VISION STATEMENT

SHESB has the vision of becoming one of the market leaders in providing innovative solutions and new technology for the Oil and Gas Industry in Malaysia.

MISSION STATEMENT

- Our mission is to be an environmentally conscious, fiscally responsible, well managed for-profit enterprise that reinvests for future growth and development for the betterment of our country.
- Our mission is to grow by employing a benefit based use of technology and resources.
- Our mission is to innovate. We will strive to fully under stand the problem or opportunity.

HSE POLICY

- To provide and maintain safe and healthy working environment and system of work for all employees without risks to health and to provide and maintain the means access to and agrees from it that are safe and without such risks.
- To provide of such information, instruction, training and supervision as is necessary to ensure the safety and health at the work place for all the employees.
- To make arrangements for ensuring safety and absence of risk to health in connection with the use or operation, handling, storage and transport of plants and substances.
- To be responsibility for the health and safety of other people who may be affected by any activities in the premise and we emphasize that safety is not only the Management's sole responsibility but also every employee's responsibility in the organization.
- To achieve excellence in safety, all employees are urged to be safety conscious and give their full commitment and support to safety and safety committee.

ANTI-CORRUPTION POLICY

Steel Hawk Engineering Sdn Bhd and its employees and representatives are forbidden from offering anything - money, gifts, or services to gain an advantage in business dealings. They are also barred from abusing a position of trust to gain undue advantage. The policy defines the company's commitment to integrity, upholding the trust of her clients, the responsibilities of its employees, and prohibited actions.

Dato' Sharman K. Michael
Executive Director

CHEMICAL INJECTION SKIDS

Steel Hawk Engineering (SHESB) is offering total responsibility for engineering, procurement and construction of chemical injection systems for offshore applications. Each system will be designed to customer requirements and with respect to local regulations.

Since SHESB operates fully independent from any pump manufacturer, we are able to offer the best suitable solution for each individual application.

Chemical injection skids are mainly used to inject various chemicals, usually as dilute solutions into process piping and wells, to facilitate process flow or improve oil recovery. The injection of chemical requires precision and accuracy in amount of chemical used, the pressure required and intervals of injection. Specialist service can timely deliver high quality, sophisticated chemical injection systems conform to international standards. We can also provide Multi compartmental tank skid for handling various chemicals from same location and Multipoint injection skids where space is a main constraint.

Chemical Injection Skids serve the purpose of injecting a precise and accurate amount of chemical into a system at a required pressure either continuously or intermittently.

Our range of applications includes for but is not limited to injection of

- Methanol
- Glycol
- Corrosion Inhibitor
- Scale Inhibitor
- Wax Inhibitor
- Demulsifier
- Antifoam
- Biocide

Pump types from industrial standard to high specification for process power pumps

- Plunger or Diaphragm type
- Industrial standard
- API-674 (triplex power pumps)
- API-675 (pumps with stroke adjustment)
- Single pump-head design
- Multiple pump-head design

Power supply

- Electric driven, fixed speed or frequency controlled
- Solar powered
- Air or Gas driven
- Hydraulic driven
- Diesel engine driven

Accessories

- Pulsation dampeners
- Calibration gauges
- Distribution rack and panels
- Injection nozzles
- Injection manifolds

Conventional Skids are suitable for operation in both Hazardous as well as Safe Zones.

CORPORATE INTRODUCTION

STEEL HAWK ENGINEERING SDN BHD (SHESB) is a Malaysian based international service provider to the Oil & Gas industry. It is a 100% Malaysian owned company with Bumiputera status and is a registered vendor with PETRONAS for several of its standardized work and service categories.

SHESB an ISO 9001:2015 Certified Company the pioneer in providing Engineering, Designing, Consulting Engineering, EPCC service provider focusing on upstream & downstream processes. The company offers integrated design and engineering consultancy services from concept to completion for a wide range of projects.

SHESB consists of a group of professionals with proven capability in the area of Feasibility Studies, Equipment and System Design, Piping Design & Engineering, Electrical & Instrumentation System Design and Project Management.

The directors of the company, all first generation entrepreneurs, have individual experiences in the field of Mechanical & Process Engineering.

At SHESB, we combine top-quality equipment and system design integrity with exceptional personal service. You can depend on getting the right equipment recommendation the first time, as well as comprehensive start-up and customer service.

We offer products and services through seven operating divisions namely

1. Offshore & Onshore Modification, Construction & Maintenance Services (MCM)
2. Process & Utility Skid Packages / Chemical Injection Skids
3. Pipeline Pigging, Isolation & Pig Trap Maintenance Services
4. Fire & Blast Rated Door & Walls
5. Project Management Services (Skill / Semi-Skill Manpower & Leasing Of Engineering Equipments)
6. FEED & HUC services for M&E Offshore works
7. After Market MRO Spares & Shutdown Maintenances

We specialize in provision of engineering design, fabrication, assembly/packaging, installation, start up and commissioning services. This will cover process packages and entire process plants for upstream and downstream hydrocarbon industries.

We are equipped to undertake projects within the target industry sectors as follows;

1. Upstream onshore and offshore Exploration and Production.
2. Downstream plant operations including Petrochemical.
3. Industrial Process segment.
4. Power Generation segment.

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STEEL HAWK ENGINEERING SDN BHD

FIRMA KEJURUTERAAN EPCC MEKANIKAL & PROCESS
EPCC INTEGRATED ENGINEERING TURNKEY CONTRACTOR

PETRONAS Licence Contractor
ISO 9001:2015 Certified Company

MAINTENANCE, CONSTRUCTION AND MODIFICATION (MCM) SERVICES

Steel Hawk offers Onshore & Offshore facilities works ranging from major upgrading, modification and construction to topside life extension scheduled and corrective maintenance works in oil and gas industry with a matured and well-rounded organisation with complete support departments such as Procurement, Logistics, Health, Safety and Environment, Quality Assurance and Quality Control and Human Resource and Manpower. Scheduled maintenance is focuses on planned activities while corrective maintenance is more on unplanned activities arising from unforeseen circumstances. Further, others associated services are work and communication vessels, logistics services, inspection services as well blasting and painting services.

Our QA & QC and HSSE procedures are betrothed at all levels of operations to ensure compliance with project requirements in reference to valid laws, codes, standards, specifications and regulations of client's agreement.

SHESB has implemented sound and effective procedures for control, coordination and reporting of its activities, those of its and suppliers, and interfaces with the company and company's other contractors, vendors, suppliers, third parties and others. The contract management activities shall include, but not limited to:

Establishment of relevant measures of performance and ongoing appraisal of performance compared to the plan, including those specified under the contracts. Implementation of procedures to ensure that the quality of performance, HSE, manhours and time elements of the contract are fulfilled from time to time by our in-house teams.

Analysis of trends and deviations and early implementation of corrective actions is part of our continuous services in-situ at the facilities.

Keeping the company informed of progress, status and outlook in a timely manner and providing formal reports required is another primary responsibility we undertake to ensure our client's asset and integrity is assessed at all times.

Steel Hawk develops and put into operation an interface procedure to coordinate those activities within its control and interface with activities controlled by the client including suppliers and vendors. SHESB identifies and coordinates such external interfaces as required for the performance of the SCOPE OF WORKS.

Typical **SCOPE OF WORKS** capabilities by **Steel Hawk** includes, but not limited to: -

- Project Management Team
- Cost Tracking for all WORK ORDERs
- Materials and Services Procurement
- Resource and Procurement Planning
- Improvements and/or modifications to existing facilities
- Fabrication activities at yard and/or inside onshore facilities
- Office facilities for the Project Management Team and for company's representative
- Measuring, scoping and verifying of the work to be performed at the onshore facilities
- Replacement of heavily corroded or damaged structural members, handrails, gratings and piping spools
- Preparation, cleaning and painting of the structures in both hazardous and non-hazardous areas, to specific standards including internal lining work
- Removal, installation or modification of component parts of the structures
- Preparation work onsite for recertification of vessels and relief valves
- Shutdown modifications and overhauls
- Removal, Modification, Installation, Non-destructive testing (NDT) and Reinstatement of pipework
- Removal, Modification and Installation of piping insulation
- Removal, Modification, Installation and Function Testing of instrument tubing, fittings and instruments
- Removal, Modification, Installation and Function Testing of electrical cables, fittings and equipment
- Planning and Activities Networking for all phases of the work
- Workscoping, workpack preparation and compilation and submission of close-out report
- Project MATERIALS certification, handling and transportation and surplus management
- Participating in engineering risk assessments (HAZOP, HAZID, etc.) and engineering review (Constructability, Line Design Review, etc.) whenever requested by client
- Pre-commissioning and commissioning of a new/modified equipment/system at site
- Testing and pre-commissioning at yard i.e. electrical and instrumentation, mechanical equipment, etc.
- Preparation of HSE related documentations per client's HSEMS and statutory requirements i.e. Job Hazard Analysis (JHA), Hazard and Effect Management Process (HEMP), Hazard and Effect Register (HER), Chemical Hazard Risk Assessment (CHRA)
- Appropriate as-built drawings and mark ups for Facilities Improvement Project (FIP) and Terminals maintenance inclusive of Structural, Mechanical, Electrical &
- Instrumentation, Production & Process
- Provide rigging and scaffolding assistance for various inspection SCOPE OF
- WORKS, valves change-out and miscellaneous SCOPE OF WORKS conducted by company's operation
- Provide minor civil work related to maintenance, construction and modification works
- Provide support for all associated maintenance works as and when required basis
- Provide abseiling work for any maintenance or inspection activities
- Provide storage of project materials at SHESB's warehouse as well as preservation of project materials
- Provide management of debris, scraps, waste and schedule waste
- Provide transportation equipped with lifting equipment whenever required
- Provide minor E&I work related to maintenance, construction and modification works

SCOPE OF WORKS performed at onshore & offshore facility in a shutdown mode under specific procedures such as SISO/SIPCOM/SSP or any other governing procedures that may be applicable at the time.

Details of Scope of Works by Steel Hawk

Our scope of work includes any or all other work and services which is generally related to Facilities Improvement Project (FIP) and onshore facility maintenance works. All of which are deemed required and necessary to complete the execution of the project.

These shall include but not limited to the following: -
All Equipment and/or material shall be calibrated, tested, pre-commissioned and certified shall again be calibrated, tested, pre-commissioned and commissioned at worksite, unless stipulated or specified otherwise

SHESB is responsible to carry out wash down at related area as identified by company's representative. These activities have to be performed to the satisfaction of company's representative prior to issuance of Hot Work Permit.

SHESB is also responsible for identifying and completing all tie-ins and interconnections of the systems and the associated commissioning of the system.

SHESB is responsible for offloading, receiving, uncarting and placing all material and equipment into their final position.

Upon completion of the installation of the Equipment and/or materials facilities and other appurtenances in their final position, we at SHESB shall perform a physical/visual inspection of damages and report the findings to client immediately after the installation has been completed.

For any WORK ORDER, SHESB shall provide with two (2) complete sets of AFC drawings. One (1) set shall be used for the actual WORKS while the other set shall be kept and used as the "mark-up" drawings which shall be marked by red lining on a daily basis to indicate all approved modifications during the contract work as part of our Final Documentation (Final Doc).

At the commencement of each WORKS, SHESB is responsible in providing and setting up equipment and/or materials including and not limited to Turnaround site offices, store, scaffolding, weather protection, etc., deemed necessary for the construction and life support.

SHESB shall also be responsible for the removal of all temporary tie down points, water proof wrapping on equipment and temporary blinds on the entire facilities and its appurtenances related to SHESB's WORKS unless stated otherwise.

FIRE & BLAST RATED DOOR (FRD)

Steel Hawk has established itself as an integrated provider for fire rated door for onshore and offshore for PETRONAS Carigali Sdn Bhd. and other oil majors. Our single point of responsibility in providing installation and maintenance on all types of fire doors and systems/equipment in ensuring operation efficiency, cost effective improvements and faster rate of return for the project turn-around has gained extensive appraisals. The SHESB service team has extensive experience, and the necessary certificates and safety courses required for offshore work and have performed installations, surveys, maintenance and recommendations for upgrading and cost-effective improvements. The doors are all full scale tested against fire, blast and jet fire. The following types of Single Leaf, Double Leaf, Sliding and customize doors are in our product range: NFR, B15, A0, A60, H0, H60, A120 and H120.

Introduction

Fire Rated Doors (FRD) consist of various types e.g. Single Leaf A60, Double Leaf A60 and Sliding Door are recommended for replacement. All components of FRD for offshore facilities adheres to the requirements as follow:

- Adhere to design requirement by International Maritime Organization (IMO)
- SOLAS & PETRONAS Technical Standard (PTS) 11.22.04: Design of Offshore Living Quarters
- Fully certified by the relevant body such as Det Norske Veritas (DNV), American Bureau of Shipping (ABS), Norwegian Petroleum Directorate (NPD) or Lloyds

For FRD in onshore facilities, all components are required to adhere to requirements as follow:

- Adhere to design requirement by Universal Building By-Law (UBBL 1984)
- PTS 11.14.01: Design and Engineering of Building & MS 1073 (BOMBA & SIRIM)
- Certified by Fire and Rescue Department of Malaysia (Jabatan Bomba & Penyelamat Malaysia)

Our work and services include any or all other work and services, which is generally, related to Fire Rated Door. Job Execution shall also be performed on live platforms under simultaneous production and commissioning (SIPCOM) mode as and when required.

Steel Hawk is responsible in providing all fire door design, supervision, procedures, labor, equipment, materials, temporary construction aids, consumables, tools, facilities including transport to point of embarkation, services and all other things of the like nature necessary to perform and complete the intended work.

We are responsible for the packaging of all materials, equipment and fabricated items in good manner for mobilization to offshore and onshore location. Steel Hawk is also responsible to provide the required cargo handling equipment and deliver them to the required client's point of embarkation for mobilization to onshore via truck crane and offshore location via supply vessel or fast crew boat.

Typical WORK to be performed may also include, but not limited to:

- General and Dimensional Survey, Measuring and Scoping of WORK
- Perform engineering and design of FRD including Third Party certification
- Provide construction resources such as material, manpower, equipment, tools, consumables etc. upon WORK execution

Testing and Inspection

We adhere to the requirement of manufacturing of FRD as follow:

Offshore Facilities

- Adhere to design requirement by International Maritime Organization (IMO)
- SOLAS & PTS 11.22.04: Design of Offshore Living Quarters
- Fully certified by the relevant body such as Det Norske Veritas (DNV), American Bureau of Shipping (ABS), Norwegian Petroleum Directorate (NPD) or Lloyds

Onshore Facilities

- Adhere to design requirement by Universal Building By-Law (UBBL 1984)
- PTS 11.14.01: Design and Engineering of Building & MS 1073 (BOMBA & SIRIM)
- Certified by Fire and Rescue Department of Malaysia

All fabrication, assembly, testing and coating shall be performed in strict accordance with the SCOPE OF WORK and the required specification and standards. All Fire Rated Doors, accessories and frames that are supplied by us are certified by an approved third-party services or local authorities based on requirement.

We furnish client with all QA/QC related documents such as mill certificate, inspection report, material test/inspection certification and other pertinent reports during the final inspection and acceptance test.

PROVISION OF MAINTENANCE SERVICES OF PIG TRAP SYSTEM

Steel Hawk provides complete EPCC services for Pig Trap Systems at all crude & gas pipelines both for launchers and receivers. Pig trap system is an essential component of a pipeline system for pigging activity. They are required to facilitate pigging operations. Pig trap systems are classified as Unfired Pressure Vessels, so all components repairs and maintenance staff (for WORK) must conform to DOSH regulations and recognized standards.

The objective of our services is to identify pig trap system that fall below acceptable standards and to rectify all identified defects either by component replacement, repair, or a combination of both. The WORK scope consists of five (5) major elements which are as follow:-

- Inspection
- Engineering Analysis
- Procurement
- Fabrication
- Installation, Hook-Up and Commissioning

INSPECTION
As and when required by client, our team plans and carries out routine inspections of all pig trap system and associated facilities in all operational areas. The schedules shall be established after CONTRACT award and shall be approved by our client. In addition, we do undertake ad-hoc inspections as instructed by our clients.

Visual Inspections
Whenever practicable, inspections is performed during pigging operations. This is required in ensuring the function and performance of pig trap system can be observed. The following list of scheduled inspection items is provided as a guide and is not meant to be fully inclusive but not limited to:

- End closure leaking under full pressure or atmospheric conditions.
- Missing or non-functioning/damaged end closure components
- Condition of end closure seal
- Condition of end closure hinges while being operated
- Condition of end closure locking mechanism
- Condition of end closure and barrel mating surfaces
- End closure alignment
- Condition of all safety features
- Condition and operability of pig alerts
- Condition and operability of pressure gauges and temperature gauges
- Condition and operability of valves
- General condition of pig trap internal and external. (Minor/major barrel and reducer)
- Condition of all flanges and stud bolts/nuts
- Condition of draining system (end closure and drain lines)
- Dimensions of pig trap
- Access to pig traps for Intelligent pigs
- Condition of lifting equipment (where provided)
- Congestion/SCOPE OF WORK space for pigging operations
- Condition of existing pig trap pipe support

End Closure Servicing
End closures often prove difficult to operate due normal wear and tear. Steel Hawk shall arrange for the servicing of end closures by suitably qualified parties as and when required by client's operational staff or identified during the inspection phase. This service may be subcontracted to the end closure manufacturer. On-site training of operational staff shall be provided during such service periods. Training shall be specific to the correct safe operation of the end closure and maintenance of end closure and is not intended to transfer maintenance knowledge. The servicing shall include the following:

- Door Closure Seal and Bleed Screw Seal inspection cleaning and change out if required
- Door Seal groove inspection and cleaning
- Cleaning of drain hole
- Safety bleed seal cleaning and change out if required
- Cleaning of door/hub mating surfaces including removal/blending of minor irregularities
- Alignment and clearance check of door
- Alignment and clearance check of locking mechanism
- Quick of opening and closing of door closure.

Component Replacement
Steel Hawk is competent to replace all defective components identified during the inspection cycle or reported independently by client. Wherever possible, Steel Hawk shall standardise components upon agreement by our client. Replacement will normally take place with the pig trap in situ on the platform. We shall mobilise our manpower and equipment to site in order to undertake the replacement SCOPE OF WORK. The following list provides a guide to the items most likely to be in need of replacement. It is not intended to be an exhaustive listing.

- End closure seals
- End closure door
- End closure locking mechanism
- End closure locking actuator mechanism
- End closure safety bleed valve and seal
- Pig signaller/indicator (Intrusive or Non-Intrusive type)
- Weld neck flanges
- Spiral wound gaskets
- Stud bolts and nuts
- Pressure gauges

Weld Repairs / Modifications
In the event that repair to the pig trap requires welding works, Steel Hawk shall provide qualified welders. All welding operations shall require a welding procedure approved by our client and DOSH or DOSH approved third party. Such work may be undertaken on site (offshore / onshore) or in Steel Hawk's fabrication yard. Welding repairs shall include but not be limited to the following:

- Supply of all procedures, tests and certification
- WPS & WPQT
- Welding of flanges
- Replacement of major pig traps sections (major/minor barrel and reducers)
- Replacement of end closures with flanged type connectors
- Welding of weldoletts
- Welding of fittings
- Repairs to end closure mating services
- Hydrotesting of completed repairs
- NDT (X-Ray, UT & MPI)
- Blasting and coating of completed repairs
- Post weld heat treatment (if Required)
- Modification of existing barred "T"
- Modification on major barrel for provision of purging line, fitting and valve which will be used for Nitrogen purging during pigging activity
- Modification of existing drain line and drip pan to comply with PTS requirement
- Modification of existing vent line connected to atmospheric to drain line
- Modification of existing kicker line to comply with PTS requirement
- Modification of existing pig trap pipe support
- Removal of existing damage and installations of new fabricated pig trap

All repairs to the pig trap complies with ASME design codes. All welding works complies with the latest applicable both international codes, PETRONAS Technical Standards (PTS) as deems necessary at point of request by client.