# INNOVATIVE IDEAS FOR AN INNOVATIVE FUTURE

Oil Field Services

Value Engineering

Geotechnical Consultancy

Supply Chain

**Construck provides next generation technologies for new engineering challenges**

CONSTRUCK SYSTEMS & TECHNOLOGY

www.construck.me

# About us

Construck Systems & Technology is a multi-disciplinary engineering solutions development company based in Czech Republic serving the construction industry in the Middle East, North Africa, South Asia, Asia . Our expertise includes concept, design, testing of various value engineered systems and providing consultation for the same.

We also support the sourcing of the included/recommended products through our supply chain services. We can also undertake the execution of such solutions based on clients' interest.

Our Vision is to be a globally recognised oil service company offering quality services safely, on budget and on time.

Our mission is to provide world class engineering solutions to our esteemed client in a safe environment

# Our Services

We offer various value engineering solutions for oil and gas drilling operations among other construction works. Innovative methods over traditional ones is where our expertise lies in.

Construck Systems and Technology's engineering department offers reliable solution tailored to individual needs and requirements. However, our designs are always based on the relevant international standards and codes to produce cost effective solutions and accurate calculations that save operating and maintenance costs for our clients.

Our self-dependent construction capabilities set us apart from other contractors. We bring our well established knowledge and experience to all our projects, while attending to the unique attributes of each location in terms of logistics, legalities, and market situation. Our well-trained and experienced personnel, with their varied backgrounds, can handle the toughest of project conditions as well as benefit from available human resources at each location whether qualified or trained by our staff.

## Mudlogging Services

We offer realtime surface logging and mudlogging services. Our site experts continuously monitor Rig Parameters and Mud parameters, and help in early detection and warning of issues that may occur during drilling. This in turn helps in reducing the NPT (Non-Productive Time). The services offered by our mudlogging unit are

- **Realtime monitoring of Mud Parameters**
- **Realtime monitoring of Rig Parameters**
- **Storing and Visualizing Realtime Data**
- **Sending Realtime Data to Client or 3rd Party servers in WITS or WITSML format**
- **Realtime GAS Analysis (Total Gas and Gas Chromatography)**
- **Drilling Sample collection and packing**
- **Shale Density and Shale Factor Analyses**
- **Calcimetry Analysis**
- **Daily Rig Metrics Report**

### Mud Parameters

Mud Weight (in and out), Mud Temperature (in and out), Mud Conductivity (in and out in Water Based Mud), Mud Tank Volumes

### Rig Parameters

Hookload, ROP (Rate of Penetration), RPM (Rotations Per Minute), SPP (Standpipe Pressure), SPM (Strokes Per Min), WOB (Weight on Bit), Hook Height

### Gas Parameters

TG (Total Hydrocarbons available in the Gas Sample), Gas Chromatograph (Individual Hydrocarbon Gas Components in the Gas Sample)

### Sample Collection

Wet Samples, Dry Samples, Geochemical Samples, Mud Samples, Chemical Samples, Core Samples, etc are collected and provided as per client requirement.

### Daily Reports

Daily Progress Reports include the meterage, gas shows, time breakup for each operations and Rig Metrics reports if required by the client.

### Days vs Depth Report

Days vs Depth Report will help in making sure the drilling programme is being followed and how much time is gained or lost.

### EOW Report

The End of Well Report will include the daily progress reports, Master Log, Depth wise trend of rig and mud parameters, gas shows at various depths, Complications faced, etc.

### Specialized Tests

Shale Density, Shale Factor and Calcimetry Tests are conducted as per client requirements.

# Cementing

Cementing protects and seals the wellbore. Most commonly, cementing is used to permanently shut off water penetration into the well. Part of the completion process of a prospective production well, cementing can be used to seal the annulus after a casing string has been run in a wellbore. Additionally, cementing is used to seal a lost circulation zone, or an area where there is a reduction or absence of flow within the well. In directional drilling, cementing is used to plug an existing well, in order to run a directional well from that point. Also, cementing is used to plug a well to abandon it.

We offer the works from the process of preparing the cement to the application of the same on-site to prepare the well for further drilling.

We aim to design, manufacture and deliver the incomparable downhole drilling cementing solution in the oil & gas ensuring customer satisfaction and reliability.

## Supply chain

### Drill Mud

Drilling muds are traditionally based on water, naturally occurring or prepared brines. Many muds are oil-based, using direct products of petroleum refining such as diesel oil or mineral oil as the fluid matrix. Also there are synthetic-based muds that are prepared using highly refined fluid compounds that are made to more-exacting property specifications than traditional petroleum-based oils.

### Drill pipes

Used to connect the BHA (Bottom hole assembly) to surface, transfer mud to the bottom and at times to provide rotation to the bit. Various sizes and grades are available, mostly used being 5" in outer diameter.

### Heavy Weight Drill Pipes (HWDP)

These are part of BHA that can withstand both compression and tension forces. Various sizes and grades available.

### Drill Bits

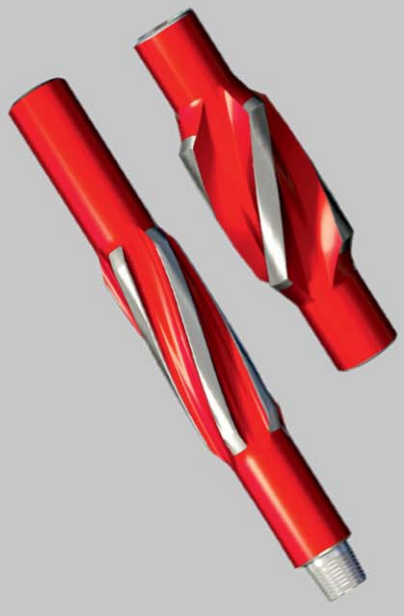
Used to penetrate or cut d rock formation. Drill bits generally determine the size of d hole being drilled and the diameter varies from 36 inches to 3.875 inches. Various types in use are Rolling Cutter bits (milled tooth bits and insert bits) and Fixed Cutter bits (PDC Bits, Diamond bits). Core bits are also available.

### Drill Collars

Drill collars are used to provide the weight on bit while drilling. They are either made from steel or from Non magnetic materials (NMDC) depending upon the use of M/LWD Tools in the BHA. Various types and sizes are available depending upon the section being drilled and the formation properties.

## Stabilizers

Used to stabilize the drill string and bit from wobbling too much and deviate from the well plan. The location of the stabilizers is crucial in directional drilling. Stabilizers are generally used near the bit, above or below the mud motor, and among drill collars. Some stabilizers are made from non-magnetic materials while used along with M/LWD tools. The size is dependent upon the drill bit diameter.



## Reamers

Reamers are generally used to ensure smooth walls and maintain bore geometry. They have cutting elements attached to its sides so that the hole size will be properly maintained even if the bit gets under-gauged. Thus, most reamers are the same diameter as the drilling bit. A specific type of reamer called Under-reamer is used in case the hole size needs to be increased after a certain depth.

## Cross-overs

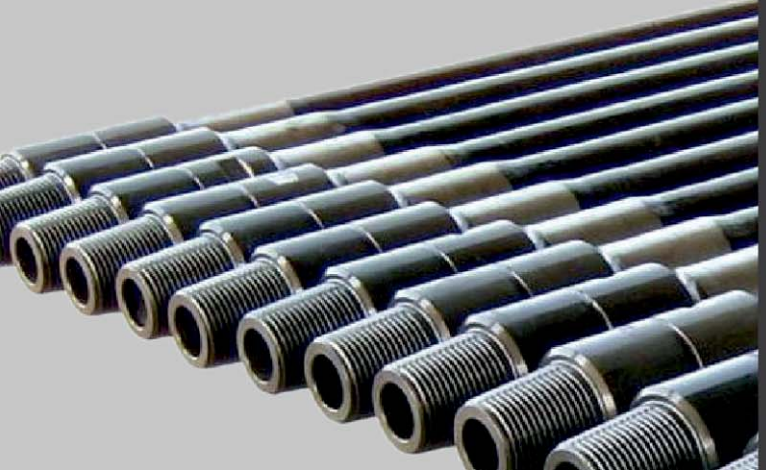
Cross-overs are subs used in between tools of different size (8.5" to 6.5" DC) or different connection types (like box-box, box-pin, or pin-pin). They also are used to adjust BHA length and weight.

## Casing Pipes

Casing pipes are lowered into drilled boreholes for multiple purposes like preventing caving of wall or contamination of formation fluids or influx from high pressure formations, isolation of zones, etc.. The size depend upon well plan and section.

## Centralizers

Centralizers are used to keep the casing pipes centralized in the open hole so that cement will get equally distributed around the casing pipes ensuring proper isolation from the surrounding formations and fluids. The size of centralizer is determined by the size of casing.



## Float Collar and Casing Shoe

Float collar and Casing shoe are used at the end of casing string to guide it and to prevent cement from returning into the Casing pipe. They are made from drillable material so that once the cement is set, these can be drilled through to drill the new formation.

# THE OIL FLOW SOLUTION

The OilFlowSolution (OFS) additive (Product) is a liquid carbon additive that improves the flow performance of crude oil and liquefies oil sludge build-up in pipelines, storage tanks and ships. The Product also significantly increases oil recovery in oil reserves with parrafin and ashphaltene problems.

A non-toxic and environmentally clean organic chemistry, the Product revolutionises an existing market dominated by highly toxic chemistries (Benzenes, Toluenes and Xylenes)

Improves the existing cleaning regime of valuable oil transit infrastructures (tanks and pipelines) by limiting the need for physical and manual cleaning (pigging and de-sludging)

The Product has been tested and approved for use by Petronas and Nippon Steel in major and valuable assets such as Pipelines, VLCC's (Very Large Crude Carriers) and Storage Tanks

The Product is also an emulsion breaker and separates oil from water. This is an attractive cost benefit for the oil and related industry as it significantly reduces the water burden associated with oil in transit.

The Product is environmentally sound and solves a core problem for the oil industry by moving or liquefying waxy, asphalt-laden crude oils, thick oils and sludge that build up within pipelines, storage tanks and ships in transit to the refinery. The oil recovered from sludge is valuable.

A non-toxic and environmentally clean organic chemistry, the Product revolutionises an existing market dominated by highly toxic chemistries (Benzenes, Toluenes and Xylenes)

Applications of the Product extend to mobilising thick oils, paraffin wax liquefaction, asphaltene liquefaction, pipeline flow assurance, pipeline cleaning, API lifting, viscosity reduction, in-pipe oil refining, Enhanced Oil Recovery (EOR), secondary oil recovery from storage tank bottom sludge and corrosion control.

The Product does not harm crude oil or its valuable properties in any way.

## In line TANK Cleaning : Reducing Down time

Our in-line tank cleaning does not require taking the tank off-line and only requires diversion of crude oil for a reduced time. The in-line tank cleaning method offers the client a greater than 90% clearance of sludge and a return to full service within these two weeks.

While Traditional Tank cleaning takes about 3- 4 months of down time, Our line-tank cleaning system with our product takes merely 2 weeks only !

## Pipe line flow Assurance for oil in transit

The cost benefit analysis of pipeline flow assurance is largely dominated by loss in flow volumes, pump efficiencies and the 'knock on effect' caused by severe reduction in transiting crude oil flow volumes.

Injecting our Product constantly into pipelines creates flow assurance, increases flow capacity and liquefies sludge deposits.

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