



Specialized Engineering Services

الشركة المتقدمة الثلاثية لخدمات التوربينات المحدودة
Advanced Triad Turbine Services Co. Ltd.

Power Plant And Workshop Services

Power Rental Services

Water Treatment

Renewable Energy

Specialty Chemicals And Fuel Additives

Environmental Solutions



“Our Quality Policy ensures that the customer receives goods, services and technical support for the systems, which meets or even exceeds the agreed upon requirements with regards to reliability, and technical specifications”

www.attssa.com

ABOUT THE COMPANY

Advanced Triad Turbine Services Ltd. (ATTS) is an Asyad Group company. ATTS was established in 2004, with the vision of becoming the preferred service provider in the power, water and renewable sectors in Saudi Arabia. Vision 2030 is transforming infrastructures and utilities towards smarter facilities in order to cater to ever-growing population demand on water and power in the Kingdom.

ATTS provides bespoke services that include engineering, construction and supply of material and chemicals to power and water plants, industrial facilities, and municipal infrastructures.

ATTS has also established the unique concept of Integrated Utilities (IU). The IU solution offers water, power and cooling services to industrial parks, smart / economic cities, airports and universities. We simply bridge the gap between supply and demand and provide a comprehensive utility solution from one safe source at competitive unit rates.

We also perform environmental impact studies for industrial plants and provide sustainable recommendations to eliminate waste or cycle for reuse.

We are an environmentally responsible ISO 9001 - 2015 certified company with a respectable track record serving key accounts such as SEC, MARAFIQ, SWCC and many other private and governmental customers.

You can simply contact us for a peer reviewer or consultation on utilities, smart cities, renewables and overall facility management and control solutions.

Our Mission

Deliver tailored engineering and integrated utility solutions with excellence to meet the expectations of our clients and stakeholders.

Our Values

- Integrity
- Technology
- Competence
- Excellence

Our Core Competencies

- Engineering, retrofitting and maintenance
- Project Management
- Integrated Power and Water Plants
- Project Development on BOT basis
- Alternative Green Energy - Solar PV and TSE for water reuse
- Smart and Energy Efficient buildings
- Responsive and fast logistical capabilities
- Peer Review – Third Party Advisory capability

Products Offered

- Energy Sales – ECRA Certified
- Water Sales – Overmatch SWRO
- Fuel Additives – Liquid Mineral Global Magnesium Carboxylate / Sulphonate
- Water Treatment – Specialty chemicals
- Waste Water & Water Treatment plants – Bioshaft MBBR Technology
- Trina, ABB, Desert Tech and Fronius solar PV accessories

Custom-built Solutions Offered

- O & M of Power, Desalination, Waste Water, and Cooling and Cooling Plants
- Smart Facility Control, Efficiency and Metering Solutions
- Detection & Sensory Apparatus
- Survey and Engineering Services
- Logistics, mobilization, installation and commissioning
- Low and Medium voltage cabling works including: pulling, laying, testing, installation and termination
- Retrofitting and Installation of electrical components (distribution panels, NGR panels, synchronization panels)
- Installation, calibration and commissioning of control systems
- Lightning protection system
- Oil-field fuel additives and filtration systems
- MV transformer maintenance
- Electrical Design Works
- Electro-chlorination Plant
- CO2 refrigerated tanks for firefighting GT application
- Control system upgrade of GTs
- Transformer Services, Repair, testing & Oil Treatment
- Generator Services, repair, rewind & testing
- NDT of GTG Compressor blades and Retaining rings
- Load and Battery Banks – Supply & Installation

ENGINEERING & POWER

In the Engineering & Power sector, we provide innovative solutions to various fields of power generation, servicing, maintenances, testing & retrofits & refurbishments.

Our specialization is in the field of energy, rental power, gas turbines and power plant services, Transformers maintenances, IPP solutions operated on HFO or diesel engines, and engineering services.



Range of Services

POWER

- Turnkey solution for every need
- IPP (HFO or Diesel Generator Sets)
- Emergency/Black Start Power Plant
- Power Rental Services
- Electrical & Mechanical Installations
- Control Systems



SERVICING & TESTING

- Experienced site service engineers and large modern workshop
- Condition based maintenance & maintenance agreements
- HV/MV Transformers & Generators: Procure, Repair, Assess, Rewind, Overhaul, Test and Commission
- Residual Life Assessment of Generators & Transformers
- NDT – UT/MP/Eddy Current – turbine blades & components, condenser and heat exchanger tubes
- Training, Refresher Courses & Skills Upgrades for Maintenance Teams



RETROFITS & REFURBISHMENTS

- Upgrading of power systems
- Replace/supply new equipment/system including engineering and design services
- Traveling Water Screen systems
- Electrical and Mechanical Retrofits (Flow Gas Dampers, UPS system)
- Hypo-Chlorination Plant
- Filtration Systems
- Cooling Systems
- Turbine Control Systems
- Electro-static Precipitators (ESP's)



SUPPLY RANGE OF AUXILIARY EQUIPMENT

- Utility and Industrial Boilers & accessories.
- Annual Inspection of Boilers (steam units)
- Pressure Vessels, Fuel Storage Tanks
- Inspection & Repair of Chimneys and Stacks
- Cooling Systems
- Mist Eliminators
- Heat Exchangers
- Cathodic Protection Systems

TECHNICAL PARTNERS

A. JORD INTERNATIONAL (Australia) Cooling Systems



Design, Manufacture, Commissioning and Service of:

- Air cooled heat exchangers (ACHE)
- Air cooler trains
- Cooling water modules (CWM)
- Horizontal & 'A' frame air cooled condensers (ACC)
- Engineered process equipment
- Modular systems & turnkey plant
- Production platform topsides & FPSO topsides



B. E-ONE (USA) - Equipment for hydrogen-cooled generators

Design, Manufacture, Commissioning and Service of:

- Generator Gas Dryer
- Generator Gas Analyzer
- Gas Station
- Generator Condition Monitor
- Hydrogen Control Cabinet

Water & Waste Water

Water

Water is the world's most precious natural resource. ATTS can make water available in any location around the kingdom. Our reliable water resource management solutions can address availability challenges by providing alternative water supplies to the witnessed growing demand in the region. We also tackle water in-availability in remote urban, residential, industrial and commercial locations by mobilizing mobile SWRO skids to meet immediate needs. Our dependable, low-cost and sustainable solutions are available to consumers at a touch of a button.

Our experts can survey, design, procure, construct and operate water treatment facilities while the client enjoys a risk-free water supply with a guaranteed rate under a BOT/BOO business model. This model transforms the typical vendor-client relationship into a partnership, allowing our clients to focus on their core business while having the peace-of-mind provided by the ATTS Water Solutions.



Waste Water

ATTS in association with BioShaft, owns, designs and manufactures the patented BioShaft Turbo Moving Bed Bio Reactor (T-MBBR) technology for municipal and industrial wastewater treatment applications. The company also designs and manufactures the proprietary Modular Anoxic Aerobic Digester (MAAD) technology for high strength and/or variable quality wastewaters.

Salient features of our STP

- Odor free.
- Energy Efficient
- Minimal sludge
- Smallest modular foot print
- Minimum manpower & maintenance



Chemical & Fuel Additives

ATTS chemical division offers a wide range of specialty chemicals for water treatment and fuel additives. Created in 2004, with 70% local content, we are ready to serve the ever growing industries in water, power and petrochemical plants.

Fuel Additives:

- Development & manufacture of wide range of oil soluble specially formulated fuel additives to control high temperature corrosion and ash deposition in gas turbines and boilers using residual oil, crude oil, contaminated distillate or natural gas.
- Compressor cleaning products water-based and solvent based.
- Anti – icing agents for compressor cleaning.



Water Treatment:

- We supply chemicals used for applications in treatment of fresh water, waste water, boiler water and cooling water. Products include scale inhibitors, corrosion inhibitors, anti-foulants, oxygen scavengers, and oxidizing and non-oxidizing biocides.
- De-watering chemicals.
- Steam traps.
- Laboratory services.
- Design & installation of water treatment plants.
- Water treatment chemicals.
- Antiscalants.
- Filter cartridges.
- Chlorination dosing system.
- SWRO advisory solutions.



Renewable Energy

Renewable Energy solutions such as Solar PV are gaining momentum in the Kingdom and are being accepted as a reliable alternative to conventional energy sources such as Fossil Fuels.

ATTS has a business vertical to cater to the ever-growing demand for green energy via Renewable Energy and Energy Efficiency as follows:

- Grid-tie Solar PV Systems
- Off-Grid Solar PV Systems
- Hybrid Solar PV Systems
- Grid-Tie with Storage Solar PV Systems
- Electric Vehicle (EV) Charging Stations
- Solar Water Heating

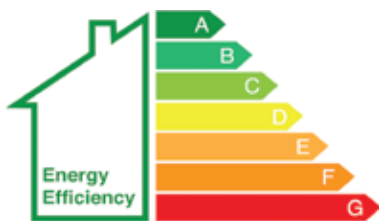


Benefits:

- Reduce dependency on Fossil Fuels
- Reduce Footprint (CO₂ and other greenhouse gases)
- Have a fixed cost for electricity
- Reduce grid dependability.

Energy Efficiency

With the increased awareness of the dangers of misusing electricity on the environment and on the future of our planet, it is of utmost importance to take measures in order to efficiently use the available resources, without compromising our comfort. ATTS can provide energy services up to the highest international standards such as ASHRAE which can be modified according to the customers' requirements. Such services Include:

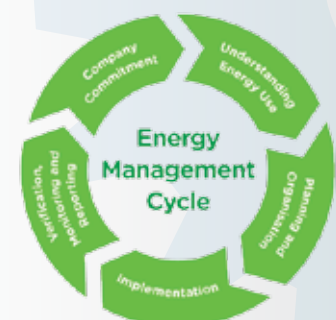


- Energy Audit
- Energy Verification & Measurement
- Energy Management
- Energy Modelling



Benefits:

- Energy Audit
- Energy Verification & Measurement
- Energy Management
- Energy Modelling



Yes, from waste we can produce energy for sustainability and this is the story. In metropolis cities, burying waste and refuse is not a sustainable solution. Primitive humans produced very little waste and biodegraded quickly. Modern humans produce much more waste of a complex nature.

- Save Waste Land and limit pollutants
- Produce Green Electricity
- Control Waste Generation
- Preserve environment and natural resources
- Enhance Air and Water Quality



In cooperation with our partners “RCR International”, who possess a patented technology for waste treatment, our customers could benefit from the following:

- No incineration, Gasification, Pyrolysis or Landfill
- Life span of 35 years
- Modular and mature technology
- No need for waste segregation at source
- Grade A outputs & Green Electricity
- Conformity to most stringent EU, UK & US air quality standards



Spare Parts

We have access to a wide variety of Power Generation, Distribution & Transmission parts, provided by a global community of vendors and manufacturers.

Apart from this, we also deal in Oil & Gas industry, heavy equipment, lab & medical equipment and many other parts.

Our main supplies comprise of the below manufacturers:

- Pall Filters
- Atlas Copco
- Cavex GmbH & Co. KG
- Cockerill Maintenance & Ingénierie (CMI)
- Compair
- Dresser Masoneilan
- Environment One
- Flowserve pumps & valves
- Menk Radiators
- STI Strumentazione and many more.....

Our Main Products:

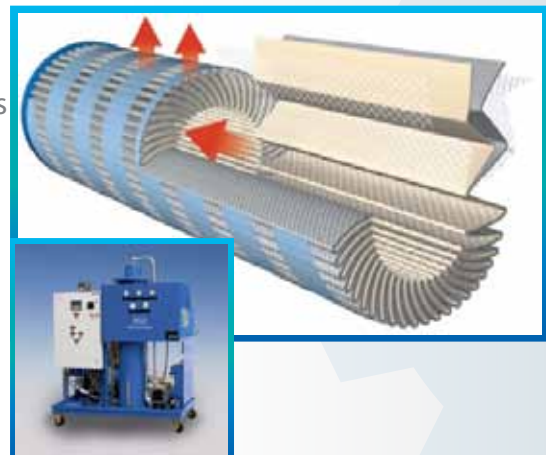
Actuator	Compressor
Filter	Controller
Batteries	Pump
Gear Box	Radiator
Boiler Tube	Detector
Heater Element	Sensor
Cable	Engine
Heat Exchanger	Transformer
Circuit Board	Expansion Joint
Motor	Valve



Pall Corporation

(Authorized Distributor for Power Generation in the Kingdom).

- Global provider of filtration and separation sciences enabling technology.
- Delivering the most innovative process solutions.
- Lube and Hydraulic Oil Treatment: Reliability Solutions for Turbines.
- Fuel Treatment: Protection of Combustion Burners, Liners, Hot Gas Path
- Process Water Treatment: Protection of Boilers, HRSGs, Turbines.
- Transformer Oil Purification: On-line On-Load oil purification.



Notes



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