

JOB DESCRIPTION AND RESPONSIBILITIES

SOS ENGINEERING DESIGN SERVICES

POSITION:

**LEAD ENGINEER: MECHANICAL/ PIPING;
CIVIL/STRUCTURAL; PROCESS' ELECTRICAL; PROCESS
AUTOMATION, CONTROL & OPTIMISATION (PACO); PIPELINE**

QUALIFICATION

- (a) Have 15 years' experience of which twelve (12) years must be of practical engineering design experience (designer/ drafting level is not included) appropriate to the discipline in the offshore and onshore oil and gas industry
- (b) At least three (3) years shall have been spent in the overall coordination and supervision of an engineering design team
- (c) Have a recognised Bachelors or preferably Masters degree or equivalent qualification in his/her discipline. In addition, he/she shall be a member of a recognised institution and a registered Professional Engineer/ Chartered Engineer e.g. MIE (Aust), IPENZ, MIMech E, MICE, IEM, etc.

Shall be conversant and have working knowledge with the relevant international standards and code of practices. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).

TASKS AND RESPONSIBILITIES

- (a) Represent CONTRACTOR in Co-ordination with COMPANY Discipline Heads/ Project Team for monitoring of COMPANY Standards and quality.
- (b) Review any design work carried out by third parties (vendors), and to participate in, some instances lead HAZOP, HAZID, IPF, reliability studies, Safety and Facilities Technical audits.
- (c) Establish the actual (as opposed to design) capacities/capabilities of existing field facilities in order to identify potential bottlenecks and scope for optimisation.
- (d) Identify potential applications for new technology.
- (e) Actively develop local staff to fulfil engineers and managing role.
- (f) Environmental aspects (ISO14001) of oil and gas design.
- (g) Safety aspects of design in relation to the project cycle e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
- (h) Quality Assurance and Control requirements of the design process.
- (i) Life cycle cost analysis.

Prepare engineering, construction and material estimation, schedule, resource planning and update resource capacity planning half yearly.

SOS ENGINEERING DESIGN SERVICES

POSITION:

SENIOR MECHANICAL STATIC/PIPING ENGINEER

QUALIFICATION

- (a) Hold a recognized degree in mechanical engineering or equivalent and have minimum 10 years of mechanical design engineering practical experience in the offshore and onshore oil & gas industry
- (b) Have 7 years' experience in the upstream oil and gas facility design and preferably two (2) years in a leading/ coordination role in multi-discipline team.
- (c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (d) Have a comprehensive knowledge of: -
 - Piping design, fabrication and erection including welding procedures, non-destructive and hydrostatic testing procedures.
 - Vessel design, specification and fabrication procedures.
 - Current vendor equipment and specifications for piping systems (e.g. valves, strainers, flanges etc.).
 - Plant and Equipment installation, commissioning and maintenance procedures.
 - Relevant International Standards and Codes of Practice normally used by the Mechanical Engineering field in the Oil and Gas industry such as API, ANSI, ASME, BS, IP.
- (e) Have sound appreciation of: -
 - Environmental aspects (ISO14001) of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
 - Quality Assurance and Control requirements of the design process.
 - Oil and Gas process design.
 - Pumps and rotating machinery design and selection.
 - Material selection for different process and environmental conditions.
 - Integrity issues on piping and static equipment

SOS ENGINEERING DESIGN SERVICES

POSITION: MECHANICAL /PIPING ENGINEER

QUALIFICATION

- (a) Hold a recognized degree in mechanical engineering or equivalent and have minimum 10 years of mechanical design engineering practical experience in the offshore and onshore oil & gas industry
- (b) Have 7years' experience in the upstream oil and gas facility design and preferably two (2) years in a leading/coordination role in multi-discipline team.
- (c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (d) Have a comprehensive knowledge of:-
 - a. Piping design, fabrication and erection including welding procedures, non-destructive and hydrostatic testing procedures.
 - b. Vessel design, specification and fabrication procedures.
- Current V endor equipment and specifications for piping systems (e.g. valves, strainers, flanges etc.).
- Plant and Equipment installation, commissioning and maintenance procedures.
- Relevant International Standards and Codes of Practice normally used by the Mechanical Engineering field in the Oil and Gas industry such as API, ANSI, ASME, BS, IP.
- (f) Have sound appreciation of:-
 - Environmental aspects (ISO14001) of oil and gas design.
 - Safety aspects of design in relation to the project cycle ;e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
 - Quality Assurance and Control requirements of the design process.
 - Oil and Gas process design.
 - Pumps and rotating machinery design and selection.
 - Material selection for different process and environmental conditions.
 - Integrity issues on piping and static equipment

SOS ENGINEERING DESIGN SERVICES

POSITION: SENIOR CIVIL ENGINEER

QUALIFICATION

- (a) Hold a recognised Bachelors degree in Engineering relevant to their discipline and have a minimum 10 years (unless specified otherwise) of relevant practical experience (designer / drafting level is not included)
- (b) Have 7 years' experience in the upstream oil and gas facility design and preferably two (2) years in a leading/ coordination role in multi-discipline team.
- (c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (d) Have sound appreciation of: -
 - Environmental aspects (ISO14001) of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
 - Quality Assurance and Control requirements of the design process.
- (e) Be a member of a recognised institution and a registered Chartered Engineer, shall be knowledgeable in civil engineering software such as Staad Pro and other equivalent design software including soil analysis
- (f) Have practical experience in design and construction of civil engineering structures, including buildings, bridges, roads, storage tanks, drainage systems including design of marine civil infrastructure and dredging works for coastal and inland marine facilities.
- (g) Have practical experience in civil and architectural designs for all onshore infrastructure, and oil and gas facilities.
- (h) Have comprehensive skills and knowledge of: -
 - Design techniques in civil engineering
 - Construction methods
 - Relevant technical specifications

Codes of practice and specifications related to oil and gas industry

SOS ENGINEERING DESIGN SERVICES

POSITION: SENIOR STRUCTURAL ENGINEER

QUALIFICATION

- (a) Hold a recognised Bachelors degree in Engineering relevant to their discipline and have a minimum 10 years (unless specified otherwise) of relevant practical experience (designer / drafting level is not included)
- (b) Have 7 years' experience in the upstream oil and gas facility design and preferably two (2) years in a leading/ coordination role in multi-discipline team.
- (c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry but not limited to API, BS, AISC, DNV. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (d) Have sound appreciation of: -
 - Environmental aspects (ISO14001) of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
 - Quality Assurance and Control requirements of the design process.
- (e) Have practical experience in design and construction engineering, including offshore installation of jackets, decks, bridges and packaged units.
- (f) Have practical experience in the various analysis such as In place, lifting, load out, floatation, upending, dynamic and fatigue analysis for the green field structures. Detailed design, materials requisition, fabrication and onshore and offshore installation
- (g) Have a comprehensive skills and knowledge of: -
 - Design techniques in structural steel engineering including finite element analysis and associated computer software.
 - Structural integrity (re-)assessment of offshore structures (jackets and topsides, jack-ups), Includes implementation of state-of-the-art analysis techniques.
 - Feasibility studies for new structures or modifications to existing installations and/or infrastructure facilities. Conceptual designs & Cost estimates.
 - Design and fabrication detail drawings.
 - Codes of practice for structural steel work erection and welding applications.
 - Installation of jacket structures, piles, decks and modules.
 - Weighing procedures and structure center of gravity calculations.

Lifting equipment including offshore derrick barge cranes.

SOS ENGINEERING DESIGN SERVICES

POSITION: SENIOR PROCESS ENGINEER

QUALIFICATION

- (a) Hold a recognised degree in chemical engineering or equivalent and have minimum 10 years of relevant practical experience gained either with a Design consultant/Contractor or Operating Company, in the offshore and onshore oil & gas industry
- (b) Have 7 years' experience in the upstream oil and gas facility design and preferably two (2) years in a leading/ coordination role in multi-discipline team.
- (c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (d) Have sound appreciation of: -
 - Environmental aspects (ISO14001) of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
 - Quality Assurance and Control requirements of the design process.
- (e) Have comprehensive skills and knowledge of Process Simulation of Physical Fluid Properties.
- (f) Be familiar and be experienced in the use of the following Process Software:
 - Hysys/Unisim
 - Pipesim
 - FRED
 - HTFS/HTRI
- (g) As a minimum have the necessary sound Level of experience to undertake the following with minimum supervision:
 - Steady state modeling of Plant facilities and unit Processes using either HYSYS or Unisim. With ability to both optimise and translate results into design
 - Steady state modeling of multi-phase Pipeline Hydraulic systems. With the ability to evaluate, optimise and translate key flow assurance elements (e.g. Slugging, System liquid hold up, line and slug catcher sizing) into a Basis of Design.
 - Detailed knowledge of the basic data and phase behaviours; equations of states, phase envelopes of gas and oil components (C1-C6 and C7 +) H₂, CO₂, H₂S, H₂O; C₇ + characterisation.
 - Undertake studies to evaluate and identify system constraints/bottlenecks. Recommend and implement design for removal of the identified constraints (e.g. system capacity constraints)
 - Investigation of alternative process options, which might provide a step change improvement in capital cost and/or operating cost economic performance.
 - Optimise plant performance considering operating requirements and experience.
 - Conducting performance trials to validate process simulations and identify bottlenecks.

- Develop key parameters for monitoring/optimising plant performance.

(h) Have significant experience in Process design from Concept Design through to and inclusive of Detailed Design of the following Process unit operations and Key deliverables:

- Development of PFS/UFS, material balances, PEFS/UEFS (incl. Alignment of PFS/UFS, PEFS/UEFS with HSE aspects)
- Gas/Oil separation and dehydration systems (Incl. Sizing and selection of Gas/Oil separation & dehydration equipment).
- Stabilisation & Fractionation (incl. Sizing and selection of column reboilers and reflux systems for stabilisation and fractionation duties).
- Gas dehydration and conditioning (Incl. Selection of appropriate process technology for water and hydrocarbon dew point control and sizing major components).
- NGL/LPG processing.
- Gas Compression and artificial oil lifting (incl. Duty specification for compression, pumping, and turbo-expansion processes).
- Gas sweetening.
- Water treatment and Utilities.
- Relief, depressurising and disposal systems, including drains, vents and the quantification of dispersion and radiation effects.
- Development of Process Control and Safeguarding Philosophy and specifications.
- Development of Process material requirement and input to Material selection philosophy for different process and environmental conditions.
- Development of/and updating of Facility Hazardous Area Classification drawings, inclusive of Sources of release schedule.

(i) Have had significant exposure to HEMP processes, in particular:

- HAZOP and HAZID review participation, with responsibility for HAZOP/HAZID action close out and implementation in design.
- IPF review participation and input to IPF recommendation implementation into Key Process deliverables, namely PFSs/PEFSs/PSFS.

Specification and design of Process Shutdown, Emergency Shutdown and Instrumented Protective Function safeguarding systems

SOS ENGINEERING DESIGN SERVICES

POSITION: SENIOR ELECTRICAL ENGINEER

QUALIFICATION

- (a) Hold a recognised degree in electrical engineering or equivalent and have minimum 10 years of electrical and construction engineering practical experience in the offshore and onshore oil & gas industry
- (b) Have 7 years' experience in the upstream oil and gas facility design and preferably two (2) years in a leading/ coordination role in multi-discipline team.
- (c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (d) Have sound appreciation of: -
 - Environmental aspects (ISO14001) of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
 - Quality Assurance and Control requirements of the design process
- (e) Have a comprehensive knowledge of: -
 - Systems testing, commissioning or maintenance.
 - Generators, switchgear, transformers, motors, cables and other electrical equipment for high and low voltage systems.
 - Equipment installation and commissioning procedures
 - Power system and transient stability study.
 - Equipment sizing calculations and selection.
 - Requirements for electrical installation in hazardous areas.
 - Protective relay settings, equipment and testing.
 - PLC, SCS and software configuration plus communication networks.
 - Current international standards (IEC), Shell DEP's and statutory regulations, e.g. IEE Regulations, IP Code.
 - Fire and gas detection installations.
 - Control & automation system.
- (f) Telecommunications installation.
- (g) Cost analysis.

Lightning protective systems.

SOS ENGINEERING DESIGN SERVICES

POSITION: SENIOR PACO ENGINEER

QUALIFICATION

- (a) Hold a recognised degree in measurement and control or equivalent and have minimum 10 years of design instrumentation and control engineering practical experience in the offshore and onshore oil & gas industry in the areas of design, construction, testing, commissioning or maintenance (petrochemical industry experience is not considered)
- (b) Have 7 years' experience in the upstream oil and gas facility design and preferably two (2) years in a leading/ coordination role in multi-discipline team.
- (c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (d) Have sound appreciation of: -
- Environmental aspects (ISO14001) of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire & Gas mapping and risk analysis techniques.
 - Quality Assurance and Control requirements of the design process
- (e) Have a comprehensive skill and knowledge of: -
- Control and safeguarding philosophies and specifications
 - Design and installation of foundation fieldbus systems.
 - Process control and measurement principles.
 - Design and installation of pneumatic and electronic instrumented protective systems.
 - Design and installation of pneumatic and electrical control and/or monitoring systems including DCS, PAS and SCADA systems.
 - Design and installation of fire and gas detection and protective systems.
 - Design and installation of metering and monitoring.
 - Design and installation of QMI system.
 - Design and installation of instrument air and electrical distribution systems.
 - Design and installation of rotating equipment such as compressor/ generator systems.
 - Design and installation of process control valves and shutdown valves.
 - Requirements for selection and installation of electrical instruments in hazardous areas.
 - Calibration and testing of equipment and systems.
 - Installation standards and codes of practice.
 - IPF classification methodology and implementation.
 - INtools knowledge and has at least two (2) years as an Intools active user.
 - Instrument design software tools such as flow and valve sizing calculations.
 - Pneumatic, Hydraulic and electrical consumption calculations.
- (f) Have a sound appreciation of:
- Oil and gas process design.
 - Life cycle Cost analysis.

- Material selection for different process and environmental conditions.
- Ergonomics study and requirements.
- Industrial process control security and data communication
- Carried out IPF probability of failure on demand calculations.
- New technology.
- Hazardous area classification drawings development

Lightning protection and EMC zoning.

SOS ENGINEERING DESIGN SERVICES

POSITION: Discipline Engineers - Mechanical/Piping; Rotating Equipment; Materials, Corrosion and Welding; Civil/Structural; Process; Electrical; Process Automation, Control & Optimisation (PACO); Pipeline

QUALIFICATION

- a) Hold a recognised Bachelors degree in Engineering relevant to their discipline
- b) Have a minimum 7 years (unless specified otherwise) of relevant practical experience of which 5 years are identifiable in the relevant discipline engineering and design of upstream oil and gas facilities (Designer / drafting level is not considered).
- c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's). The roles and responsibilities of these engineers are to carry out the work allocated by the senior engineer.
- d) Have sound appreciation of: -
 - Environmental aspects of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire and Gas mapping, and risk analysis techniques.

Quality Assurance and Control requirements of the design process.

SOS ENGINEERING DESIGN SERVICES

POSITION: Discipline Engineers - Mechanical/Piping; Rotating Equipment; Materials, Corrosion and Welding; Civil/Structural; Process; Electrical; Process Automation, Control & Optimisation (PACO); Pipeline

QUALIFICATION

- a) Hold a recognised Bachelors degree in Engineering relevant to their discipline
- b) Have a minimum 7 years (unless specified otherwise) of relevant practical experience of which 5 years are identifiable in the relevant discipline engineering and design of upstream oil and gas facilities (Designer / drafting level is not considered).
- c) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's). The roles and responsibilities of these engineers are to carry out the work allocated by the senior engineer.
- d) Have sound appreciation of: -
 - Environmental aspects of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire and Gas mapping, and risk analysis techniques.

Quality Assurance and Control requirements of the design process.

SOS ENGINEERING DESIGN SERVICES

POSITION: SENIOR DESIGNER

QUALIFICATION

- (a) Hold a recognised qualification in engineering draughting, CGLI or equivalent
- (b) Have at least ten (10) years of practical experience as a designer in the specific discipline of which at least two (2) years shall have been spent in the overall coordination of a multi-discipline design office in the offshore and onshore oil and gas industry.
- (c) Be experienced in the Quality Control, requirements and general management of a multi-discipline design office.
- (d) Duties shall include: preparation of manhour estimates, detailed planning and scheduling for the draughting work to be carried out
 - preparing sketches/proposals for the designers and draftsman to develop into detailed design drawings
 - preparation of process flow scheme (PFS), process and engineering flow scheme (PEFS) cause and effect matrix, logic diagrams, general arrangement drawings, layouts, isometrics, etc.; and will be expected to carry out checks on the drawings produced by his section
 - make basic design calculations and must be familiar with both industry and Shell Standards and should have a sound working knowledge of Computer Aided Draughting (CAD), AutoCAD techniques, INtools, and be responsible for directing and coordinating the work for CAD
 - Supervision of the training/development of new trainee draftsman and students.

SOS ENGINEERING DESIGN SERVICES

POSITION: DESIGNER

QUALIFICATION

- (a) hold a recognised qualification in engineering draughting, CGLI or equivalent and have at least seven (7) practical experience as a designer in the specific discipline in the offshore and onshore oil and gas industry.
- (b) be knowledgeable in the Quality Control, requirements and general management of a multi-discipline design office.
- (c) Duties will include the following types of work:
 - Capable of preparing sketches/ proposals for the designers and draftsman to develop into detailed design drawings.
 - Fully understand the preparation of process flow scheme (PFS), process and engineering flow scheme (PEFS) cause and effect matrix, logic diagrams, general arrangement drawings, layouts, isometrics, etc.; and will be expected to carry out checks on the drawings produced by his section.
 - Required to make basic design calculations and must be familiar with both industry and Shell Standards and should have a sound working knowledge of Computer Aided Draughting (CAD), AutoCAD techniques, INtools, and be responsible for directing and coordinating the work for CAD.

Supervise the training/development of new trainee draftsman and students

SOS ENGINEERING DESIGN SERVICES

POSITION:

SENIOR PROCESS/ TECHNICAL SAFETY ENGINEER

QUALIFICATION

- (a) Has a recognised degree in any engineering discipline preferably in Chemical Engineering and related areas.
- (b) Have a minimum 10 years of relevant Technical Safety experience (designer / drafting level is not included).
- (c) Working knowledge of operations having worked with the operations department for various technical safety activities.
- (d) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (e) Have strong working experience of: -
 - Environmental aspects of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire and Gas mapping, and risk analysis techniques.
- (f) Quality Assurance and Control requirements of the design process

TASKS AND RESPONSIBILITIES

- (a) Support to Lead Technical HSE Engineer in persuading activities and proposals and to promote the capabilities of the group with internal and external Customers.
- (b) Support Lead Technical HSE Engineer to provide mentoring and coaching support to the group.
- (c) Carry out the Role of Senior Engineer in the discipline & focal point from discipline for the project / projects.
- (d) Cascade Lesson Learnt to the team members.
- (e) Liaison with other discipline Lead engineers on technical issues and engineering matters.
- (f) Maintains HSE focus within the team to ensure that safety requirements are included in design.
- (g) Ensure all design work conforms to the codes and standards used by the client, or to agreed industry standards.
- (h) Act as Focal Point Engineer for Quality Management, Design Integrity, Safety in Design, Budget and resources Management, Schedule Management, Scope of Work and Management of Change.
- (i) Responsible for maintaining work progress (budget, schedule) and raising change documentation where necessary.
- (j) Supervision of technical detail, budget and schedule of discipline design in Project work where requested by the Lead Discipline Engineer when required.
- (k) To take ownership to all design work.

SOS ENGINEERING DESIGN SERVICES

POSITION: **PROCESS/TECHNICAL SAFETY ENGINEER**

QUALIFICATION

- (a) Has a recognised degree in any Engineering discipline preferably in Chemical Engineering or related areas.
- (b) Have a minimum of 3 to 5 years of relevant Technical Safety experience (designer /drafting level is not included).
- (c) Working knowledge of operations having worked with the operations department for various technical safety activities.
- (d) Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry. It is preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEP's).
- (e) Have sound appreciation of: -
 - Environmental aspects of oil and gas design.
 - Safety aspects of design in relation to the project cycle; e.g. HAZID, HAZOP, HAZAN, IPF classification methodology and implementation, reliability studies, Fire and Gas mapping, and risk analysis techniques.
- (f) Quality Assurance and Control requirements of the design process.

TASKS AND RESPONSIBILITIES

- (a) Support Senior and Lead Technical HSE Engineer in planning of man hour budgets, schedules, manpower loadings and staffing requirements, by skill and experience, to satisfy project requirements and direction given by the HOD.
- (b) To carry out design work under direction from the Lead & Senior Technical HSE Discipline Engineer.
- (c) Liaison with other discipline Lead engineers on technical issues and engineering matters.
- (d) Maintains HSE focus within the team to ensure that safety requirements are included in design.
- (e) Ensure all design work conforms to the codes and standards used by the client, or to agreed industry standards.
- (f) Act as Focal Point Engineer for Quality Management, Design Integrity, Safety in Design, Budget and resources Management, Schedule Management, Scope of Work and Management of Change.
- (g) Responsible for maintaining work progress (budget, schedule) and raising change documentation where necessary.
- (h) To maintain all files and documentation in an orderly fashion.
- (i) To take ownership to all design work.

SOS ENGINEERING DESIGN SERVICES

POSITION: SENIOR CONCEPT (FRONT END) ENGINEER

QUALIFICATION

- Degree in Chemical Engineering (preferred) or other related Engineering discipline. Charter Engineering status is preferable/
- The position requires a combination of strong technical and analytical, innovative and commercial skills.
- Fifteen (15) years' experience in E&P environment covering both Concept engineering and project management aspects for Hydrocarbon Maturation Projects in the Oil and Gas industry for medium size and major projects. Familiarity of working closely with petroleum engineering related disciplines.
- Previous exposure to production operations and business analysis would be an advantage.
- Excellent written and verbal communication skills with a demonstrated aptitude for taking initiative.
- Experienced in one of the major engineering disciplines and must have a demonstrated ability to coordinated multi discipline engineering tasks, either in the design of construction phase of a project.
- Able to effectively communicate across all levels of the interfacing departments and to Management.
- Self-motivated individual, delivering high quality, timely technical work. Understands the "sense of urgency" in achieving targets.
- Good knowledge of recognition of Risks/Uncertainties in projects and able to devise measures in response to the identified risk.
- Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry but not limited to API, BS, AISC and DNV. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEPs).

TASKS AND RESPONSIBILITIES

- Responsible for the delivery of documents and activities for the Assess and Select phases of the Opportunity Realisation Process. The deliverables are to be completed to a high standard in accordance with the Project timelines.
- Lead/Participate in Opportunity Framings, Concept Identification/Concept Selection workshops.
- Conduct feasibility studies by coordinating and integrating engineering disciplines input, subsurface data and realizations, HSE, Operations and Project execution.
- Ensure that a full range of options have been identified and properly screened, and a clear solution space has been identified before proceeding to the select phase.
- Provide input for cost estimates and economic evaluations.
Coordinating the Engineering input of all disciplines;
Integrate all HSE and SD aspects;

- Consideration of Project Management and execution planning;
 - Coordinating the Petroleum Engineering, Operations and Maintenance input to all relevant engineering documentation;
 - Develop and manage risk and opportunity registers.
- Define surface facilities development options for projects, including

Select the most robust concept based on the agreed selection criteria and prepare Concept Select Report. Support each of the decisions taken by documenting the technical work in

- Note to Files

Once the Concept select has been approved, prepare the Basis for Design document ensuring alignment between engineering disciplines, operations input, contracting and project strategies.

Implement innovating cost saving technology with a view to reduce the UTC of projects and

SOS ENGINEERING DESIGN SERVICES

POSITION: **CONCEPT (FRONT END) ENGINEER**

QUALIFICATION

- Degree in Chemical Engineering (preferred) or other related Engineering discipline. Charter Engineering status is preferable/
- The position requires a combination of strong technical and analytical, innovative and commercial skills.
- Seven (7) years' experience in E&P environment covering both Concept engineering and project management aspects for Hydrocarbon Maturation Projects in the Oil and Gas industry for medium size and major projects. Familiarity of working closely with petroleum engineering related disciplines.
- Previous exposure to production operations and business analysis would be an advantage.
- Excellent written and verbal communication skills with a demonstrated aptitude for taking initiative.
- Experienced in one of the major engineering disciplines and must have a demonstrated ability to coordinated multi discipline engineering tasks, either in the design of construction phase of a project.
- Able to effectively communicate across all levels of the interfacing departments and to Management.
- Self-motivated individual, delivering high quality, timely technical work. Understands the "sense of urgency" in achieving targets.
- Good knowledge of recognition of Risks/Uncertainties in projects and able to devise measures in response to the identified risk.

Have a working knowledge of the relevant International Standards and Codes of Practice normally used in the Oil and Gas Industry but not limited to API, BS, AISC and DNV. It is strongly preferred that the incumbent be familiar and has worked with Shell International Design Engineering Procedures (DEPs).

TASKS AND RESPONSIBILITIES

- Responsible for the delivery of documents and activities for the Assess and Select phases of the Opportunity Realisation Process. The deliverables are to be completed to a high standard in accordance with the Project timelines.
- Lead/Participate in Opportunity Framings, Concept Identification/Concept Selection workshops.
- Conduct feasibility studies by coordinating and integrating engineering disciplines input, subsurface data and realizations, HSE, Operations and Project execution.
- Ensure that a full range of options have been identified and properly screened, and a clear solution space has been identified before proceeding to the select phase.
- Provide input for cost estimates and economic evaluations.
 - Coordinating the Engineering input of all disciplines;
 - Integrate all HSE and SD aspects;
 - Consideration of Project Management and execution planning;
 - Coordinating the Petroleum Engineering, Operations and Maintenance input to all relevant engineering documentation;
 - Develop and manage risk and opportunity registers.

- Define surface facilities development options for projects, including:
- Select the most robust concept based on the agreed selection criteria and prepare Concept Select Report. Support each of the decisions taken by documenting the technical work in Note to Files
- Once the Concept select has been approved, prepare the Basis for Design document ensuring alignment between engineering disciplines, operations input, contracting and project strategies.
- Reduce Opex and/or operational complexity by developing strategies and plans for rationalisation of facilities and infrastructure.
- Implement innovating cost saving technology with a view to reduce the UTC of projects and maximise their economic benefits to shareholders.
- Actively develop local staff to fulfil Concept Engineering roles.