Quality & Confidence
40
Years

Alkazem

AL KAZEM TRADE & INDUSTRY
مكاظم للتجارة و الصناعة

ALKAZEM Steam Boiler is Firetube three passes with wetback. Research and development studies confirm a minimum efficiency of 90 ± 2% in liquid or gas fired Steam boiler. The boiler is designed, manufactured and tested to the latest International Standards. It is an ideal steam boiler for medium and large scale industries, studied to obtain maximum safety with the lowest investment.

ALKAZEM manufactures Steam boilers from 100 Kgs/hr to 12,000 Kgs/hr steam generating capacity and pressure up to 16 bar. Complete automatic working, that includes all accessories. checked with supersonic and X-ray on welding and MS sheets.

Combustion occurs perfectly with total absence of UN burnt particles and low Nox contents . The high turbulence generated in gaseous mass aids the transmission of heat and the combustion power, which under normal conditions easily attains maximum thermal efficiency

Standard equipments:

- Safety valves
- Non-return valves
- Water pumps
- Level indicators
- Pressure indicators

The above equipments are manufactured by international leaders in steam industry such as ARI-ARMATUREN Germany, Spiraxsarco UK and Grundfos.

Quality Control:

As the welding is the most critical aspect in production process.

In order to meet the quality standards, state of the art machines and welding methods are used by certified welders, fabricators and highly qualified workers

After welding the following tests are performed:

1. Visual inspection of welding joints.

2.10 - 100% of longitudinal welding joints are tested by X- Ray and Ultrasonic Testing Devices.

3. Dye penetrate inspection (DPI) is used where the X-Ray is not possible

4. Hydrostatic test (test pressure is 150 % of operating pressure).

Main Features

- Designed and manufactured to ASME section I and IV.
- Hot corrugated large diameter furnace with low fatigue coefficient
- Completely automatic.
- Wet-Back design (water cooled gas return chamber)
- Hinged front doors for easy access to fire tubes
- Boiler legs with bolt-down lugs mounted on a rugged structural steel base
- Suits any brand of burner and achieve excellent combustion values.

Boiler Design

Three-Pass Firetube design with stress relieving "Wetback" construction. Hot Water pressures models are from 30-160 psi. High pressure, high temperature Section I hot water boilers available. Factory assembled with trim, tested, ASME code, UL, and CSD-1 standards.

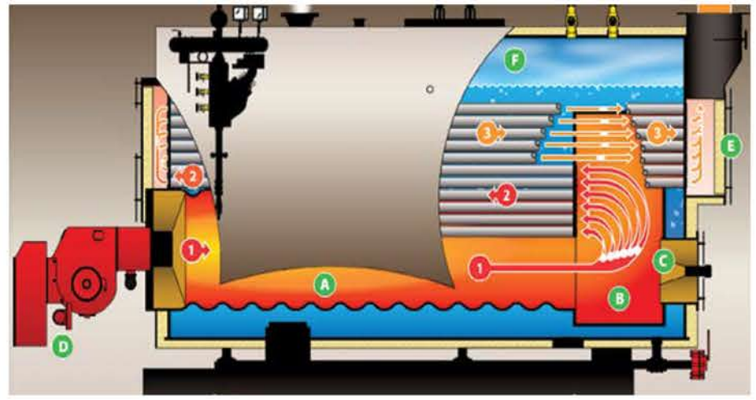
The Burner

The boiler is equipped with high-quality burners manufactured by respected leaders in the burner industry, such as Weishaup and Rillo. All boilers feature a forced draft burner, designed to operate on customer – specified fuel supply.

Burners on all units may utilize a variety of fuels including natural gas and diesel. Custom units can be designed around many special fuel requirements.

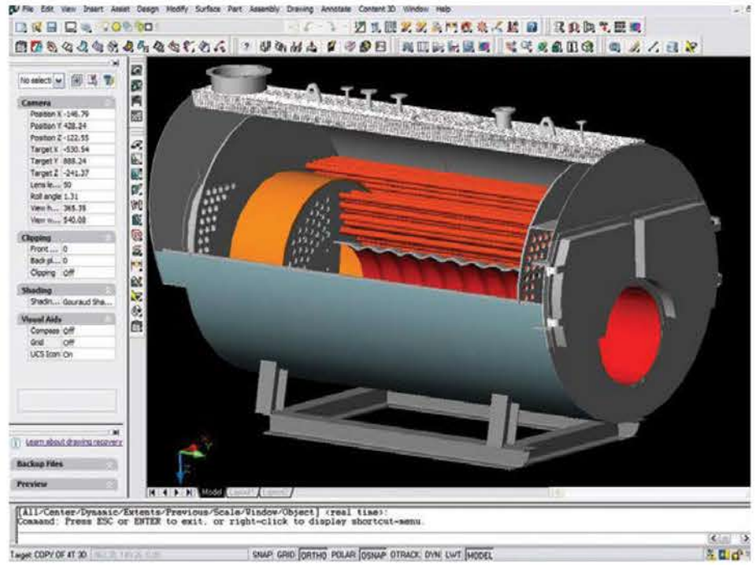
Corrugated furnace

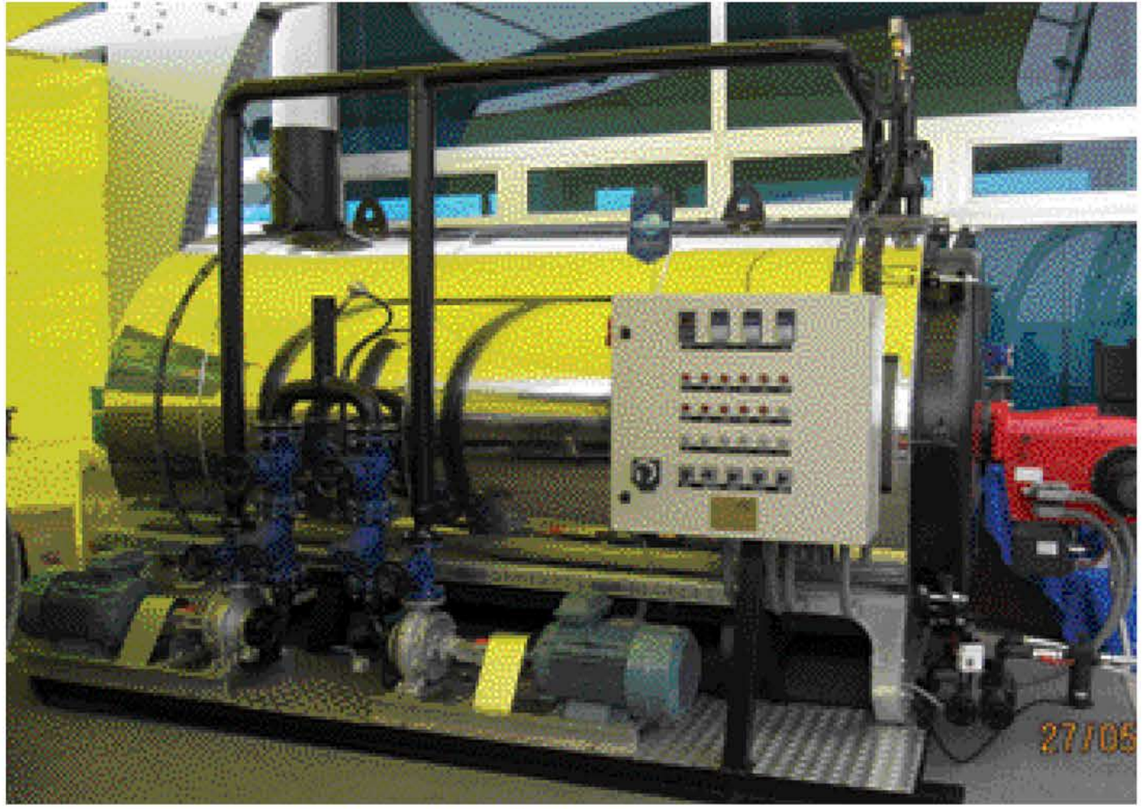
Increases heat transfer area, offers flexibility for thermal expansion and insures minimal stress transfer to tube plate.



A. Hot coffugoted furnace
B. Wet-Bock
C. Man -Hole for Wet·Bock access
D. Will suit any brand of burner
E. No refractory in doors
F. Lorge steam dome
G. Structural steel bo.se

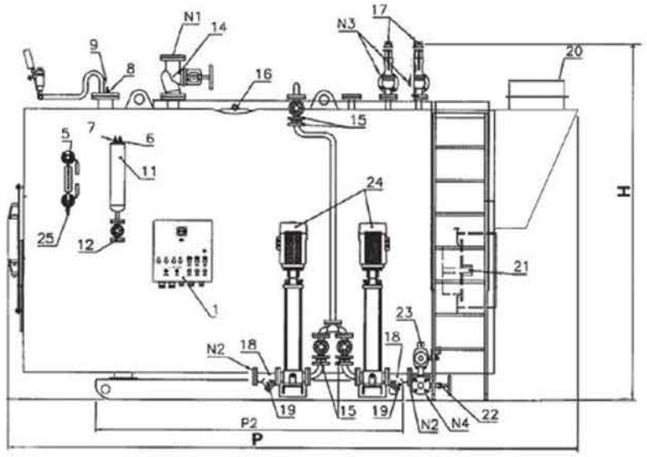
I. First pass
2. Second pass
3. Third pass

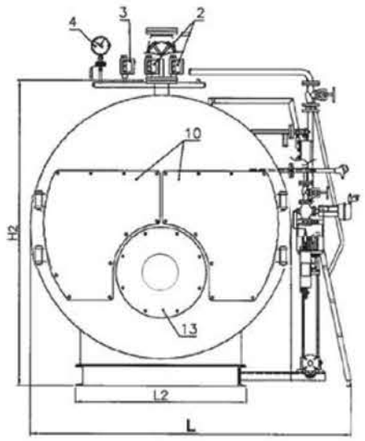




Our thermal heaters are designed to be a reliable means of supplying continuous direct heat at temperatures up to 300 C.

The basis of the design consists of one coil nested inside the other in a way that provides three complete flue gas passes. The combustion chamber and heating surface are oversized to provide low film temperatures. Low film temperatures extend the life of the thermal fluid, creating a cost savings.





LEGEND

1 Switchboard
2 Control pressure switches
3 Locking pressure switch
4 Pressure gauge
5 Level gauges
6 Pump stop probes
7 Pump start probes
8 151 safety level probe
9 2"d safety level probe
10 Front plates
11 Probes holder barrel
12 Barrel drain 13 Burner plate
14 Steam take-off
15 Non return valve
16 Inspection door
17 Safety valves
18 Feed water
19 Suction pumps filters
20 Smokestack connection
21 Flame inspection hole
22 Boiler drain
23 Pneumatic drain valve
24 Feed water pumps
25 Level gauges drain

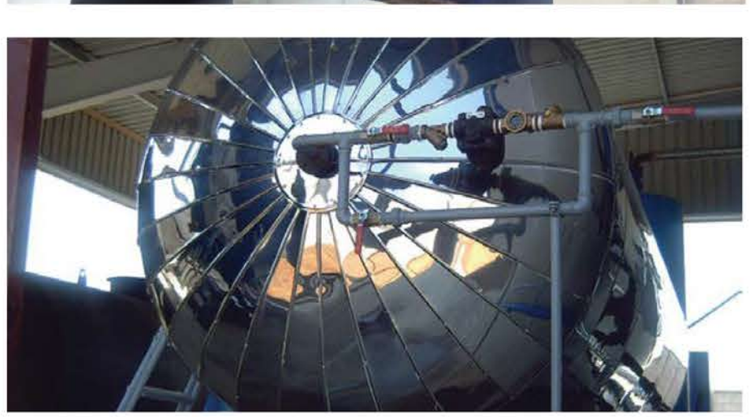
N1 Steam take-off fitting
N2 Feed water fitting
N3 Safety valve drain fittings
N4 Boiler drain fitting

Capacity	Design Pressure	Dimensions											Total Weight
		H	H3	L	L3	P	P3	Øc	N1	N2	N3	N4	
Kg \hr.	Bar	mm	mm	mm	mm	mm	mm	mm	DN	DN	DN	DN	Kg
200	8	2000	1600	1300	850	1500	1100	15	25	25	25	25	800
300	8	2150	1750	1400	900	1700	1200	15	25	25	25	25	900
500	8	2400	2000	1800	1000	2200	1300	20	40	25	25	25	3000
1000	8\10	2500	2100	2100	1200	2900	2000	25	50	25	25	25	6000
1500	8\10	2650	2250	2250	1200	3100	2200	25	65	32	25	25	6500
2000	8\10	2850	2450	2500	1300	3600	2500	30	65	32	25	32	7700
2500	8\10	3000	2500	2600	1350	3800	2500	35	80	32	32	32	8500
3000	8\10	3350	2750	2650	1550	4500	3000	40	80	40	32	32	10000
3500	8\10	3350	2750	2650	1550	4500	3200	40	100	40	32	32	11000
4000	8\10	3450	2850	2800	1600	4800	3350	50	100	40	32	32	13500
5000	8\10	3500	2900	2950	1700	5250	3350	55	100	50	40	40	16000
6000	8\10	3700	3100	3100	1850	5250	3500	55	125	50	40	40	18000
7000	8\10	3700	3100	3100	1900	5500	3750	60	150	65	40	50	20000
8000	8\10	3900	3250	3250	1900	5750	3750	60	150	65	50	50	23000
10000	8\10	4250	3500	3450	2100	6400	4500	70	150	65	50	50	26000
12000	8\10	4400	3650	3500	2100	6550	4800	70	150	65	50	50	28000
14000	8\10	4900	4000	3500	2200	6550	5000	75	150	80	65	65	32000

In the steam systems, a steam accumulator is a central component, as It can be used to balance steam production and to compensate for process load variations and unexpected malfunctions by increasing the steam volume in the network, or by storing the surplus steam produced. The steam accumulator can also function as a short-term power reserve, when steam production is interrupted.

Our Steam accumulators are designed, manufactured and tested to latest international standard, to meet our customers' technical requirements and mill-specific production strategies, which guarantees that the production of the accumulator is economical, fit its purpose.

The accumulator is fitted with standard auxiliary equipment manufactured by the leaders of steam industry in EU.



Heater Configuration

In the horizontal configuration the burner is firing horizontally into the heater. This places the burner, fuel train and instrumentation at grade, which provides convenient access for maintenance personnel. The configuration is designed with top or free standing stack. Although this heater configuration has a large footprint, it is the most commonly used nowadays.

The Burner

The heater is equipped with high-quality burners manufactured by respected leaders in the burner industry. All Thermal Fluid Heaters feature a forced draft burner, designed to operate on customer –specified fuel supply.Burners on all units may utilize a variety of fuels including natural gas; a variety of fuel oils (including diesel); or an alternating operation of natural gas and oil. Custom units can be designed around many special fuel requirements.

Control Panel

All systems include burner management systems, single loop controllers, and limit controllers to comply with safety requirements.

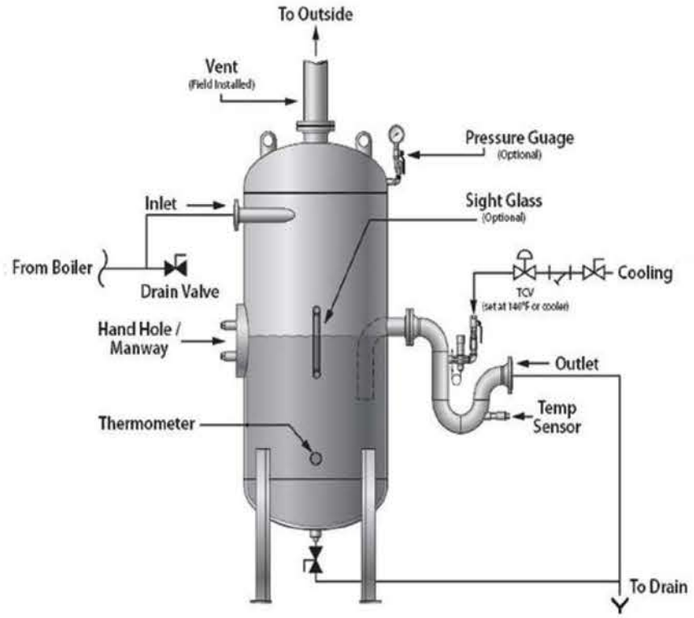
Control options are virtually limitless with relay logic and programmable logic systems available.

Standard relay logic based control panels are used on all equipment to provide a cost effective control system. They are relatively simple and reliable and provide adequate communication to the customers' control systems (DCS).

Auxiliary Equipment

The following auxiliary equipment can be provided separately or designed into an integral skid, size and transportation requirements permitting.

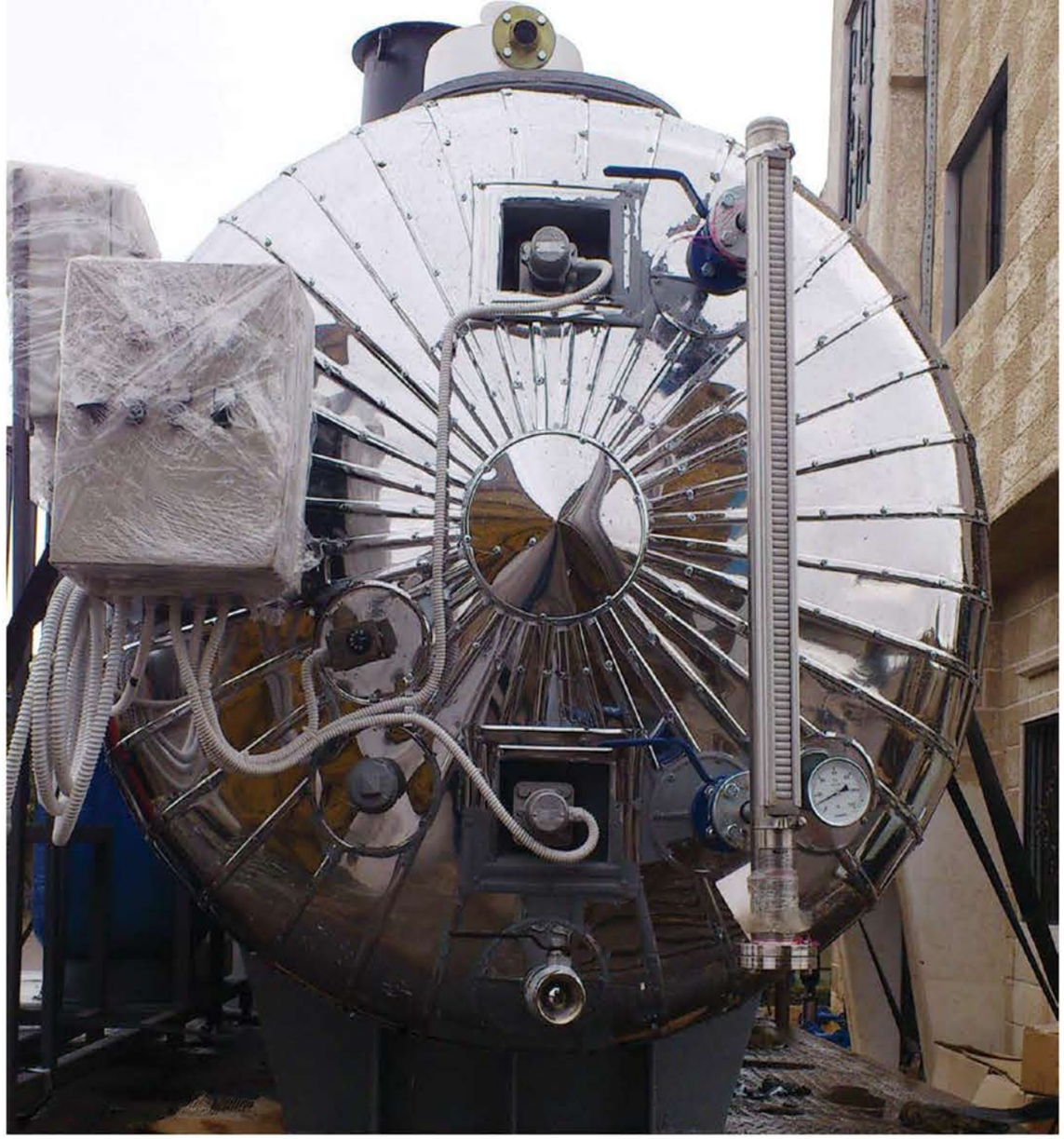
- Drain Tank
- Fill/Drain Pump
- Thermal Buffer
- Slip Stream Filter
- Custom Valve Assemblies



BLOWDOWN TANKS

Steam generation process in the boiler is highly efficient, as it allows only pure water to escape the boiler in a gaseous state. Any minerals or impurities that were previously in the water remain in the boiler where they eventually form into sludge. This sludge must be periodically drained either through the blowdown fitting located on the lowest point of the boiler or through continuous/surface blowdown.

Our blowdown tank is designed to remove dissolved solids and sludge that builds up in the boiler water. It enables high pressure water to safely flash to steam and protects the boiler surfaces from corrosion and severe scaling. These tanks are designed, constructed and tested in accordance with ASME Code Section VIII, Division 1



These tanks are designed with several features to help prevent suspended solids from building up and preventing the boiler from performing its function. The surface water blowdown is often done frequently to help prevent solids and sludge from building up in your tank system. This blowdown process often includes the removal of water to help keep the tank clean.

STEAM DISTRIBUTION HEADERS

The steam collectors are fabricated in various sizes according to steam boiler capacity.

The headers are isulated with High density rock wool of 100 -150mm, and coverd by stainless steel sheets.

Flash steam scan be effectively recovered by using a Condensate Tank as a part of a Flash Steam Recovery System. The flash steam is free steam and can be used to supplement the normal steam requirement. Flash steam should be separated from the condensate to maximize the system's efficiency. Since the flash steam is utilized, it will not be vented to the atmosphere where it is wasted and can be a safety hazard

According to our customers' requirements, all necessary armatures, automation and safety elements can be provided and installed on the condensate tank so the integration with the system can be maintained

COMPRESSED AIR TANK:

- The tanks are designed and fabricated in accordance with DIN standards and fitted with all necessary nozzles and flanges
- The capacities from 1 to 20m3.
- Epoxy coated body

COOLING TOWERS

SEPERATORS &

STEAM SYSTEAM

Separators and steam systems designed by specialist engineers for various of pipelines sizes

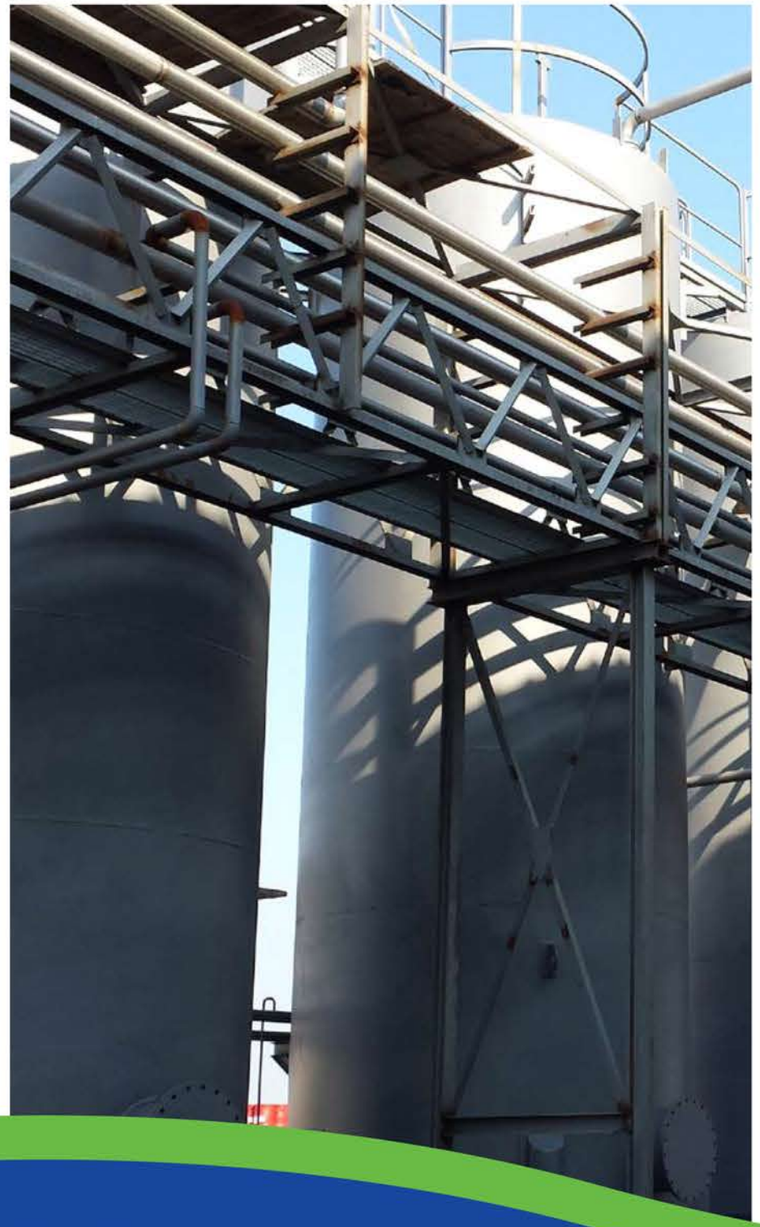
We have successfully installed and commissioned economically Integrated Steam Curing Systems for many clients in Precast Concrete industry in UAE, via which we have managed to reduce concrete curing time to 30% of the conventional curing time, which in turn significantly increases the productivity and reduces cost product.

Stainless steel tanks

Daily fuel tanks

External and internal Stoplogs for Pumping Station at Hamriyah Station for Power Generation& Water Desalination, Sharjah, U.A.E.

Concrete steel forms - Khalid Lagoon Island Marine Works
Sharjah, UAE



Fuel tanks

Sand filters

Water tanks

Electric ho

water boilers

Steam networks

- All nozzles and flanges are according to international standards.

- Beveling angles of the oil separator parts are done according to the thickness of the sheets as Standards.

- All parts of oil separators are cleaned before assembling.

OIL & GAS SEPARATORS:

- Two/three phases Oil separators are fabricated according to international standards.

Technical specifications:

- Welding are according to (A.W.S) using (E7018)-BOHLER -Austria electrodes.

10 - 100% of longitudinal weld joints are examed by X- Ray Devices.

- The sheets of tank body are as per (DIN17155 - ST37.2)

OIL RESERVOIRS:

- Our company had produced tanks for storing petroleum from 200 to 50000 m3 according to USA / Russian methods.

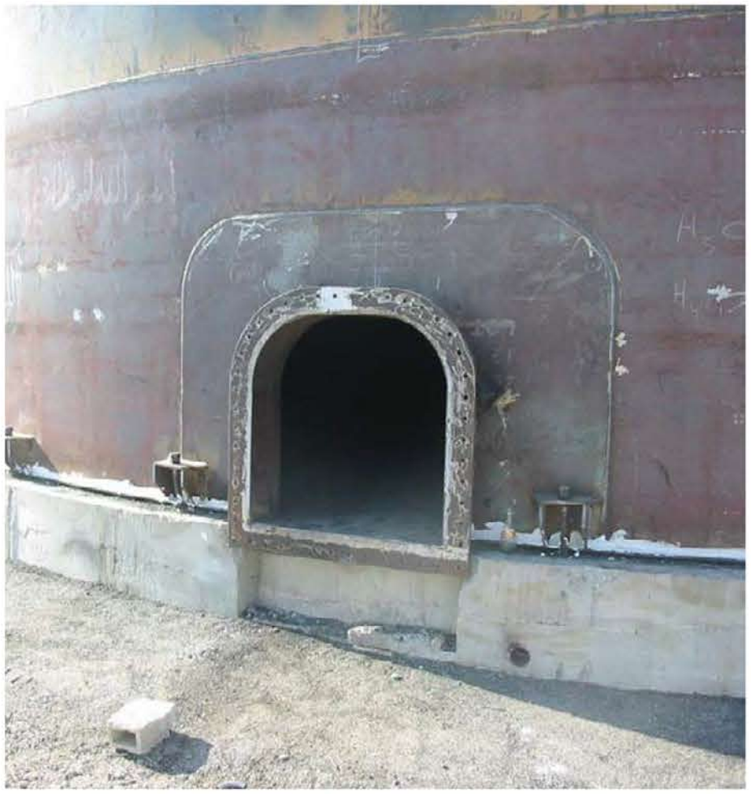
Technical specifications:

- Welding are according to (A.S.T.M) using (E6013)-BOHLER -Austria electrodes.

- The sheets of tank body are per (DIN17100 - ST37.2)

- After finishing all manufacturing stages. The tanks are Sand Blasted Cleaned to SA3 or SA2.5 Swedish grade

- Airless devices are used to paint the products, so painting layers could be about 300 microns for a layer.



WATER PASS HEATER

Plate rolling machine-

AKYAPAK -Turkey

Capacity 3000mm @ 30mm

Sheet bending machine -

Baykal-Turkey

Capacity 240 Ton

Plate rolling machine

Capaciry 2000mm @18 mm

Steel flanging machine

Capaciry 4000mm Dia,

25mm thickness

Radial Drilling Machine

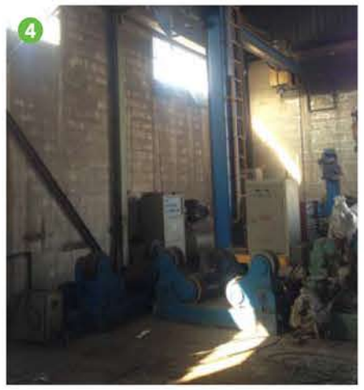
Capaciry 3000mm @ 100mm

Sheet metal cutting machine -

Turkey

Baykal - 3000mm length, 12

mm thick



1. Hydraulic sheet presser
Capacity : 4000mm Dia, 25mm thick

2. Lathe machines for - various lathing operations

3. Automatic Welding Machine

4. Automatic Welding Machine

5. Milling machine

KAZEM ABU SAFIA
UAE - SHARJAH
Steam Boiler/Hot Water Boiler
Tanks, Vessels & Steel Structure

كاظم أبو صفية للانشاءات المعدنية
الإمارات العربية المتحدة - الشارقة
مراجل بخار/ مراجل الماء الساخن
خزانات/إنشاءات معدنية

QHSE POLICY STATEMENT

ALKAZEM Co. is Specialized in steam and hot water boiler, steam networks, oil boilers, storage tanks and Oil structures such as, Reservoirs, pipelines, manifolds and separators, cooling towers and many other pressure vessels and structural steel works.

ALKAZEM is committed to:

- Establishing and implementing an Integrated Management System (IMS) for efficient loss prevention management to protect all involved personnel, assets and environment with a commitment strive for continual improvement to attain and retain "Client's Satisfaction".
- Maintaining a high standard level operations and status on Quality, Health, Safety and Environmental aspects to meet Client's requirements.
- Recognizing the concerns and significance of Quality, Health, Safety, Environmental aspects reverence.
- Inhibiting all preventable incidents and ill health by anticipating all personnel and other involved parties effort and ideas for successful of our mission and to achieve the objectives of "Legal Compliance, Quality Conformity, No LTI and No Harm Environment".
- All applicable legal requirements and Client's requirements.
- All applicable national legal regulations, code of practices and international standards of ISO 9001:2008, ISO 14001:2004 and OHSAS18001:2007 for the guidance to ensure Legal Compliance, Quality and HSE conformities.

ALKAZEM targets to achieve the goals by:

- Carrying out works in full compliance with all Legal regulations, Standards, EHS regulations, Code of Practices.
- Raising the awareness all employees of work related concerns affecting Quality, Health, Safety and Environmental aspects, improving awareness of client's requirements, company policies, procedures, commitments and to encourage their contribution for continual improvement of Integrated Management System.
- Thoughtful allocation of competent human resources, providing safe work procedures, equipment, specific task trainings and performance evaluation to ensure the capability to perform task safely, identify and encounter harmful activities or hazardous materials by deploying harmless substance and activities wherever possible to prevent incidents and ill health.
- Carrying out regular Inspections, proper maintenance to eliminate all Potential non-conformities and corrective actions to demonstrate Quality Conformity and HSE
- Reporting all incidents to required corrective and preventive actions to control and eliminate prospective causes of all non-conformities

Kazam Abusafia

MANAGING DIRECTOR

September 2012

Alkazem

Established in 1990 by the current Managing Director Mr. Kazem Abusafia to produce steam boilers, hot water boilers, heat exchangers, pressure vessels and storage tanks for oil and gas industries.

Since inception, ALKAZEM has experienced a regular and impressive growth to come one of the most leading companies specialized in design and manufacturer of boilers, pressure vessels and tanks.

Al KAZEM has established an excellent reputation as a leading manufacturer of equipment for industrial process steam generation in the middle east and north Africa

In 2007 and by going through training activities in ISO works,the company has achieved ISO 9100: 2000 certification.

To maintain the space of the development and to quality for the ever wanting demand of quality, ALKAZEM decided to go for QUALITY SYSTEM in accordance with International standards

In 2013, ALKAZEM has established a new branch in UAE, Sharjah industrial area to support the main branch in Syria and to provide our services in the GCC region

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