



FOSTECH
ENGINEERING SERVICES
LTD.

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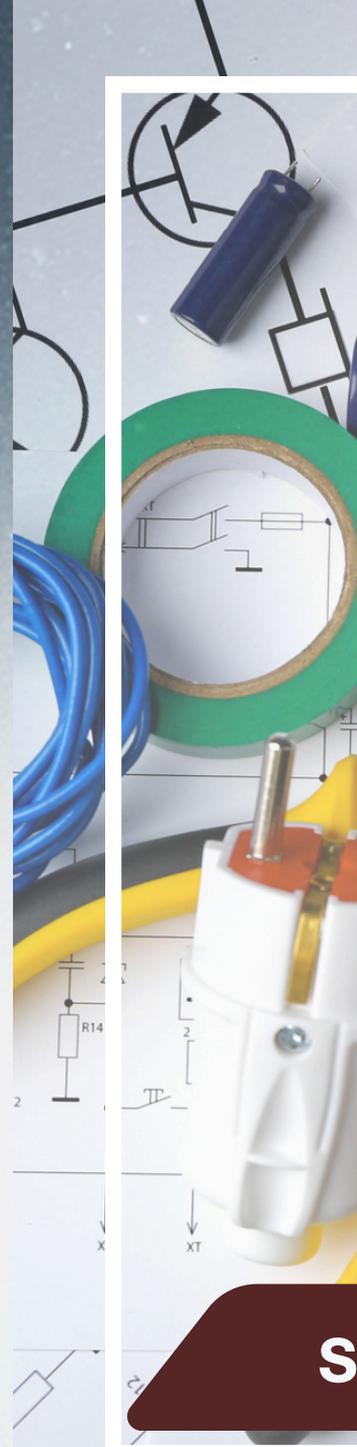
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FOSTECH ENGINEERING SERVICES LIMITED

SPECIALIZED INDUSTRIAL SERVICES





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ABOUT FOSTECH ENGINEERING SERVICES LTD.

Fostech Engineering Services Ltd. is a skilled provider of on-site services aimed at maintaining the integrity of production, process plant, and pipework. With our extensive range of specialist portable equipment, coupled with highly skilled technicians, we provide you with cost-effective mechanical completion services on-site at any location and at any time.

We are a Private Liability Company and an internationally focused engineering enterprise in partnership with Advanced Bolting Solutions Private Limited (ABS), with world-class capabilities spanning the entire client value chain. We operate an integrated business model comprising the full range of engineering services and asset management services, delivering single-source solutions for some of the world's most prestigious public and private organizations.

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PERFORMANCE EXCELLENCE

Fostech Engineering Services Ltd. is committed to developing a culture based on Excellence Plus performance. Our group sets stretching targets in all its operations globally, and by applying the four elements of Excellence Plus performance: Client Focus, Innovation, Responsible Behaviour, and People Development.

We aim to achieve our vision of being the first choice services provider for all stakeholders; being capable of challenging and changing the common poor practices in the engineering industry, while competing with global-leading businesses.

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OUR MISSION

- ✔ To be responsible partners with respect to the construction environment safety.
- ✔ To impact all our operations and services.
- ✔ To recruit, retain, and reward high-performance workforces.

OUR VISION

To be recognized as the premier indigenous oil and gas services provider driven by excellence and innovation.

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OUR CLIENTS

Fostech Engineering Services Ltd. is one of the fastest-growing engineering companies in Nigeria. Fostech has emerged as a successful contractor in the field of construction projects, modifications, plant shutdowns, and emergency repairs of oil and gas plants. We work in remote locations, eliminating the need to disperse heavy equipments for repairs, and this has saved our clients hours of downtime and cost.

Our approach is led by an unwavering focus on fully understanding the needs of our clients and delivering on our promises regardless of the scale and complexity of the challenge at hand. In collaboration with our clients, we develop bespoke solutions and assign a dedicated team of experts to oversee a project every step of the way, from execution to completion, ensuring the best expertise and resources are deployed to achieve the target goals, while aligning with time, safety, and sustainability.

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RESPONSIBLE BEHAVIOUR

We take it as a duty to always act responsibly and very seriously while handling clients' projects. We proactively manage the impacts of our activities on the workers, site environment, and also the community we work in, while working in accordance with the guiding principles in our Code of Conduct.

We place the safety of those involved in, or affected by, our operations as our core obligation, aiming to eliminate all possibilities for potential accidents on our managed sites by 2030.

We also take a leading role in driving change across the industry by seeking ways to reduce the effect of our operations on the environment through the modernization of traditional engineering methods and practices.

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ABOUT OUR FOREIGN TECHNICAL PARTNERS: THE ABS GROUP

- Specialists in equipment sales: Torqueing, Tensioning, Portable Machining, and High-Pressure Systems.
- More than 10 brands to offer.
- Manufacturers of customized belt tensioning equipment and bolting accessories.
- Industry leader in precision bolting and in-situ machining for 20+ years, with options for Annual Rate Call-Out contracts.
- 7 companies with business operations across South Asia and the Gulf Region.
- Over 250 employees.
- Customer-centric "Support Services" through onsite training, data management, onsite calibration, and repairs. (24/7 x 365 active customer support)
- Read-to-deploy onsite technical team of over 150 personnel.
- CRISIL "SME 1" rated company.

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THE ABS QUALITY MANAGEMENT SYSTEM

An effective Quality Management System is the cornerstone of organizational effectiveness in delivering value to our customers.

With international standard certifications such as ISO 9001:2015, ISO 45001:2018, and ISO/IEC 17025, we ensure quality in our product & service delivery.

ABS is the only indigenous Indian company running an ASME-certified training facility with ASME-authorized training providers.



Advanced Bolting Solutions Pvt. Ltd.

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MIDC Khairane, Navi Mumbai - 400 708, M.S.- INDIA.
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website : www.absgroup.in / www.hytorc.in
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Date: 24/11/2020

FOREIGN TECHNICAL PARTNERSHIP

With reference to our previous discussion on the subject of providing technological expertise in Nigeria, the management of Advanced Bolting Solutions Pvt. Ltd. (ABS), an Indigenous Industrial Bolting and in situ Machining service provider duly registered in India with specialization in the area of:

- Plant maintenance/shutdown/reactivation services
- Pipe prepping, cold cutting, beveling
- Flange serration and facing
- Torqueing and tensioning
- Hot bolting
- Flange spreading and aligning
- Nut splitting and stud removal
- Blue matching and onsite drilling

I would like to extend our foreign technical partnership to Fostech Engineering Services Limited located at 14 Nzimiro street Amadi Flat Old GRA Port Harcourt, Rivers State Nigeria in the areas of expertise mentioned above. ABS shall provide tools & tackles and technical manpower to execute the jobs as per project requirements.

The terms and conditions of our agreement shall be finalized before the time of execution of the first project. The agreement shall include details w.r.t payment terms, mobilization costs, accommodation, and any other requirements that may arise out of the project.

We are delighted to take a step towards expanding our footprint in a new market and offer our unconditional support to Fostech Engineering Services Limited in applying for bolting and on site machining jobs in the Oil and Gas sector of Nigeria.

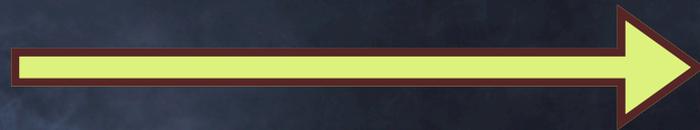
BALASUBRAMANIAN
 ANIAN
 LAKSHMINARAYAN
 Ayan
 L Balasubramanian
 Founder and Managing Director
 Advanced Bolting Solutions Pvt. Ltd.



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OUR SERVICES



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PLANT SHUTDOWN & MAINTENANCE

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PLANT MAINTENANCE / SHUTDOWN / REACTIVATION

Objectives:

- To achieve minimum breakdowns and keep the plant in good working condition at the lowest possible cost.
- For machines and other facilities to be kept in perfect conditions that allow them to deliver at optimal capacity and efficiency, without interruptions or hindrances.
- To work independently as an outsourced expert, or in collaboration with in-house maintenance teams to ensure the availability of the machines, buildings, and services required by all sectors of the factory to carry out their functions effectively at optimum ROI, whether the investment is in material, machinery, or personnel.

PLANT MAINTENANCE / SHUTDOWN / REACTIVATION

Importance of Plant Shutdown:

The point of shutdown is to create a plan for a complete cessation of all plant activities to perform necessary maintenance, repairs, component replacements, and internal maintenance. This includes putting the equipment into process columns, for a vast number of reasons, including increasing throughput, replacing or maintaining internal mass transfer equipment, and carrying out process upgrades.

Shutdowns are necessary because they are often required by federal and state government agencies to prevent accidents and to ensure that the plants are running within required regulations.



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CONTROLLED BOLTING SERVICES



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TORQUEING

- We have a wide range of hydraulic and pneumatic torqueing tools for on-site services.
- Parallel Joint Closure using multiple wrenches to ensure “joint integrity.”
- Adherence to bolting sequence procedure as per ASME guidelines.
- Crew with over 10,000 hours of combined experience in torqueing.
- Flange identification, tagging, and data management for accountability and traceability.

RANGE

Hydraulic Torque Wrenches: **47**
Nm - 187,794 Nm

Pneumatic Torque Wrenches: **68**
Nm - 11,233 Nm

Nut Size: **22 MM to 245 MM**



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TENSIONING

- We have a wide range of standard, spring return, foundation, and multistage tensioners for on-site deployment.
- Parallel joint closure by using multiple tensioners to ensure "joint integrity."
- Optimum for all ANSI, API, and ASME flanges.
- Adherence to bolting sequence procedure as per ASME guidelines.
- Flange identification, tagging, and data management for accountability and traceability.

RANGE

Bolt Tensioning: **228 kN - 4650 kN**

Nut Size: **M24 (1") - M100 (4")**



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FLANGE MAINTENANCE

Flange Spreading

- We have several integral, external, and valve change-out hydraulic flange spreaders.
- Can be used for wafer/butterfly valves, spades/spacers, or gaskets from large flange joints.
- Flange spreader range covers ANSI, DIN, SPO, ASME, API, and BS flanges.

RANGE

Spreading Force: **Up to 25 Tons**

Access Gap Required: **5 - 40 mm**

Flange Alignment

- We offer mechanical fixed flange & rotational alignment tools for low and medium pressure flange joint misalignment.

RANGE

Alignment Force: **Up to 6 Tons**



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NUT SPLITTING AND STUD REMOVAL

- We offer integral and external nut splitting tools.
- An easy, quick, and efficient way of cold cutting seized-up nuts in a corroded environment.
- Nut removal without any damage to the studs, and without hazardous procedures like grinding, sawing, and flame cutting.
- Stud extraction via non-hazardous procedures.

RANGE

Nut Splitting: **M22 (32 mm) - M72 (110 mm)**

Capacity: **10 Tons - 50 Tons**



COLD PIPE-CUTTING AND PREPPING

- We offer several hydraulic-and pneumatically-operated cold pipe cutting and beveling machines.
- We provide cold-cutting machines that can cut Carbon Steel (CS), Stainless Steel (SS), Alloy Steel (AS), Inconel, and Monel pipes.
- Our forte lies in pipe severing, replacing, cutting, grooving, beveling, counter boring, and overall pipeline integrity.
- A 30-man read-to-go expertise crew.

RANGE

Pipe Cutting: **1' - 56'**

Pipe Thickness: **4mm - 85mm**

Beveling: **37 * 5, 22 * 5, 47 * 5
standard bevel & J Groove**

Counter Boring: **10' to 56'**



FLANGE FACING AND SERRATION

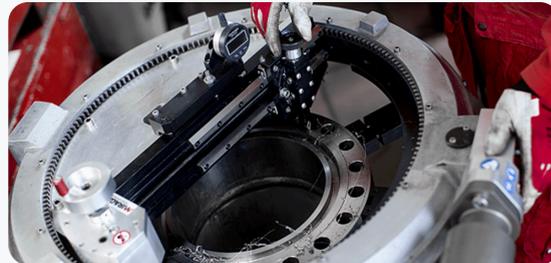
- We offer several manual and pneumatically-operated flange facing and serration machines.
- Tools can be configured either in ID, OD, or surface-mount configurations.
- Flexibility to create a variety of cuts, including chamfers, O-Ring grooves, lens rings, and other angular surfaces.

RANGE

Flange Facing ID or OD Mount: **12'**
- **80'**

Flange Serration (Automatic): **12'** -
80'

Flange Serration (Manual): **0'** - **1'**



CALIBRATION

Calibration is the act of ensuring that a method or instrument used in measurements will produce accurate results. There are two common procedures: the **working curve** and the **standard-addition method**. Both methods require one or more standards of known composition to calibrate the measurement.

Instrumental methods are usually calibrated with standards that are prepared (or purchased) using non-instrumental analysis; there are two direct analytical methods: **gravimetry** and **coulometry**. Titration is similar, but it requires the preparation of a primary standard.

The main advantage of the working curve method is its rapidity: a single set of standards can be used for measuring multiple samples. The standard-addition method requires multiple measurements for each sample, but it can reduce inaccuracies due to interferences and matrix effects.

It is a branch of civil engineering involved with the maintenance, design, and construction of both natural and man-made environments, such as roads, railways, buildings, water reservoirs, subdivisions, airports, bridges, sewers, tunnels, and dams. The civil engineering industry consists of individuals, companies, and other interested parties who are involved in the planning, creation, and designing of our infrastructure.





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VALUE ADDED SERVICES



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BLUEMATCHING AND ONSITE DRILLING

- We offer blue matching services for the correct positioning core and cavity during mound assembly.
- Our on-site drilling services include cutting jobs, drilling, and tapping through steels of all thicknesses. Services include hole punching or circular, square/rectangular slots, in restricted/awkward positions.

RANGE

Blue Matching: **As per equipment dimensions.**

On-Site Drilling: **All types of steels.**



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GENERAL WORKSHOP MANAGEMENT

- We use lathe, drills, milling, tapping, and shaping equipment for the production of components as per our clients' requirements.
- We assign maintenance supervisors for the general health and safety of the manpower and machines in our managed workshops.

Safety:

All personnel to follow housekeeping, PPEs, and hazard identification procedures while maintaining a clean work area.

Storage:

Safe handling and proper storage of hazardous/flammable/dangerous materials via shelving, labelling, waste management, and periodical inspections to avoid spillage, leakage, breakage, or fails.

Handling:

Only trained personnel operate machinery under the supervision of their respective team lead as per guidelines set to ensure adherence to processes control procedures.

GENERAL TOOL MAINTENANCE AT CUSTOMER PREMISES

General Inspection:

Our Annual Tool Maintenance service covers end-to-end health and maintenance checkups of equipment supplied or available at our clients' locations. This includes tensioning tools, torque tools, machining equipment, jacks, spares, hoses, pumps, etc.

Tools Audit:

Periodical health inspections of tools and accessories to preemptively identify defects, abnormalities, and nonconformities.

Calibration:

Timely calibration and certification of all equipment supplied or provided, to always maintain operational readiness. On-site repair and calibration of torqueing and tensioning equipment with Fostech Mobile Van.

Testing:

Equipment to be validated under the Test Plan Procedure set before being cleared for use on-site.



PRESSURE AND LEAK TESTING

A leak is an undesirable flow of gas or liquid through the wall of a vessel via an imperfection such as a hole, crack, or bad seal. Leaks require a pressure difference to generate the flow; they always flow from higher pressure to lower pressure.

Typically, leaks are thought of as travelling from positive pressure (inside an object) to atmospheric pressure (outside an object). This is not always the case as a leak could be from the atmosphere to inside an evacuated object, but it helps us to think about it in this way because the units and terminologies are based on this model.



VALVE OVERHAULING

We have acquired a wealth of experience in overhauling every type of valve from every area of industrial, commercial, and marine installation.

We strip all valves to their basic form, clean them using suitable methods, and thereafter inspect them to ensure they are within the manufacturer's tolerance to be put back into service in the valve.

Flange faces are carefully inspected for damage and machined if required. Seat and disc faces are machined if required, and then lapped to ensure a perfect seal. All packagings and gaskets are replaced with material suitable for the application. The valves are then reassembled, pressure tested, and painted in accordance with our clients' requirements.

We attach metal tags to identify the valves in our records, and a test certificate is issued detailing the pressure sustainment of the tested valve and the engineer responsible.



ADVANCED NON-DESTRUCTIVE TESTING (ANDT)

ANDT is regarded as one of the best approaches to NDT in construction engineering. It is the use of advanced techniques to evaluate the integrity and quality of materials and structures without causing any damage to either.

ANDT ensures the safety and prevention of structural failures while remaining compliant with industry standards. It is deployed in testing concrete, steel, and welds in buildings, pipelines, bridges, and other types of infrastructure.

Fostech experts carry out ANDT through Visual Testing (VT), Radiographic Testing (RT), Digital Radiography (DR), Magnetic Particle Testing (MT), and Liquid Penetrant Testing (PT), using the industry's best equipment.



INSTALLATION OF PIPES, SPOONS, AND VALVES

Even when the installation is temporary difficult, it is important to think about the long-term work of the operator. It is best to have the valve hand wheel and the chest (usually 1.2 meters away from the operating floor), so that the opening and closing of the valve is more labor-saving.

The floor valve hand wheel should be facing up, do not tilt, so as to avoid awkward operation. The valve against the wall machine should also leave room for the operator to stand.



WORK PERFORMED IN THE CIVIL CONSTRUCTION INDUSTRY

Tasks performed in the industry include the planning, creation, and maintenance of public infrastructure, basically anything that will make the lives of people easier. These include:

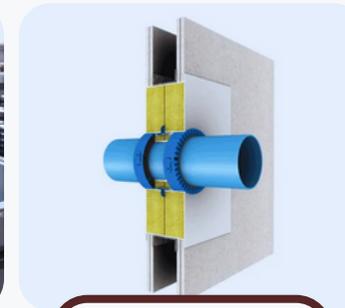
1. Liaising with governments, clients, and other professionals.
2. Studying, evaluating, and investigating the land and building sites suitable for the possible creation of infrastructure, adhering to the guidelines created by the government, local bodies, and clients when planning, creating, and maintaining infrastructure.
3. Creating infrastructural plans and having these approved by governing bodies and local authorities.
4. Creating cost estimates and contracts.
5. Tendering the contracts and hiring contractors.
6. Supervising and monitoring the construction of the infrastructure to ensure it matches the plan and serves the purpose.

FOSTECH PROCUREMENT SERVICES

We provide procurement advisory and delivery solutions to help reduce supply risk and improve procurement effectiveness. It is also the link between engineering and construction through sourcing, purchasing, and delivering bulk materials and equipment.



Flanges



Pipes & Seals



Valves



Bolts & Nuts



Hydraulic
Torque Tool



Electric
Torque Pump



Tensioners



HPF Air
Pneumatic Pump

LIST OF EQUIPMENT WE HELP OUR CLIENTS TO PROCURE

- Hydraulic Torque Wrenches
- Torqueing Pumps
- Valves
- Bolts and Nuts
- Flanges
- Tensioners
- Hydraulic Nuts
- Tensioning Pumps
- Flange Spreader
- Nut Splitters
- Bolting Accessories
- Slugging Wrenches
- Non-Sparking Safety Tools

