



K2 OILFIELD
SERVICES

SERVICES PACKAGE

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Registration number 201923983G



CONTENTS

- Introduction
- Drilling & Offshore Production market Analysis
- Renewables
- Construction
- Engineering
- Petrochemical Facilities



INTRODUCTION



- K2 Oilfield Services are a new business set up to provide inspection – repair and maintenance services to the Energy and Marine Industries.
- Our commitment is to provide professional services to our clients based on our collective history of more than 120 years in the Energy Services environment with different companies.
- We have experienced professionals within our business that can bring our skill set to all elements of the energy business from fossils to renewables



PREPARED FOR THE FUTURE

K2 OS has strong core competencies that can be applied across the energy sectors



**Exploration
Assets**



**Existing Production
Assets**

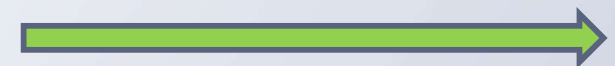


**Cleaner Hydrocarbon
Assets**



**Renewable
Assets**

We are strategically positioned and ready for the future.



De Carbonization



SERVICE LINES

Within the next few slides we will detail our service lines that we can provide our clients on all types of onshore and offshore assets.

All services are provided by qualified – experienced engineers in the field and supported by experienced Managers in the office in Singapore. The majority of personnel we supply are rope access qualified as well as qualified in their respective trades.

- Inspection Services
- Repair and Maintenance Services
- Mechanical Services
- Electrical Services
- Renewable Services
- Construction
- Engineering – Repairs and Upgrades



ROPE ACCESS SERVICES

Rope Access provides a more cost effective alternative to scaffolding in 90% of instances where work is required to be done at height, it provides our clients:

- ⦿ A Safe method of working at height.
- ⦿ A Safe method to access difficult-to-reach location.
- ⦿ Industrial fall protection.





DRILLING

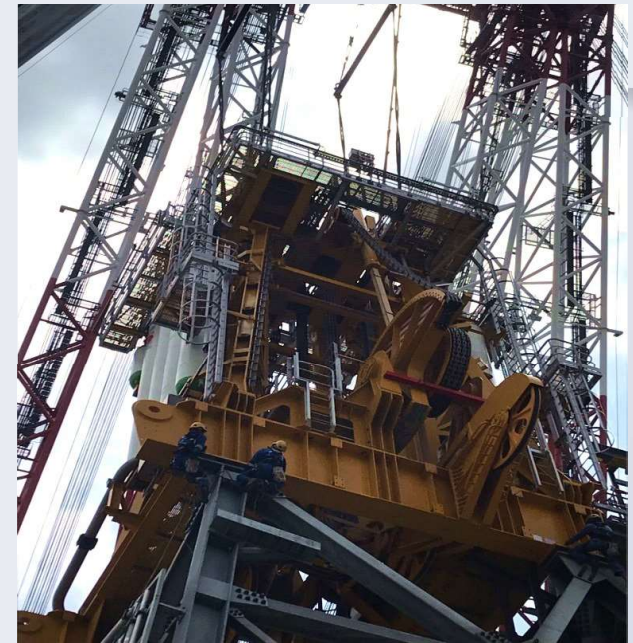
- Inspection
- Repair and Maintenance
- Mechanical Services
- Rig Audits
- Electrical Services



DRILLING MARKET - INSPECTION SERVICES

K2 Oilfield Services provide an experienced team that can provide solutions to ensure your drilling structure is safe and compliant. We provide this assurance through the following services:

- API 4G Surveys, Cat III or IV
- Dropped Objects Surveys
- Structural Bolt inspection – replacement
- Stem and Guide Track Alignment surveys and remedial scopes
- NDT Of critical connections





DRILLING MARKET - INSPECTION SERVICES

Drilling Handling & Hoisting Equipment

- Category III and IV inspections on all drilling handling tools
- In accordance with API RP7L, 8B, ISO13534.
- Inspections include MPI, visual inspections, dimensional checks.
- Pipe handling system.
- Rotary table.
- Dimensional checks and NDT.

Hull Inspection & Class surveys

- Special Periodic Survey (SPS) and Hull Preservation Survey (HPS)
- Baseline surveys
- Steel renewal assessment
- Pre-purchase or pre-conversion Inspections



DRILLING MARKET - INSPECTION SERVICES

Lifting Gear Inspection

- Load testing and NDT.
- Thorough examinations.
- Multi-disciplined teams allowing multiple work scopes to be performed on one mobilization.
- Online database and lifting equipment management system.
- In accordance with LOLER.

Dropped Objects Protection Scheme

- Drilling structures and complete vessel applications.
- Online database and management system.
- Independent DROPS survey.



DRILLING Market - Inspection Services

Basic NDT Services

- Eddy Current Inspection (no need to remove paint)
- Magnetic Particle Inspection
- Dye Penetrant Inspection
- Ultrasonic Thickness Gauging
- Ultrasonic Flaw Inspection

Advanced NDT Services

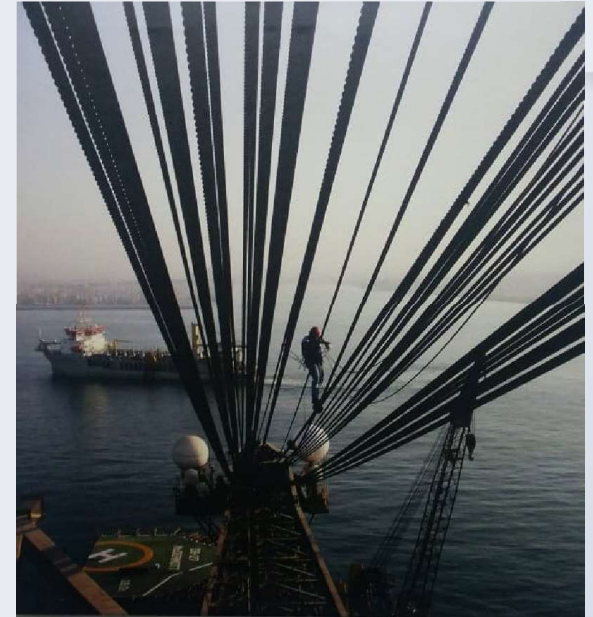
- CCTV crawlers and probes
- PAUT Inspection
- Pulsed Eddy Current Inspection
- TOFD
- ACFM



DRILLING MARKET – INSPECTION SERVICES

Crane Inspection

- Derrick barges, boom cranes, pedestal cranes, knuckle boom cranes, gantries, etc.
- In accordance with API RP2D
- NDT inspections and conditional assessments
- Phased Array bolt inspection and Torqueing





DRILLING MARKET - INSPECTION SERVICES



Pipework and Pressure Vessel Inspection

- ◉ Internal and external visual inspections.
- ◉ Thickness gauging and CNDT.
- ◉ Corrosion mapping using PAUT scanners.
- ◉ Hydrostatic testing of PSV/PRV.
- ◉ Applicable to standards API 510, 570, NR 13, ASME B31.3.
- ◉ Isometric drawings of pipes, vessels and pressure systems.
- ◉ Online access to all reports, drawings, etc.



REPAIR AND MAINTENANCE SERVICES

Difficult Access Solutions

- Industrial Rope Access
- Mobile Work Platforms
- Tensioned Netting
- Mechanical Access systems

General Maintenance Services

- Insulation Replacement
- Hotworks and repair Services
- Coating and blasting services
- Pipework and Sprinkler Repair and replacement

- Rigging and lifting
- Bolt Torqueing

Hull and Tank Repairs

- Web Frame Stiffener Welding
- Anode Installation and replacement
- Under-deck support Structures
- Steel Replacement Campaigns
- Coating Repairs

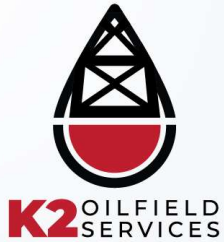


REPAIR AND MAINTENANCE SERVICES



Crane Repairs, Modifications and Upgrades

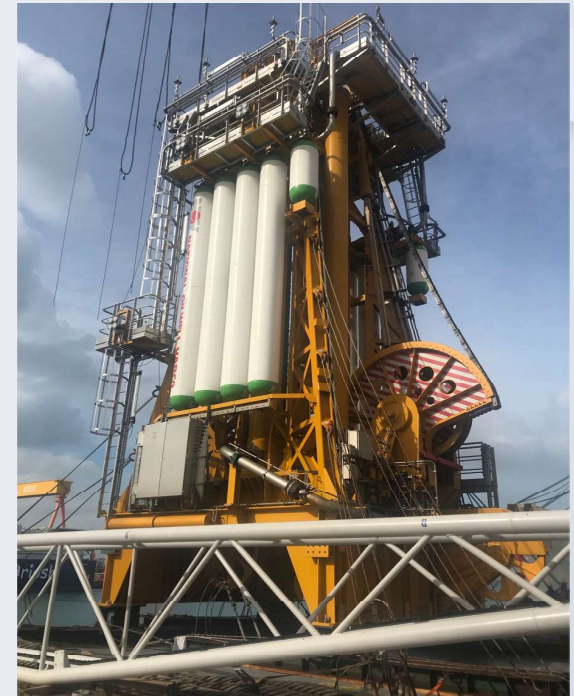
- Knuckle Boom Cylinder Change Out
- Lattice repairs & replacement
- Wire Change
- Structural and Mechanical Upgrades

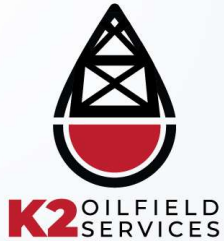


REPAIR AND MAINTENANCE SERVICES

Equipment removal – Replacement

- ⦿ AHC - Crown Mounted Compensators
- ⦿ Floating Crowns
- ⦿ Racking Systems
- ⦿ Guide Tracks Replacement - Alignment





DRILLING - MECHANICAL SERVICES

Our mechanical service line provides a one stop shop for removal, disassembly, NDT, Dimensional checks, blast and paint and re-assembly of all your drilling – travelling equipment as per the OEM's recommendations – API Guidelines.

- Travelling Blocks
- Crown Blocks
- Drawworks
- Mud Pumps
- Top Drives
- Dead Line Anchors





DRILLING - MECHANICAL SERVICES

RIG AUDITS

Purpose

- To pinpoint defective, faulty or malfunctioning equipment or systems.
- To avert potential threats to personnel, the environment or operations.
- To ensure that all equipment inspected meets the current industry standards.
- To ensure the rig is in an operational condition.
- In accordance with client specific requirements.

What we provide

- Rig condition surveys.
- Rig acceptance audits.
- Rig selection audits.
- Pre hire audits.
- Witnessing of endurance testing.
- Equipment/system audits.
- Hazardous area surveys.
- Maintenance system audits.
- Witnessing of commissioning.



PETROCHEMICAL FACILITIES



Basic NDT Services

- ⦿ Eddy Current Inspection (no need to remove paint)
- ⦿ Magnetic Particle Inspection
- ⦿ Dye Penetrant Inspection
- ⦿ Ultrasonic Thickness Gauging
- ⦿ Ultrasonic Flaw Inspection

Advanced NDT Services

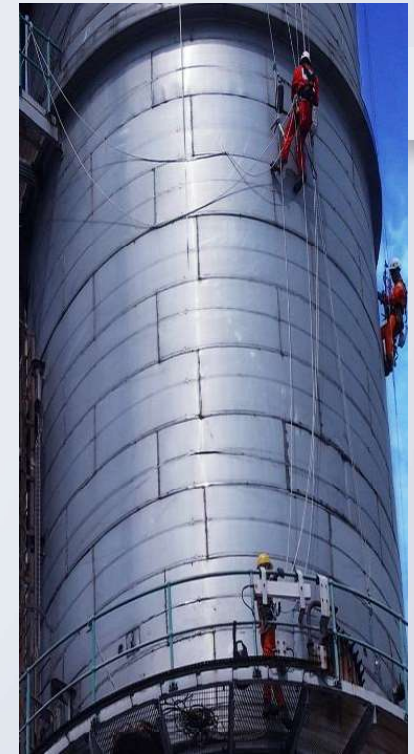
- ⦿ CCTV crawlers and probes
- ⦿ PAUT Inspection
- ⦿ Pulsed Eddy Current Inspection
- ⦿ TOFD
- ⦿ ACFM



PETROCHEMICAL FACILITIES

Refinery Repairs

- Pipe cladding & insulation removal and replacement
- Removal of Pressure Safety Valves at height without crane
- Flare Line Repairs – welding doubler plates on pipe
- Compressor Roof repairs – corrugated cladding replacement
- Deluge System Flush & Repairs

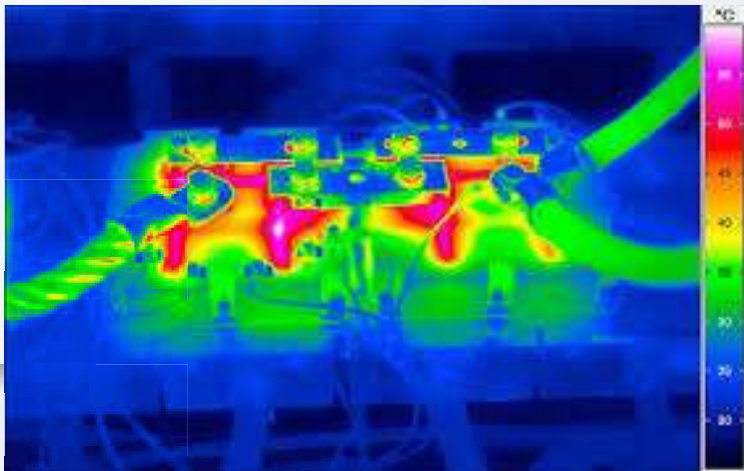




ELECTRICAL SERVICES

Electrical Inspection and Testing

- Explosion Proof Equipment (Ex Inspection)
- Electrical Completion and Commissioning
- Electrical System Audit
- RFID application
- Online reporting system and database.
- Supply of dossier and engineering drawings
- Supply of materials to effectively close out non-conformances issues in the most efficient manner.



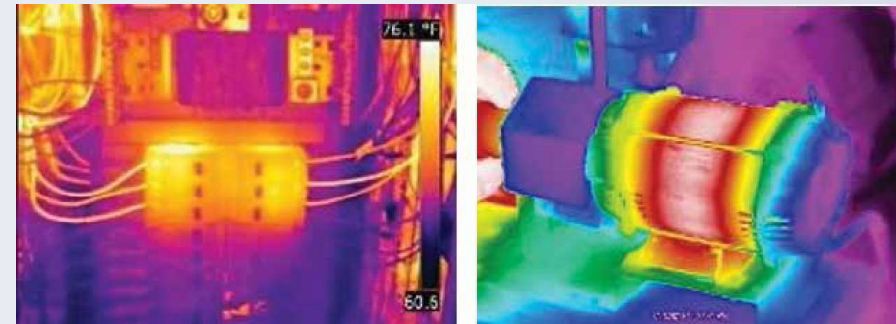


ELECTRICAL SERVICES

Electrical Installation, Commissioning, Repair and Maintenance Scopes

- Preventative, corrective and operational maintenance of electrical equipment in accordance with manufacturers' guidelines.
- Installation and Commissioning of new electrical equipment
- Fault finding and repair of existing equipment

- Ancillary tasks such as cable tray installation, cable pulling, cable termination and subsequent testing
- Upgrade of electrical systems





ELECTRICAL SERVICES

Heat Tracing

- Full capabilities to install, commission, fault find and maintain electrical heat tracing installations.
- Ability to remove and replace lagging systems on completion

Infrared Thermography Testing(IRT)

- Survey electrical equipment such as switchgear, motors, distribution boards, transformers, cables and ancillaries.
- Highlights issues such as loose connections, incorrect voltages, material deterioration, installation defects before they create a occurrence such as unplanned shutdown and operational downtime.



RENEWABLE SERVICES

K2 OS Can provide the following services from construction and commissioning – operation and maintenance phases of the asset.

All personnel employed are trained in accordance with IRATA and GWO guidelines



Operation and Maintenance Services:

- Tower Inspection and NDT services using UAV and rope access techniques
- Tower Repair Services
- Blade Inspection
- Blade repairs
- Bolt Torque Services
- Bondura™ Bolt Supply and Installation



RENEWABLE SERVICES



- Gear Box inspection - Borescope
- Gear Box Change Out
- Electrical System Inspection
- Lightning Protection System Installation, Inspection and Maintenance
- AluRing Inspection - Inspection of the union of the blade to the hub. Looking for fatigue cracks on the aluminum ring. Inspection based on Phase Array (PA) UT advance technique
- Power Shaft Inspection - Preventive inspection "Go / No-Go" in order to identify cracks in the material that may compromise the integrity. Inspection based on Phase Array (PA) UT advance technique



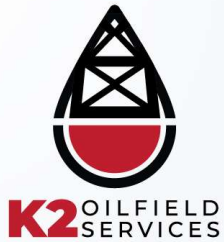
CONSTRUCTION - STRUCTURAL

Derrick Construction – Structure

Provision of Turnkey Local or Expat Derrick Construction project teams in accordance with clients and manufacturers requirements. Supply of

- Derrick Construction PM
- Derrick Builders
- Provision of a Manager – Supervisor to monitor and advise shipyard supplied construction teams.
- Bolt Torque Checks





CONSTRUCTION - MECHANICAL

Derrick Construction – Mechanical

Provision of Supervision as well as manpower to install all drilling and handling equipment in accordance with clients requirements.

- Owner rep
- Derrick Mechanical PM
- Drilling Equipment Service Techs
- Rig Builders for Installation
- Alignment Teams to survey and align all equipment to Crown – rotary table as per OEM specifications



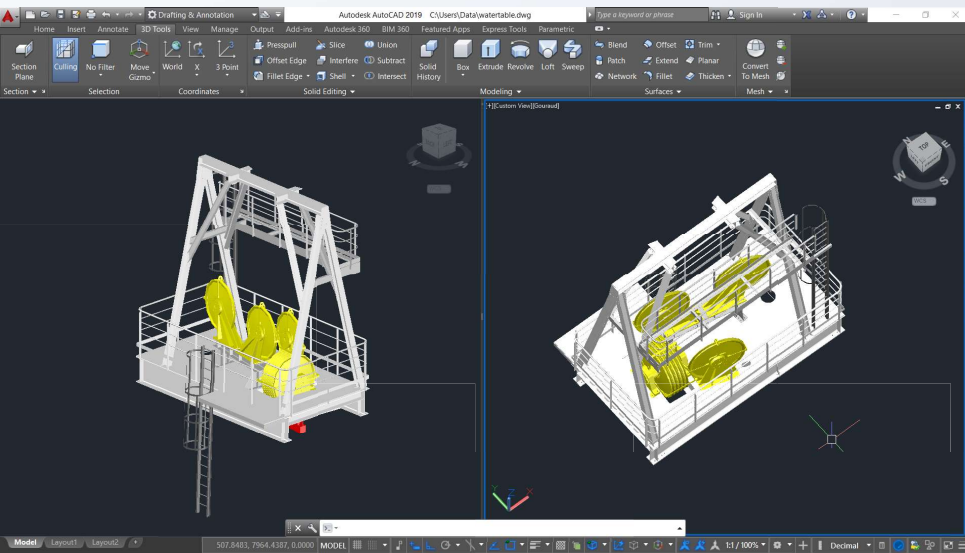
ENGINEERING

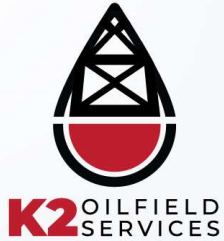
Derrick – Engineering

Provision of engineering – fabrication services to carry out any post delivery mods required by Client.

Examples:

- Stem and Guide Track Laser Alignment
- Design, Fabrication and Installation of new guide tracks
- Design, Fabrication and Installation of Interface Steel
- Design, Manufacture and Install heat Shielding
- Design, Manufacture and Install Hydraulic Power Unit – LER Control Cabinet for Aux Power Tongs





CONSTRUCTION – ENGINEERING

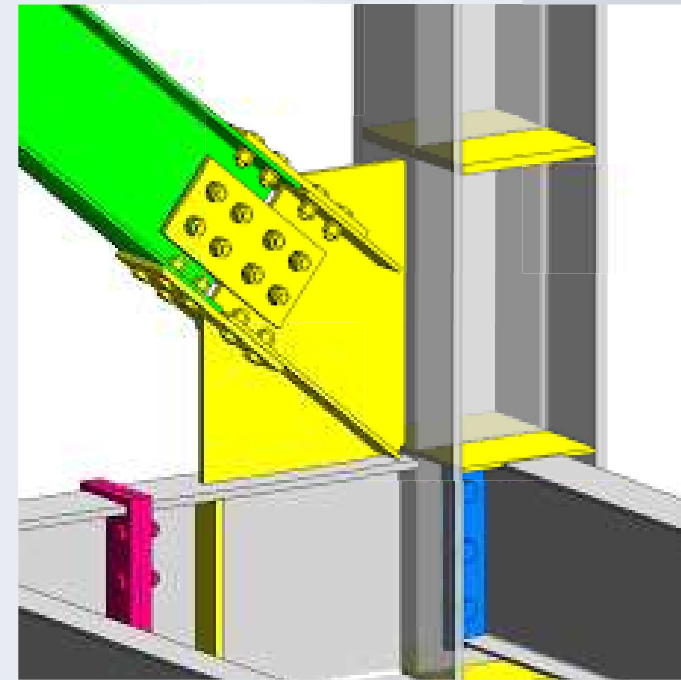
Services include:

Structural Analysis –

- ◉ Drilling package upgrade or repair

Design Engineering

- ◉ Drilling structures
- ◉ Flare booms
- ◉ Racking systems
- ◉ Heat Shielding – Flare Protection
- ◉ Equipment Integration – Interface Studies





We have an extensive pool of qualified resources on a global scale able to mobilise from / to any continent within 7 days notice.

Qatar (rep office)

Singapore