

Since 1957

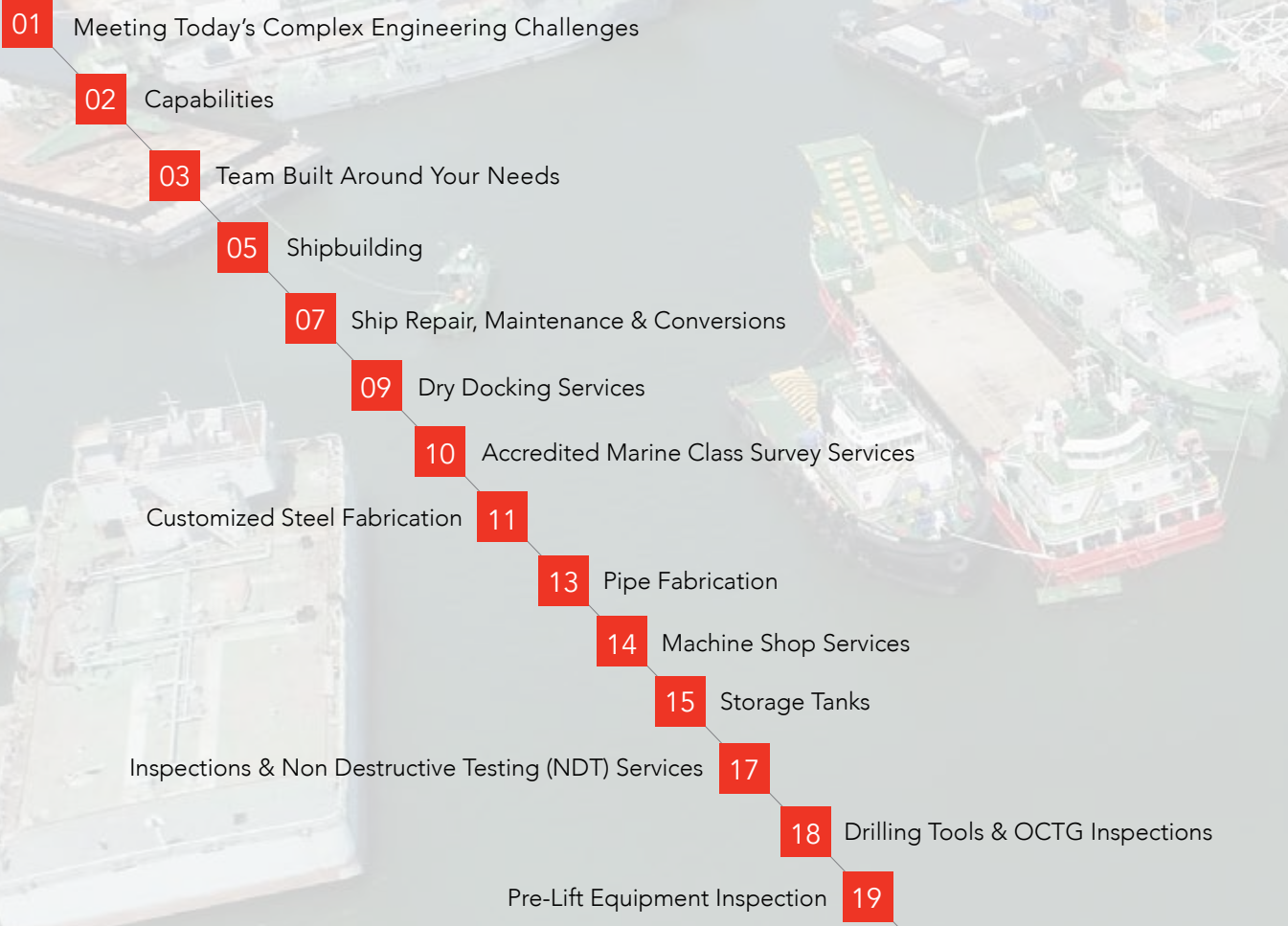




SOUTHERN ENGINEERING CO LTD

Marine & Offshore Engineering



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MEETING TODAY'S COMPLEX ENGINEERING CHALLENGES



CERTIFICATIONS



Southern Engineering Co. Ltd (SECO):
An ISO 9001 and RINA accredited
solution driven engineering company
specializing in marine and offshore
engineering.

At SECO, our aim is to be the engineering company of choice in all the industrial sectors we serve in the East African region. As an innovative and fast-growing organisation, our highly skilled team of engineers and craftsmen backed with our 60+ years heritage enable us to deliver engineering solutions to the most demanding operational and technical challenges faced by our customers

around the region. From our origins as a ship repair specialist, SECO has developed unparalleled operational expertise in the marine environment, providing comprehensive products, services and support to the marine renewables, shipping and defence industries. On land, SECO is increasingly a supplier of choice to the Oil and gas, construction and transportation sectors, providing specialist knowledge, skills and capabilities in the most safety-critical of engineering environments. Our core values of delivering excellence and continual innovation have been the key contributors to our success. By leveraging

our regional reach, deep operational understanding, breadth of capability and the enthusiasm and commitment of our staff, SECO has become a trusted partner of major corporations, government agencies and other valued customers around the East African region.

As a company we place a great emphasis on effective client relationships. We invest time to understand our customer requirements and business strategies in order to tailor the best possible service solutions to their existing and future needs.



CAPABILITIES

SHIPYARD

- Shipbuilding
- Ship Repairs
- Ship Maintenance
- Ship Conversions
- Accredited Marine Class Survey Services
- Dry Docking Services
- Engine Overhaul

MECHANICAL ENGINEERING

- Customized Steel Fabrication
- Machine Shop Services
- Pipe Fabrication
- Storage Tanks

INSPECTIONS & CERTIFICATIONS

- Inspections & Non Destructive Testing (NDT) Services
- Drilling Tools & OCTG Inspections
- NDT Training & Certifications
- Pipe Cleaning & Inspections
- Tank Inspections

ONSHORE & OFFSHORE CIVIL WORKS

- Piling
- Load Test on Piles
- Construction & Rehabilitation of Ports, Harbors & Jetties
- Dredging & Reclamation
- Marina & Breakwater Constructions
- Shoring Works
- Slope / Shore Protection
- Ground Improvement
- Civil Works & Construction
- Slipway Construction

ONSHORE AND OFFSHORE SITE SURVEY

- Geo-technical Ground Investigations
- Bathymetric & Hydrographical Surveys
- Seismic Refraction Survey
- Magnetic Survey
- Topographic Survey
- Pre & Post Dredging Survey
- UXO Survey
- ROV Inspections
- Diving and Underwater Photography

HEAVY LIFTING & EQUIPMENT RENTAL

- Engineered Heavy Lifting
- Plant, Machinery & Tools For Hire
- Generator Set Rentals
- Lifting Plan Development

**A TEAM
BUILD AROUND
YOUR NEEDS**





The SECO workforce is well trained and each of our 600+ employees contributes to our success.

Working for SECO often means being involved in pioneering projects.

We know that our people – their expertise, creative thinking and sheer hard work – are the foundation for that success. SECO makes every effort to secure special Kenyan talents that make the difference.

RECRUITING AND RETAINING THE RIGHT PEOPLE

Continuous education and qualifications are crucial. We select people with an entrepreneurial, creative spirit, people who are keen to take on responsibility. SECO makes every effort to create an environment in which everyone can flourish and are stimulated to further strengthen their competencies, share knowledge and develop skills to make strong team players.

In order to achieve this goal, SECO strives to attract national and international talents whose background is as diversified as the company's activities and regional presence.

Diversity in our teams is our strength: Diversity is not about being different but all about seeing more through different eyes. Our corporate values apply equally to our staff and clients, and are a key factor in our ongoing success.

SHIPBUILDING

SECO builds a wide range of highly efficient ships with lasting competitiveness, all build under International Association of Classification Societies (IACS) classification. We offer our combined know-how in the areas of design, engineering, project management, construction, installation and commissioning. We are shipbuilders, delivering quality on-time - as we have done since 1957.

A RELIABLE PARTNER

Shipbuilding is both an art and a science, calling for a high level of expertise and a workforce able to deliver products that provide long-term competitiveness. At SECO, customers get experience, reliability and shipbuilding quality that justify a long-term investment.

SECO has unique competence in engineering, installation, commissioning and upgrading. We focus on innovative technological solutions and methods, project management, and efficient logistics and outfitting methods. Team spirit and streamlined production

provide a high level of flexibility and quality. Decades of building advanced vessels for demanding marine operations have given us a knowledge base and experience that guarantee the highest standards of quality, execution and delivery precision. When we build ships, we have the ship's life cycle and the industry's future in mind. Our project managers have years of experience solving and delivering complex projects. The scope of our clients ranges from

Bunker Ships, Pilot Boats, Barges, Ferries, Fishing Boats, Dredgers, Split Barges and Survey Boats.

LOCATION

SECO's shipyard is strategically located near at the entrance of the port of Mombasa and is the oldest family-owned and operated private shipyard in the East African Region.



MV UMURAGE

Type: Research Vessel
Class: Bureau Veritas
Length: 16.00 m
Breadth: 4.20 m



MV ALBERT NILE 1

Type: Modular Passenger Ferry
Length: 42.44 m
Breadth: 17.26 m

SHIPBUILDING PROJECTS



ALPHA TRION

Type: Jack-up Barge
Length: 35.70 m
Breadth: 17.9 m



ALPHA KIRAWIRA

Type: Multi-purpose Support Vessel
Length: 64.0 m
Breadth: 15.0 m



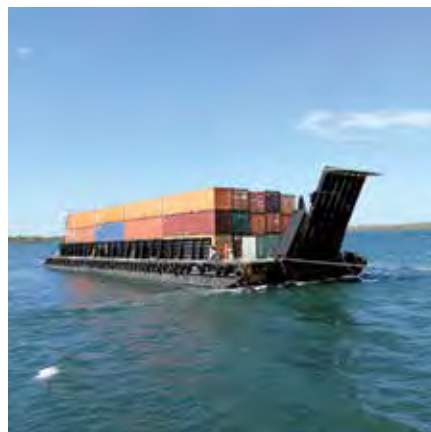
MUSSA K

Type: Double Skin Bunker Vessel
Length: 51.0 m
Breadth: 11.0 m



ALPHA JIMBO

Type: Multi-purpose Vessel
Length: 31.78 m
Breadth: 8.1 m



ALPHA 2500

Type: Non-propelled Barge
Class: IRS
Length: 65.0 m
Breadth: 18.0 m



UNDER CONSTRUCTION

Type: Cargo Barge
Class: Bureau Veritas
Length: 77.98 m
Breadth: 11.83 m

SHIP REPAIR, MAINTENANCE AND CONVERSIONS

Our ship yard delivers high quality ship repair and conversions. With all service workshops in close vicinity, the work is carried out in an efficient manner.

SERVICE & AFTERMARKET

We have a unique expertise in engineering, installation, commissioning and upgrading. We focus on innovative technological solutions and methods, project management expertise and

efficient logistics and outfitting methods. Team spirit and streamlined production provide a high level of flexibility and quality. Close cooperation between design, engineering, production and operation makes us an effective supplier of aftermarket services. We offer engineering for rebuilding of any vessel, engineering for installation of project equipment as well as calculations and analyses such as strength calculations, stability updates, CFD simulations,

station keeping analyses and motion analyses.

MEETING THE DIVERSE NEEDS OF OUR CUSTOMERS

Encompassing more than 100 acres, our facility provides our clients an efficient and cost effective lay out of prime space, dry dock, support shops, boat yard and administrative offices in a single and well-equipped location.

Hippopotes,
a non-propelled
backhoe dredger,
after undergoing
major repairs at
our shipyard





YARD FACILITIES

SECO Shipyard is a compact and complete ship yard with excellent facilities, to secure the best possible quality on every process in the outfitting, integration and finishing of new builds, ship repairs and conversions. All assets are in walking distance from the yard administration offices.

SECO has naval experts in the areas of HVAC (ventilation), accommodation, stability, machinery, propulsion, hull structure, outfitting, electrical installation. On the SECO shipyard the services include conversions, repair, antifouling, painting, pipe production, maintenance, upgrades, steel work, welding, docking, mooring, storing of maritime equipment.

BLASTING & PAINTING

We offer prepaint surface treatment of hulls and hull parts. The painting process is performed in the controlled environment of our Shipyard.

MOBILISATION & DEMOBILISATION

SECO offers excellent logistics for effective mobilisation and demobilisation of equipment and tools for vessels such as subsea vessels, anchor handling tug supply vessels and cable laying vessels.

FLEXIBLY, FAST & COST EFFICIENT

Optimizing capacities is an ongoing process. Whether you're increasing cargo and passenger capacities, converting to

more economical propulsion or meeting the latest regulations – SECO is always the right partner for any conversion project. We command proven expertise for conversions and refitting of any scope and a high degree of complexity. In close cooperation with our customers, we develop the technically best and most economical solution for every requirement.

WE CARE FOR YOUR REPAIRS

SECO always offers ship owners the optimum solution, particularly when repairs require the development of specific procedures or when temporary repairs need to ensure a minimal interruption of the journey.

DRY DOCKING SERVICES

WITH PROFESSIONAL PLANNING, PREPARATION AND EXECUTION, WE MAKE DRY DOCKING PREDICTABLE AND EFFICIENT

The largest single cost for any ship owner during the lifetime of vessel ownership is the cost of regular dry docking. SECO's naval engineers, the experienced dry dock team have a record of efficient docking services. Dry docking is a high risk job and if not managed well, through good preparation and tight controls then costs can quickly spiral and time in dock can spin out of control.

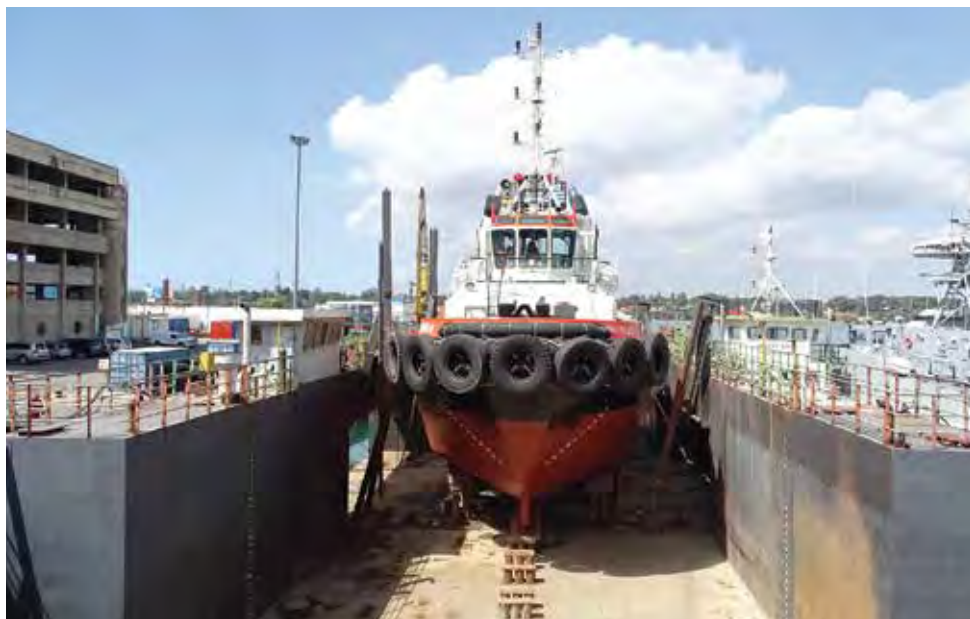
SECO's technical management team is able to carry out the effective planning of dry dock and other major repairs, retrofits and conversions, as well as supervision of these services, to a high standard.

Through an evaluation, we will demonstrate valueadded savings as well as resolve any uncertainties – enabling both you and us to conduct efficient dry dockings in the future. Retrofitting of new and replacement equipment and project work, as well as full vessel conversions and lengthening, can be managed using the same methodology, and has been done so with great success.

The SECO Dry Dock is ideally located near at the entrance of the port of Mombasa and our dock is at the core of our modernized shipyard.

Our dock can harbor ships with a length of up-to 75 meters, beam of 12.5m and a maximum weight of 1100 tons.

Ask for a dock maintenance appraisal against a minimal fee, our specialists can give you a 2 year schedule running up-to your dry docking.



ACCREDITED MARINE CLASS SURVEY SERVICES

As accredited marine surveyors, we provide a reliable assessment of a vessel's condition. We provide survey inspections with elaborate marine survey reports, enabling your business decisions.

This way our clients save time and money.

Independent surveys and reports of the current condition, class status and life history of a vessel provide vital information to help evaluate a proposed

investment. This vital information to help evaluate the needed investment. Our survey services:

- ❖ Survey project management and support
- ❖ General positioning support (Trenching, diving, ROV & excavation)
- ❖ Precise positioning services, surface and sub-sea
- ❖ Subsea asset inspection – structures, pipelines, umbilicals and cables
- ❖ Construction support - as laid, as trenched and as built surveys
- ❖ Out of straightness (OOG) surveys
- ❖ Pre-lay grapnel runs (PLGR)
- ❖ Data management services
- ❖ Survey and navigational equipment supply





CUSTOMIZED STEEL FABRICATION

STEEL IS OUR BUSINESS

In addition to our standard offerings, we've designed and manufactured a broad range of customized steel solutions for the regional market.

Our forte is establishing a balance between advanced technology and the proven machine design principles required to achieve your desired results.

Our design team's sensible approach is mindful of production objectives, while focusing on quality, value, maintenance, sanitary design, and return on investment.

STAINLESS MANUFACTURING

We have decades of experience working with stainless steel. From the first cut to the final assembly, our knowledge and expertise provides you with the necessary assurance that your project is done correctly to your specifications. There is no concern of iron contamination during the fabrication process.

STAINLESS MANUFACTURING

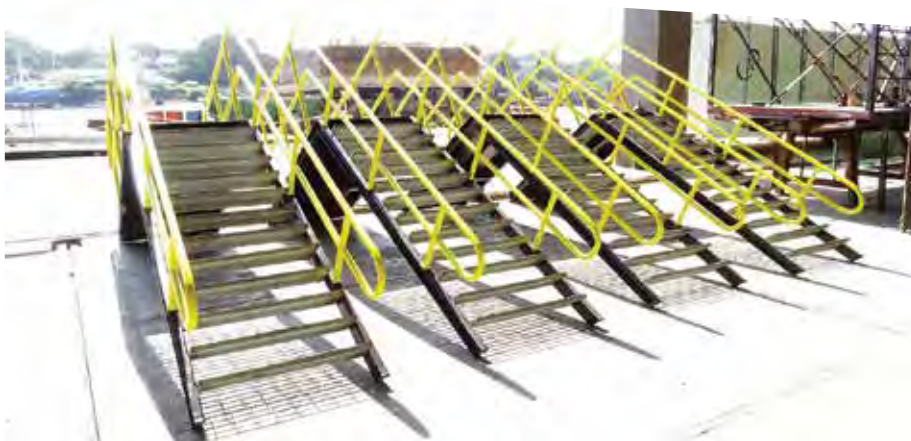
We work under a single contract with your company providing you with all of the services required establishing

a unified flow of work from concept to project completion. This single source integrated team model results in superb collaboration, higher quality, better delivery times, and cost savings.

ONE-OFF MANUFACTURING

Many fabrication companies are primarily interested in large production runs. At SECO, we embrace the low volume or one-off manufacturing.

We are able to assist in all levels of design and fabrication depending upon your specific needs.



WELDING

SECO's 6 G welders offer complete assemblies and subassemblies for a range of industries. With certified mobile welding services, we can offer on-site repairs and assemblies.

CNC MACHINING

We offer high-precision CNC machining services for a range of OEM suppliers. Our automated CNC machining process allows us to complete a range of manufacturing projects.

CNC PUNCHING

Using CNC machines, angles and flat bars can be sheared, notched, and punched with high-precision. This allows us to fabricate pieces in a highly economical manner.

METAL FORMING

Need a full-service solution to metal

forming and bending? You can count on SECO to get the job done — even for parts and assemblies that require complex sequence of bends.

OTHER CAPABILITIES

- ❖ Paint and Powder Coating
- ❖ Metal Finishing
- ❖ Metal Sawing

We're always on time, because we're on your time. By working with SECO, you can expect services to be delivered in a timely, professional manner.

We emphasize quality at each stage of the fabrication process, from design to completion.

While we do have a quality control department, we see every department as an essential part of SECO's fabrication process.



PIPE FABRICATION

SECO's pipe fabrication shop produces: pipe spools, piping skids, tanks, structural fabrication, and special fabrications in accordance to our client's specifications.

Our ASME code shop provides piping spool fabrication per B31.1, B31.3 & API1104.

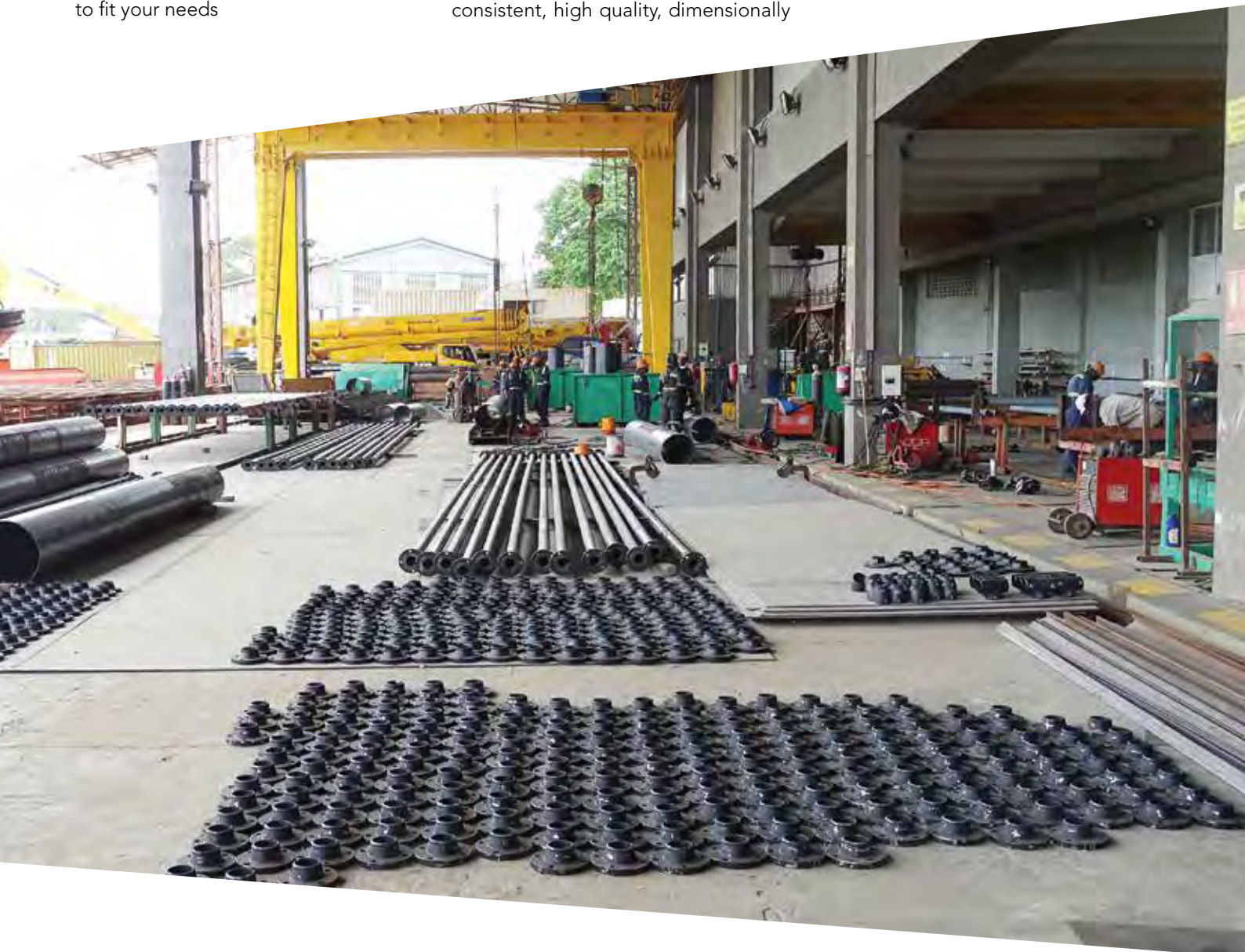
Our pipe fabrication client base includes industrial and heavy commercial facilities with a strong focus on refining, power and offshore industries. We have the pipe fabrication expertise & knowledge to fit your needs

QA DOCUMENTATION

Over the years we have established ourselves as a consistent experienced quality performer in the complex area of piping fabrication. This requires a continuous commitment to the evaluation and improvement of our technology, equipment, and quality processes with the goal of maintaining the role as the leader in these industries.

Pride in our work, coupled with a highly trained and capable workforce, yields consistent, high quality, dimensionally

exact piping day after day. Our facilities pursue continuous improvement methods utilizing the latest methods and procedures. Our welders are certified through ASME Section IX, the most stringent requirements in the industry. We maintain ASME code welding stamps "U", "S", "R", while undergoing vigorous ASME welding procedure inspections. All pipework is dispatched with a quality assurance package which includes various documents dependent upon client specifications and requirements.



MACHINE SHOP SERVICES

Machining big parts to precision is typically our work.

High value parts justify re-machining or special parts fabrication. Examples are such as ship shafts, gears, conveyor belt wheels or rooming of large engine blocks.

Typical example is the repair and replacement of large dia (>1 000 mm) bearing houses for the oven drums of cement factories.

The machine shop at SECO is run by highly qualified staff, both experienced and proficient, true craftsmen.

Their tools are regularly upgraded enabling them to address various truly complex machine works. Special and unique products often need adapted special tooling which is managed in the same shop. Fairly unique in the region is our ability to regenerate worn shafts by applying metal spray techniques.

Typical works of our machine shop is fabrication or repair of:

- ❖ Propulsion trains
- ❖ Conveyor belt wheels
- ❖ Special flanges
- ❖ Boring engines
- ❖ Special brackets
- ❖ Clutch and Valve parts



STORAGE TANKS

SECO is a leading manufacturer of above-ground storage tanks and custom ASME pressure vessels for the oil, natural gas, propane, and chemical industries, as well as a variety of other industries requiring storage tanks and pressure vessels. SECO offers a full line of single and double walled steel and stainless steel tanks to fit your exact needs. We take pride in our craftsmanship, so we can offer the highest quality ASME pressure vessels, stainless steel tanks, storage tanks and process tanks available in the region. Our tanks can be used for petroleum, diesel, new and used oil, biodiesel, anti-freeze, fuel additives, and more, SECO provides an easy to install cost effective solution to fit your needs.

TANK REPAIR AND MAINTENANCE SERVICES INCLUDE:

- ❖ Tank bottom replacement
- ❖ Tank shell repair
- ❖ Fixed and Floating roof replacement and repairs
- ❖ Relocation of tanks
- ❖ Geodesic dome installations
- ❖ Tank seal inspection and repair
- ❖ Rolling ladders and stair treads
- ❖ Tank foundations

MAINTENANCE SERVICES

We offer complete maintenance and refurbishment services for all types of pumping and pipework systems, including valves, actuators, agitators, feed systems etc.

We also specialize in the dismantling and removal of redundant plant and equipment.

All of our employees are trained to work in confined spaces and have undertaken numerous commercial, industrial and residential projects.





STEEL STORAGE TANKS

At SECO, we take pride in being one of the industry's leading manufacturers of custom single and double wall above-ground storage tanks. Waterford Tank and Fabrication's steel storage tanks are designed with a robust, welded steel for environmentally safe storage of crude oil, condensate, water, boiler return, blowdown, surge, pollution control, and other liquids. These tanks are widely used in the oil and gas industry across the East African region.

We manufacture our tanks from carbon or stainless steel, which can be built in cylindrical, spherical, square, and tube shapes in both horizontal and vertical orientations.

Your customized project can include fittings for piping up to 6 inch NPT, thief hatches, EPRV's, and clean out doors, as well as skirted tapered bottoms.

We also offer a variety of paint types and colors for internal and external coatings to extend the life of your tank.



DOUBLE WALLED TANKS

SECO's Double wall tanks provide the best protection against hazardous chemical spills into the environment. Our aboveground steel storage tanks provide safe storage of flammable and combustible liquids using minimal space.

If you are concerned about the effects fuel storage has on your bottom line you will be happy with your decision to purchase a SECO Double Walled Tank.

We can build your double walled tank exactly to your specifications and ensure on time delivery and complete customer satisfaction.



SEPARATOR TANKS

We offer Oil & Water Separator tanks which are specialty tanks designed to separate free oil, grease and settleable solids from water.

Each Separator tanks allows for clean water is discharged to a storm drain or sanitary sewer after separation is complete, while the separated oil is contained in the tank for proper disposal.

INSPECTIONS & NON DESTRUCTIVE TESTING (NDT) SERVICES

WE AIM TO ENSURE THAT YOUR ASSET OR FACILITY IS SAFE AND FIT FOR PURPOSE

Machined parts and industrial structures can be complex systems that experience extreme loads and fatigue during their lifetime. Nondestructive testing (NDT), enables the inspection of these components without permanently altering the equipment. It is a highly valuable technique that is often used to validate the integrity of materials, detect instabilities, discover performance outside of tolerances, identify failed components, or highlight an inadequate control system.

As technology has progressed, the types of inspection and equipment selection process options have become more advanced. However, this has also made the inspection selection process more complicated. It is important to note that choosing the wrong inspection method can end up costing you a significant amount of wasted time and money.

Main guidelines applied in SECO are based on the ASNT section V standard.

SERVICES

- ❖ Magnetic Particle Inspection (MPI)
- ❖ Liquid Penetrant Inspection (LPT)
- ❖ Ultrasonic Shear Wave Inspection
- ❖ Radiographic Testing (RT)
- ❖ Visual testing (VT)
- ❖ Harness testing
- ❖ Positive Material Identification
- ❖ Vacuum Box Testing
- ❖ Holiday Testing





DRILLING TOOLS & OCTG INSPECTIONS

Due to the maturing safety and environmental awareness on drilling today, inspection of drilling tools is becoming ever more important. Over the years, SECO has specialized in the inspection of OCTG to API standards.

Prudent and responsible operations have become the norm.

We constantly send our inspectors to various third party training courses, this way they keep up with the current standards and technologies in OCTG inspection.

Today, SECO has the ability to perform inspection programs to relevant industry acceptable standards including but not limited to the following;

- ❖ API RP 7G Standard Rack Inspection for Drill Pipe
- ❖ API Tool Joint Inspections
- ❖ 5CT Inspection of Tubing/Casing
- ❖ Tubular Maintenance Services
- ❖ HWDP and Drill Collar Inspection Services

DRILL PIPE & BHA INSPECTION AS PER API/DS1/NS2 STANDARD

- ❖ Drill Pipes & Tubing Strings are inspected using the EMI units.
- ❖ Tool Joints of Drill String are inspected using UV Magnetic Particle Inspection
- ❖ Critical stress areas are inspected using MPI method.
- ❖ Non-ferrous materials are inspected using liquid penetrant inspection method.



PRE-LIFTING EQUIPMENT INSPECTION

Crane, hoisting and lifting equipment inspection from SECO – ensures the safety and reliability of your equipment and compliance with statutory requirements.

Whether you own or operate cranes, lifting or hoisting equipment, you need to ensure that they are safe, and in compliance with statutory requirements.

That is where our crane, hoisting and lifting equipment inspection can help. Our pre-lifting equipment inspection can help you; in various ways

- ❖ Prepare your lifting plan
- ❖ Meet all associated regulatory requirements, with independent inspection carried out in accordance with all applicable regulations, standards and engineering practices
- ❖ Assure the safe and proper working capability and condition of your crane or lifting and hoisting equipment
- ❖ Maintain the capability and availability of your equipment

Lifting equipment inspection services include:

- ❖ Checking of brakes, clutches, sheaves, and wire rope assemblies
- ❖ Dynamic and static load testing
- ❖ Inspection of all the structural load bearing members, including sheaves
- ❖ Line level and span crane gantry surveys
- ❖ Operational tests to assure that your unit is functioning properly



TANK INSPECTIONS

SAFETY AND INTEGRITY OF YOUR STORAGE TANKS

When storing hazardous liquids and drinking water, preventing leakage is vital. Storage tank corrosion can cause environmental contamination and losses.

As a result, you need to ensure the safety and reliability of your tanks. Our inspection and audit services help you to avoid disasters and ensure that your storage tanks meet all relevant regulations.

As the pragmatic supplier of inspection, audit and calibration services, we offer you unparalleled expertise, state-of-the-art technology and a global reach. That is why we are the first choice for our clients in need to ensure safe storage of everything from chemicals and petroleum products to liquefied gases. We offer you a comprehensive range of services for both underground storage tanks (UST) and above ground storage tanks (AST). Our storage tank inspection, audit and calibration services include:

- ❖ Assessment of water and sludge inside containers
- ❖ Assessment of subsoil corrosion
- ❖ Tank floor measurement
- ❖ External thickness measurements and calculation reviews
- ❖ Tracing of system leaks and assessment of material strength
- ❖ Welding procedures and qualification to international standards

ONSHORE AND OFFSHORE SITE SURVEYS

GEO-TECHNICAL GROUND INVESTIGATIONS

With proper planning, a well-thought-out exploration programme for subsurface characterisation can reduce or even eliminate expensive surprises during and after construction. SECO's highly regarded expertise in geotechnical ground investigation is built upon knowing what questions to ask as well as where and how to gather pertinent information. Our extensive fleet of drilling and support equipment enables us to provide a comprehensive range of field services which include

- ❖ Onshore & Offshore Geotechnical Investigation - sampling, Lab testing, SPT, DPT, DCP & Vane test
- ❖ Piezometers installation and monitoring
- ❖ CPTu
- ❖ Ground water investigations

SECO's geotechnical site investigation services can help you gain insight into the ground conditions at a particular site or over a wide area or corridor. This information is typically used to obtain an understanding of the nature and variability of ground conditions or to determine specific engineering properties of the soil and rock beneath a site. It is also useful in assessing ground risks and to understand the behaviour of the ground in response to planned development activities or natural forces such as seismic shaking.



BATHYMETRIC SURVEY

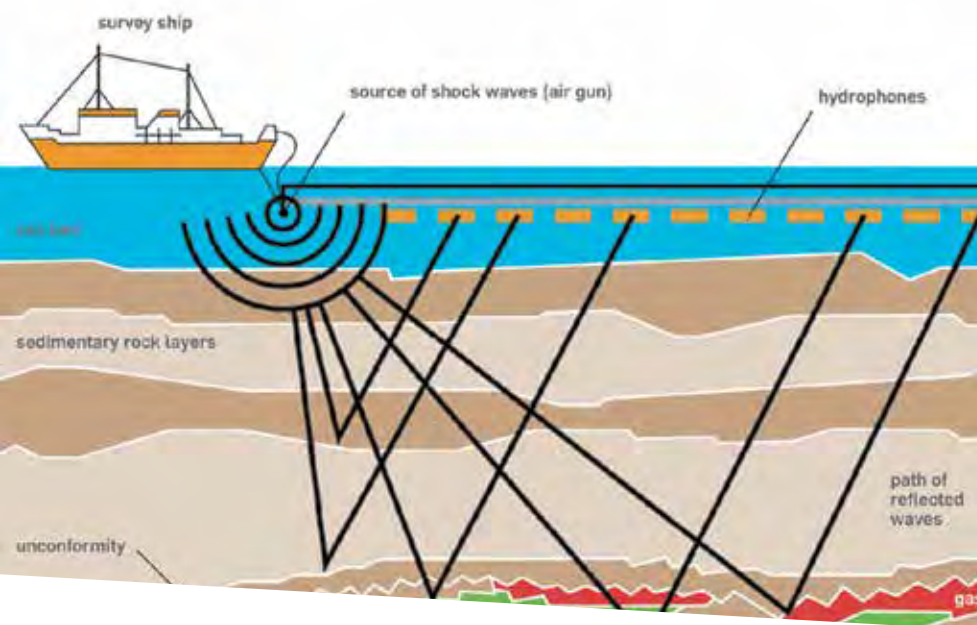
The survey involves measuring the terrain of lake, dam or ocean floors to determine the bed profile. Multiple or single beam can be applied according to the technical requirements. We have completed bathymetric surveys for:

- ❖ Dredging works
- ❖ Quarry volume calculations
- ❖ For new developments
- ❖ Port construction



HYDROGRAPHICAL SURVEY

SECO's survey fleet is equipped with full ocean depth multi-beam echo sounder systems for habitat surveys, hydrographic surveys and charting. Our accurate desktop studies assist in cable route planning and for cable burial we conduct on-board soils assessment. Our services also include airborne acquisition of offshore bathymetric lidar data and the acquisition of 2D seismic data for Exclusive Economic Zone assessment for UNCLOS claims.



SEISMIC REFRACTION SURVEY

Seismic refraction is a useful method for investigating geological structure and rock properties. The technique involves the observation of a seismic signal that has been refracted between layers of contrasting seismic velocity i.e., at a geological boundary between a high velocity layer and an overlying lower velocity layer.



TOPOGRAPHIC SURVEY

A Topographical Survey is an accurate depiction of a site (property, area of land, defined boundary) which is scaled and detailed according to the spatial considerations and is the summary of the on-site data capture processes. The purpose is to gather spatial information relating to the site (natural and man-made land features).



ONSHORE AND OFFSHORE PILING

DEPENDABLE PILE FOUNDATION CONTRACTORS

Companies in the onshore/offshore construction market face many challenges in making their projects profitable. Whether you are active in infrastructure, industrial, utilities or residential construction, the common goal is to construct a reliable foundation that withstands significant loads in any type of soil. Choosing the correct pile foundation, and installing it in an optimum way, is crucial. We are dedicated to helping you achieve these

goals. Our combination of expertise and innovative equipment allows you to construct every type of foundation pile: concrete or steel; precast or cast in situ; and drilled or driven.

SPECIAL PILING TECHNIQUES

Our equipment can be adapted on projects that require specialist techniques.

This includes rake and horizontal piling, handling cast in situ (vibro) piles, and for rock breaking, sheet and concrete piles.

PILING DESIGN

Our design engineers follow a performance-based design approach that provides the most cost-effective foundation system whilst fulfilling project requirements.

Our team is equipped with all necessary facilities, knowledge and years of design and hands-on experience, all integrated to produce efficient, high performance deep foundation solutions at a minimized cost.



PILE INSTALLATIONS

- ❖ Bored cast in situ piles
- ❖ Driven piles – Steel tubular piles
- ❖ Driven Pre-Cast Piles
- ❖ Ductile Piles
- ❖ Soldier piles
- ❖ King piles
- ❖ Sand compaction piles
- ❖ Mini piles
- ❖ Micro piles
- ❖ Sheet piles – Cofferdam, Shoring works (Temporary & Permanent works)

❖ LOAD TEST ON PILES

A Pile load test is one of the most accurate methods of calculating the load capacity of a pile. Pile Load testing helps in avoiding pile damage from excess driving.

- ❖ Compression load test
- ❖ Static Load test
- ❖ Lateral load test
- ❖ Pull out (Tension) test
- ❖ Cross hole sonic logging test
- ❖ Caliper logging test
- ❖ Low strain tests (PIT /PET)
- ❖ High Strain Dynamic load test



CONSTRUCTION & REHABILITATION OF PORTS, HARBORS & JETTIES

There is growing demand for harbor construction whether this involves building new harbors or existing ports that need to optimize or expand their capacity. The activities in this field include

ANCHOR PILES

Using its specialized drilling equipment and custom-made piling frames, SECO can install anchor piles in a vertical or raked position and for diameters ranging between some decimeters to metres or even more.

JETTY CONSTRUCTION

SECO has used its specialist engineering knowledge and experience for the construction of jetties all over the East African region. The company can offer both substructures, as well as topside installation works.

The substructure of a jetty consists of repeating bents of vertical or raked steel piles, which are driven into the ground by means of hammering, drilling, vibrating or a combination of these techniques.

Topside installation works include the installation of all sorts of pile caps, headstocks, temporary and permanent bracings, topside modules, navigation aids, conveyor belts, crane structures and any other facilities required for the project.

As your marine construction partner, our goal is to stay under budget and better manage the schedule for ontime completion. We do this through quality, results-driven self performance that enables us to build projects of all sizes.





MOORING AND BERTHING DOLPHINS

Mooring and berthing dolphins are designed to safely moor vessels alongside offshore structures. SECO can offer both substructures as well as super structure installation works.

QUAY WALL RENOVATION

Quay wall renovation works might be required to reinforce existing quay walls to enable heavier materials and equipment to be handled. SECO can provide services ranging from chartering jack-up platforms as a stable working platform to facilitate drilling works, to the management of full renovation projects.

XL DIAMETER DRILLING

Our in-house drilling systems can be installed onto floating vessels and barges to support marine construction projects. These heave compensated solutions allow us to drill sockets in water depths beyond the reach of our jack-up barges. We provide a complete service for subsea structure installations including wind farm foundations, vessel/platform moorings, conductor casings, jetty foundations and mudline cellars. For dredging and subsea mining applications, drill cuttings are lifted back to the surface and passed through onboard washing and screening plants, allowing us to provide high volume bulk sampling solutions which target specific locations or depth.



DREDGING AND RECLAMATION

We have undertaken various dredging and reclamation projects all over the East African region. In many cases the projects have involved associated reclamation works and in some instances the main purpose of dredging has been to provide source materials for reclamation.

Our projects include creation of new navigation channels or deepening of existing channels, port basins and vessel turning circles, trenches for tunnels and pipelines and creation of new land areas for various forms of infrastructure development. We employ in-house navigational software to minimize and optimize dredging layouts.

Reclamation techniques depend upon the type of natural materials found at the site. we have successfully done soil replacement, soil strengthening, vertical drains and surcharging, and deep compaction to create reclaimed land.

Our engineering and works capability can cover the practical scope of civil works. Environmental considerations are becoming increasingly important and we are experienced in developing projects in consultation with environmental agencies and in using techniques that will minimize environmental impact and provide a unique sustainable solution.

Some of our key services in dredging and reclamation projects include:

- ❖ Feasibility studies
- ❖ Planning and design
- ❖ Numerical & physical modeling
- ❖ Environmental assessment
- ❖ Contract documentation
- ❖ Plant & equipment specifications
- ❖ Project evaluation
- ❖ Project monitoring & auditing





GROUND IMPROVEMENT

Ground improvement involves the modification of soil properties or constructing inclusions within the soil to achieve a required performance. SECO's experience providing optimal ground improvement solutions spans six decades of project delivery. Ground improvement techniques are used to prepare the ground for construction projects and to reduce the risk of liquefaction in areas of seismic activity. Soil can be improved by adding cementitious materials by either permeation in granular soils or mixing in all soil types.

More functions include:

- ❖ Increase bearing capacity, shear or frictional strength
- ❖ Control deformations & filling of voids
- ❖ Decrease imposed loads
- ❖ Provide lateral stability
- ❖ Increase resistance to liquefaction
- ❖ Treat expansive soils
- ❖ Stabilize soft ground

TYPICAL TECHNIQUES

- ❖ Dry Soil Mixing
- ❖ Dynamic Compaction
- ❖ Earthquake Drains
- ❖ Jet Grouting
- ❖ Low Mobility Grouting
- ❖ Rigid Inclusions
- ❖ Vibro Compaction Vibro Replacement
- ❖ Soil Mixing

CIVIL WORKS AND INFRASTRUCTURE

SECO is a class A civil construction company offering a package of diverse construction services.

The services include, but not limited to: heavy civil construction & infrastructure, general contracting, commercial & industrial facilities construction, site improvement & utilities projects, dam construction and rehabilitation, construction of commercial and institutional buildings, railroad construction & maintenance of roads. Our involvement in a project is based entirely upon your needs.

To that end, we offer a flexible, tailored approach of getting the job done in time,

within budget and to standard.

Depending on your needs, our involvement with the project can cover anything from consultancy and client representation to project management, supervision and technical assistance.

Within the required scope, our work can involve dredging, piling and foundations, construction, earth works and paving, concrete, steel construction and assembly and materials and equipment supply.

Our approach aims to enable a strong element of local content. This is our commitment to involving the local labor

pool, ensuring local employment and economic benefit.

As part of this, SECO Civil provides training to the local workforce, transferring the knowledge and skills we have gained over the years, assisting the development of those involved. This know-how transfer will go a long way in ensuring the increased competitiveness of your yard upon the realization of the project.

We support our clients throughout the full project life cycle, from feasibility studies and planning, to detailed design and whole life support.





INFRASTRUCTURE ENGINEERING

From initial regulatory approvals to final build-out, SECO has developed significant technical knowledge from an extensive list of retail/commercial, office, residential, recreational, resort, mixed-use, industrial, educational, and municipal projects.

Our expertise in a diverse range of specialized areas, including site selection and utilization, feasibility studies, utilities assessment, site/civil engineering design and permitting, complements and supports other disciplines. SECO is team oriented, which gives us the opportunity to work on multiple aspects of very complicated assignments.

SECTORS WE SERVE

- ❖ Small ports
- ❖ Slipways
- ❖ Transfer pits
- ❖ Quay walls
- ❖ Finger piers
- ❖ Breakwaters
- ❖ Jetties
- ❖ Mooring facilities
- ❖ Workshops
- ❖ Production & Repair facilities
- ❖ Warehousing facilities
- ❖ Office & housing





ENGINEERED HEAVY LIFTING

COMBINING ENGINEERING WITH HIGH CAPACITY CRANES

The SECO Heavy lifting Division lies at the heart of what we do, and gives you the benefit of working with the most experienced, knowledgeable and most trusted team in the region. Only with this understanding we have been able to lifting services to help, support and strengthen you. Our services are designed to optimize your working process, lifting your business and bringing you a great day at work. We offer services related directly to

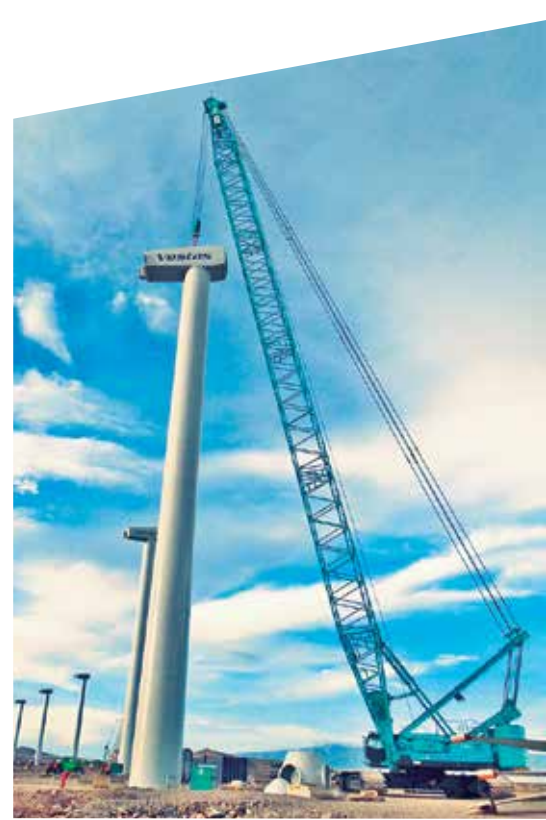
our equipment as well as certain onsite services. For many regional companies, SECO is the preferred lifting partner in delivering their demanding projects on time and on budget, we're adept at carrying the weight of expectation on major projects – having worked with the biggest names around. We provide the know-how needed to make sure multiple lifts, round-the-clock jobs run smoothly.

SECO is keen to maintain a high level on health, safety and environmental matters (HSE). Customers renting from SECO will be assured that machines have

been checked to meet high demands on quality, safety and the environment.

SERVICES

- ❖ Lifting plan design
- ❖ Lifting equipment rental
- ❖ Complex lifting projects
- ❖ Tandem lifts
- ❖ Load testing
- ❖ Spreaders and cradles



CONTRACT LIFT PROJECTS

This all-encompassing service effectively places responsibility for the entire lift process in SECO's hands.

In addition to the crane you need for a specific task, you will benefit from a range of additional services including lift design, risk assessment, method statement provision, Health, Safety and Environmental (QHSE) analysis, road closure management and any other aspects of the lift you need us to manage. This all means you can be sure that lift parameters are fully compliant with current regulations and standards.

This is the ideal option for those who want to ensure every part of planning and execution is delivered to the highest levels and use a trusted partner to take on full lift liability.

COMPLEXITY

As the East Africa largest lift solutions provider, SECO is the safe choice for handling the pressures of any multiple lift on any scale, anywhere. Our fleet of heavy haulage trucks from our sister company, Alpha Logistics supports our mobile cranes by transporting additional crane sections and lifting equipment to wherever they are needed.



PLANT, MACHINERY AND TOOLS FOR HIRE

RENTAL IS SO MUCH EASIER WITH TOP CLASS SOLUTIONS

At SECO you will find the widest assortment of equipment rental products and modular space solutions on the market, premium brands with good functionality and high quality. In addition to our rental fleet you will also find merchandise and accessories for equipment rental at our one stop shop. For you it is important that we are well updated with new technology, safety regulations and environmental engineering, that is why our rental fleet is continuously reviewed and updated.

Leading brands such as Atlas Copco, Bobcat, Bomag, Caterpillar, Hitachi, JCB, John Deere, Kubota, Manitou, Mechalec and Thwaites are available with either a trained operator or as a self-drive hire.

Most of our machines are fitted with security devices and recently we have invested in GPS satellite technology to aid the security and servicing of the machines. We are constantly adding new equipment to our hire fleet. Please ask if you can't find what you are looking for and we will do our best to source it for you. All our investments are done with our customers in focus.

CONSTRUCTION MACHINES

- ❖ Dumpers, 1-10 tons
- ❖ Excavators, 1-25 tons
- ❖ Loaders, 1-13 tons operating weight
- ❖ Rollers, 1.5 - 19 ton
- ❖ Mobile air compressors
- ❖ Concrete mixers and plants
- ❖ Compaction equipment
- ❖ Material lifting equipment





WHY RENT FROM SECO

Renting from SECO is the easy and cost efficient way to gain access to equipment you need, but do not have. Most equipment is easily available through our wide depot network and transportation services. We provide only well serviced equipment from strong brands and we always deliver on time. By renting you make your own business more sustainable.

RESPONSIBLE

An experienced organization with well trained professionals and high business ethics provides you with what you need, when you need it where you need it.

EFFECTIVENESS & TRANSPARENCY

By renting instead of owning your own equipment you reduce your overheads. You also get a clear overview of your costs and can easily target expenses to different accounts and projects. As one of East Africa's main actors in the equipment rental industry our local presence and broad range of equipment can accommodate your needs instantly. There's no need to settle for less than the best when it comes to your equipment needs. We'll provide you with the specialized tools you need to take your productivity to new heights. Rent it for as long as you need it.



CUSTOMIZED CONTAINERS

CONTAINER CONVERSIONS

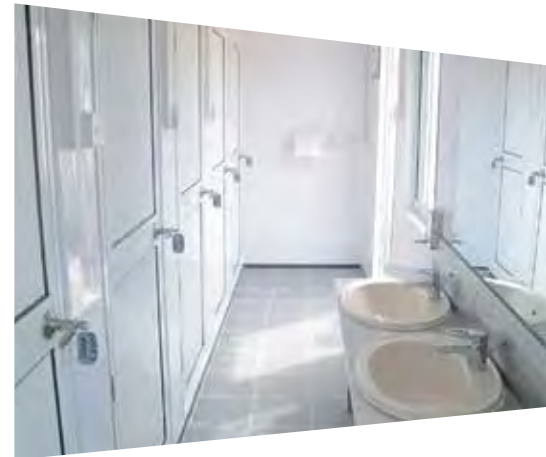
Containers are strong, secure and modular, making them the perfect solution for just about any instant space requirement. They can be modified and converted into virtually any space & their durability allows for these spaces to be moved and positioned to form individual or multiple container structures. They are not only suited to rapid delivery due to their modular nature but are also perfect for remote camps as a “plug and play” solution for everything from office and accommodation requirements to medical facilities and training rooms.

- ❖ Modular “Plug & Play” solutions including offices, accommodation, medical facilities and training rooms.
- ❖ Custom project delivery that is on-time and to specification
- ❖ Regional reach with multiple offices and production facilities in East Africa
- ❖ Standard, specialised and tailored conversions are done by a team of in-house engineers and design experts
- ❖ Turnkey solution from idea inception to site mobilisation

WE ADD VALUE TO YOUR PROJECTS WITH OUR:

- ❖ Extensive product knowledge of containers and ancillary equipment
- ❖ Design experience with structural assessment and 3D Computer Aided Design modelling
- ❖ Thorough project investigation to ensure suitable specifications
- ❖ High quality workmanship and customer service





BESPOKE CONVERSIONS

Produced in the millions, shipping containers are built and designed to carry 30 tonnes of cargo while stacked 9 high on a ship pitching and rolling at sea. This integral strength, coupled with the fact that they are mass produced means they can be affordably converted to a variety of uses and can provide a solution to various space and storage problems.

Each shipping container application is unique and therefore we understand that you may have unique requirements - from extra windows and doors, to paint and flooring.

Simple and hassle-free, these options can be added to any of our standard floorplans.

We can also alter the height and length as required.

OUR PRODUCTS

- ❖ Medical Structures
- ❖ Accommodation units
- ❖ Office spaces
- ❖ Ablution blocks
- ❖ Workshops
- ❖ Laundry units
- ❖ Laboratory units
- ❖ Storage units
- ❖ Kitchen units
- ❖ Dining units
- ❖ Canteens
- ❖ Multi-span structures
- ❖ Pop-up stores
- ❖ Mixed-used units



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