure at purification plant, Sui Gas Field (PPL Pakistan).
- Complete Design of Oil Depot (OILCO Petroleum (Pvt) Limited).
- Third Party Assessment of Newly Constructed Oil Terminal in Pakistan (HASCOL Petroleum Limited).
- Third Party Assessment of Newly Constructed Oil Terminal in Pakistan (Exceed Petroleum Limited).
- Third Party Assessment of Newly Constructed Oil Terminal in Pakistan (Pakistan State Oils).
- Design Reviews of Internal Floating Roof Tanks of Turkmen Gas - Turkmenistan.
- Design & Detailed Engineering of External Floating Roof Tank (40,000 US bbls), according to API-650 - 11th Edition, of POL Pakistan.
- Design Review and approval of Storage Tanks for Phase - II Expansion Facilities for ENOC Lubricants and Grease Manufacturing Plant LLC (ELOMP) in Fujairah, UAE according to API-650 - 11th Edition.
- Detailed Design Engineering for WASIT Gas Project, Saudi Arabia.
- Detailed Design Engineering, Procurement and Construction for MANIFA Project, Saudi Arabia.
- FAT for MANIFA Project, Saudi Arabia and Bahrain.
- Detailed Design Engineering, Procurement and Construction for JCP Project, Saudi Arabia.
- INTOOLS (SPI) Standard Form Development, Japan.
- Detailed Design Engineering and Construction for DQR Project, Vietnam
- FAT for DQR Project, Singapore.
- Detailed Design Engineering for ZARGHUN Project, Pakistan.
- ILD Preparation for HARADH Project, Saudi Arabia.
- ILD Preparation for HAWIYAH Project, Saudi Arabia.

Our team members have been involved in execution of following projects;

Civil / Architectural and Infrastructure

- Consultancy Services for Detailed Engineering Design of Segregation and Composting Facility Including Resident Construction Supervision at Sahiwal (Urban Sector Planning & Management Unit Private Limited).
- Planning, Designing, and Detail Supervision for Modification of Main building of State Bank of Pakistan at Mall road Lahore.
- Architecture plan, detailed tender documents and provision of consultancy services for construction of building of Cotton Ginning Research & Training Institute Multan, Ministry of Industries and Textile Pakistan.
- Design & Detailed Engineering of Water Storage Tank (817 m³), according to AWWA D100 Standard, of Berg Engineering UAE.
- Design Review and approval of Thermal Energy storage tank (PK2-TT-B2-01 & 02) for Qatar Olympic Committee, Qatar according to AWWA D100-11.

DAS CERTIFICATION



Occupational Health & Safety Management System

Certificate of Approval

This is to certify that the OHSMS of
Load Line Engineering Private Limited
104C-PGEHF Shahkam Chouk Lahore
Pakistan

Has been assessed and found to meet the requirements of

ISO 45001:2018

This certificate is valid for the following scope of operations

Provision of Engineering Design Services which includes performing engineering calculations and producing drawings.

Authorised by:

Stan Wright
Director

Date of Certificate Issue: 20 September 2021

Certificate Valid Until: 19 September 2022

Surveillance audit before 20 August 2022. Certified since 20 September 2021.
This certificate is the property of SN Registrars (Holdings) Limited and remains valid subject to satisfactory annual Surveillance audits.

SN Registrars (Holdings) Limited
Registration House, 22b Church Street,
Rushden, Northamptonshire,
NN10 9YT, UK
Tel: +44 (0) 1933 381859
Email: enquiries@dascertification.co.uk
Web: www.dascertification.co.uk
Company Number: 07639067

Certificate Number: DAS 93719201/19/O Rev: 001



This Presentation Certificate is not a legal document and cannot be used for legal purpose. D-PK Q Rev C3
For Certificate Verification Please visit: <http://www.das.com.pk/online-certificate-verification.php>

DAS CERTIFICATION



Quality Management System

Certificate of Approval

This is to certify that the QMS of
Load Line Engineering Private Limited
104C-PGEHF Shahkam Chouk Lahore
Pakistan

Has been assessed and found to meet the requirements of

ISO 9001:2015

This certificate is valid for the following scope of operations

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Authorised by:

Stan Wright
Director

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DAS CERTIFICATION



Environmental Management System

Certificate of Approval

This is to certify that the EMS of
Load Line Engineering Private Limited
104C-PGEHF Shahkam Chouk Lahore
Pakistan

Has been assessed and found to meet the requirements of

ISO 14001:2015

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