

**AZAR AB INDUSTRIES CO.**

---

**[www.azarab.ir](http://www.azarab.ir)**

**AZAR AB** industries Co. is a leading manufacturer of power plants & refinery equipments in the Middle East and provides comprehensive services to Iranian heavy industries. The company is engaged in design, manufacturing, erection and giving different consultation to make :

- Different types of boilers including large utility, industrial & packaged boilers
- Packaged and industrial boilers from 20 t/hr to 350 t/hr
- Heat Recovery Steam Generators
- Hydro turbines up to 250 MW
- Butterfly valves up to 5500 mm diameter
- Pressure vessels, heat exchangers ,distillation towers and storage tanks including both floating and fixed roofs
- Equipment utilized in steel mills, sugar and cement factories

The company also performs machining of heavy metal works up to 300 tons.

Approximately there are 2500 staff employed in **AZAR AB**. The skills and knowledge of our experts are the company's most valuable asset and honor. These specialists can be mobilized to provide customers with exclusive service and advice on all aspects of business manufacturing and other related services, within the company's scope of activities.

Since its establishment (May 2 nd, 1985) **AZAR AB** has had a significant role in reconstructing the countries infrastructural facilities.

Implementation of outstanding projects at the least time and cost is a competitive advantage of **AZAR AB** company.

In order to mobilize its creativity and technical knowledge, **AZAR AB**. Co has successfully met the requirements of ISO 9001, ISO 14001 , OHSAS 18001 (IMS) & ISO 3834-2. As its result, the products of this company has been approved according to the international standards to ensure the customer's satisfaction.

**AZAR AB** Ind. Co also has developed comprehensive services toward Iranian heavy industries performing as a general contractor (GC) in design, manufacturing, constructing , commissioning and consulting.

**AZAR AB**  
INDUSTRIES CO.



▲ Head Office-Tehran



▲ Factory-Arak

## Short history of AIC, Technology transferring & technical support agreements.

- 1984: Technology transfer from Japan's IHI Company in the areas of design and engineering, construction, installation and commissioning of boilers with natural circulation systems with their fuel being gas, diesel and mazot, including:
  - Packaged boilers with the capacity of 20 t/h to 200 t/h.
  - Industrial boilers with the capacity of 50 t/h to 350 t/h.
  - Power plant boilers with the capacity of 220 t/h to 390 t/h .
- 1986: Technology Transfer from ABB Gadelius Japan (Alstom) for Ljungstrom air preheaters.
- 1986: Technical cooperation with ABB Italy Group for designing, manufacturing, assembly and commissioning of air heaters for power plant boilers.
- 1987: Technology transfer from Japan's JSW Company for designing and manufacturing of the following products.
  - Towers, reactors, pressure vessels and storage tanks with a thickness of 6 mm to 260 mm made from carbon steel, steel alloys and stainless steel based on well-known code and standards such as ASME SEC. VIII & TEMA SEC. I, II Class B, C and R.
  - Heat exchangers with spectrum LP/LP, HP/HP and HP/LP and maximum 200 t for each part based on codes and standards such as ASME Sec. VIII, TEMA SEC. I, II Class B, C and R.
- 1995: Technical cooperation with China's HEC Company.
- 1997: Receipt of certificate on quality management system ISO 9001.
- 1997: Receiving top prize from SPMO for designing and manufacturing of various products.
- 1997: Awarded Global Quality Management (GQM) certificate.
- 1998: Technology transfer from Spain's Foster Wheeler (FW) Company for designing and engineering of combined cycle boilers.
- 2002: Eduactive collaboration with Russia's LMZ Company for design and manufacturing of butterfly valves.
- 2003: Technology transfer from Austria's Voith Company for Francis hydraulic turbines.
- 2004: Awarded environmental management system certificate ISO 14001.
- 2009: Receipt of occupational health and safety certificate OHSAS 18001.
- 2009: Awarded IMS certificate.
- 2014: Receipt of quality requirements certificate for fusion welding of metallic materials ISO 3834-2
- On Job Training (OJT) in Japanese firms IHI and JSW, Spain's FW Company and German companies such as Krupp AG and Deutsche Babcock for boiler and cement projects.





## Boilers

Water tube natural circulation steam generators are one of our main products in **AZAR AB** Ind. Co. As the biggest boiler manufacturer in the middle East, boilers at capacity from 20t/h to around 2200t/h of steam are designed and manufactured inside the company, under the licence of IHI Co, Japan.

### AZAR AB INDUSTRIES CO.



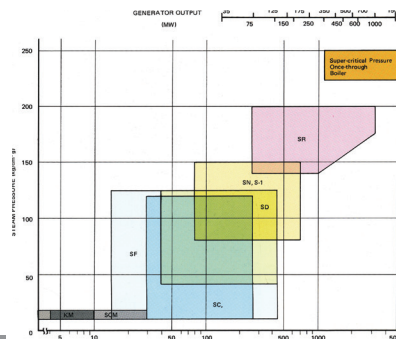
▲ Shahid Rajaei Power Plant 4\*250 MW



▲ Kavian Petrochemical 5\*120 t/h Boilers



▲ Arak 2\*227 t/h boilers



#### SOR/SODR/SOVR

- : Super-critical Pressure, Once-through Boiler
- SR : Single Drum Reheat Boiler
- SN/S-1 : Single Drum Non-reheat Boiler
- SD : Two Drums Boiler, D-Type
- SF : Two Drums Boiler, F-Type
- SC : Shop-assembled Boiler
- SCM : Full-packaged Boiler
- KM : Fire Tube Type Boiler



## Heat Recovery Steam Generator

H.R.S.G is designed under the license of F.W Spain for preventing and recovering wasting heat energy in hot exhaust at high temperature. Its main application is in exhaust of gas turbine power plants,(combined cycle) in order to reduce fuel consumption and increase efficiency of the power plants.

H.R.S.G advantages:

- Simpler design compared to the output energy.
- lower time to produce steam.
- Low initial capital investment.
- High over-all efficiency of the steam plant.
- Reduction of environmental pollution through increased efficiency.
- Short period of construction and reconstruction of the plant.



▲ Manufacturing of 6\*144 t/h Boiler for montazer-ghaem



▲ Khoy (C.C.P.P) 2\*148 t/h boilers

AZAR AB INDUSTRIES CO.



▲ Mobin Petrochemical 4\*330 t/h boilers



▲ Arak 3\*88 t/h Boilers





▲ Shazand Arak Refinery 28 Columns



▲ Bandar Abbas Refinery Spherical Pressurs vessels



▲ Arak Refinery Distillation Tower

## Pressure Vessels, Reactors, Storage Tanks , Towers , and Air Coolers

**AZAR AB** has acquired the technology transfer From reputable international companies such as JSW (Japan Steel Works Co.) for pressure vessels and heat exchangers.

Designing & manufacturing of thin, medium & thick wall pressure vessels , fixed & floating roof storage tanks, oil, gas & petrochemical tower(with diffrent material such as c.s.s.s.) are accomplished in accordance with reputable international codes & standards such as ASME, BS, API, along with using the new est software packages.



▲ Arak Refinery towers

**AZAR AB**  
INDUSTRIES CO.

[www.azarab.ir](http://www.azarab.ir)



## Heat Exchangers

In response to the market requirements related to oil, gas & petrochemical companies. **AZAR AB** has undertaken the mechanical design & manufacturing of many types of heat exchangers. These activities are based on reputable international codes & standards such as ASME, TEMA, and DIN based on benefiting from the latest software packages.

**The following equipments can be supplied by **AZAR AB** Inds. Co.:**

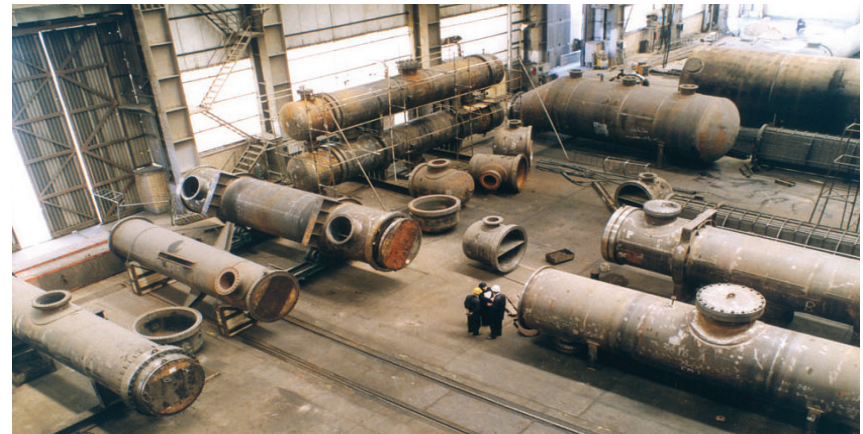
- TEMA type shell & tube heat exchangers
- Process fired heaters
- Indirect water bath heaters
- Air coolers
- Kettle type & thermo – siphon rebuilders



▲ Arak Refinery Heat Exchangers



▲ Abadan Refinery 22 Heat Exchangers



▲ Abadan Refinery 22 Heat Exchangers



▲ NGL Project (SLKL) 58 Heat Exchangers



## Cement & Steel mill Industry Equipments

Construction of cement plants on EPC basis, design, engineering and manufacturing of cement plant equipment such as Crushers, Roller, Ball mills, Filtering system, Rotary kiln, Cooler conveyer, Transport system separator, cyclones, Blending and fuel system.

- Manufacturing of equipment for steel mills.



▲ Shahrekord cement plant



▲ Ahvaz Steel Plant



▲ Shahrekord cement plant

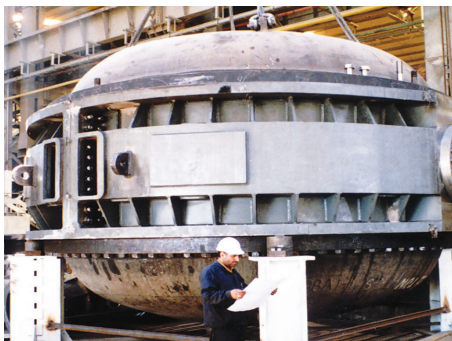


# AZAR AB

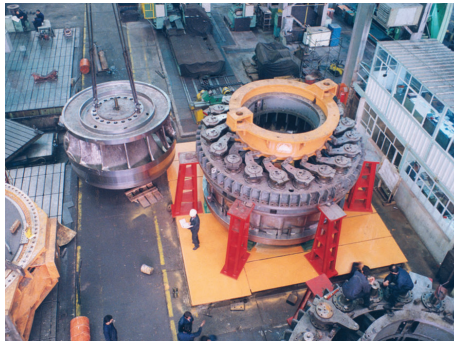
## INDUSTRIES CO.

### Hydro Turbines & Butterfly Valves

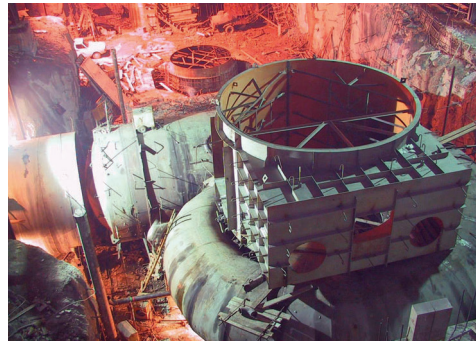
**AZAR AB** Ind. Co. as the leading manufacturer of heavy equipment in hydro power plants, has been successful in securing several large contracts for the supply of Hydraulic turbines (Francis type) with the maximum capacity 250 MW and the corresponding butterfly valves through the cooperation with Voith Siemens of Austria, HEC of China & L.M.Z of Russia.



▲ Karkheh turbine butterfly valve (BFV)



▲ Karkheh turbine distributor & runner



## Heavy Machining:

**AZAR AB**'s large heavy workshop consists of three big bays and is unique in its type.

The most sophisticated & accurate heavy machineries in Iran & region are located in this workshop, and this has increased **AZAR AB**'s capabilities to carry out machining of super heavy equipment for heavy industries such as steel mill complexes.

Machining of super heavy components up to 300 tons and boring of heavy equipments up to 200 tons and the length of 33000 mm.

Fabrication of different types of gear hubbing up to 5000 mm.

Welding capabilities: SMAW, SAW, GTAW, GMAW, ESW, STUDWELDING, OVERLY (cladding) & FCAW.



10

▲ Double column vertical turning machine



▲ Horizontal boring and milling machine



▲ Single column vertical turning and boring milling machine



## Export Projects:

**AZAR AB** Industries Co. has supplied and erected two different types of utility boilers over the seas, one boiler related to Banias (BRC) and the other related to Homs (HRC) refineries in Syrian Arab Republic.

The boilers have been designed, manufactured and delivered to the customers based on the internationally recognized standards and state of the art technology owned by **AZAR AB** industries co.

The boilers are equipped with the most reliable and sophisticated auxiliary equipments from reputable vendors aimed to provide maximum efficiency and more reliable performance.

▼ Banias Refinery Co.



### Banias Refinery Co.

Steam boiler natural circulation (SN Type)  
Capacity: 150 t/hr  
Design pressure : 120 Bar  
Drum design temperature: 330 C  
Super heater design temperature: 540 C

### Homs Refinery Co.

Steam boiler natural circulation (SN Type)  
Capacity: 190 t/hr  
Design pressure: 120 bar  
Drum design temperature: 330 C  
Super heater design temperature: 540 C



▲ Homs Refinery Co.

# AZAR AB INDUSTRIES CO.

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Single Column Vertical Turning & Boring Milling M/C (A12)	Table Dia.8000 mm Max. Dia. of Work Piece 12000 mm Max. Vertical Ram Cross Travel 3100 mm Max. Horizontal Ram Cross Travel 5600 mm Max. Height of Work Piece 5570 Max. Weight of Work Piece 300 tons	Dorries Scharmann Germany	1
2	Double Column Vertical Turning & (A4)	Max. Work-Piece Dia. 6100 mm Max. Height the Surface of the Table 4000 mm With Two Cross Rail Heads & One Side Head	Dorries Scharman- Germany	1
3	Double Column Vertical Turning (A16)	Max Table Dia. 8000 mm Work Piece: Max. Dia. 16000 mm Max. Height 4800 mm Max. Weight 200 tons	Switzerland	1
4	Single Column Vertical Turning & Boring (SKJ20)	Table Dia. 2000 mm Work Piece: Max. Height 9250 mm Max. Weight 30 tons	Czechoslovakia	6
5	Horizontal Boring & Milling (A1,A2)	Column Cross Travel 21000 mm Head Stock Vertical Travel 5000 mm Ram Cross Travel (Z) 1200 mm Boring Spindle Cross Travel (W) 1700 mm	Innse-Italy	3
6	Gantry Boring & Milling	Column Cross Travel 21000 mm Max. Width of piece: 6000 mm Max. length of pices: 21000 mm	Waldrich-Germany	1
7	Milling & Boring High Speed CNC	Dimension Axis: X-Axis 5000 mm Y-Axis 1800 mm Z-Axis 1200 mm Max. Work piece Weight 40 tons	Waldrich-Germany	1
8	Milling & Bornig High Speed CNC	Work Piece: X-Axis 5000 mm Y-Axis 3000mm Z-Axis 1000 mm Max. Speed. 8000 rpm Max.Work Piece Weight 20 tons	Italy	1



No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
9	Turning Lathe (A11)	Work Piece: Max. Dia.4000 mm Max. Length 11000 mm Max. Weight 40 ton	Waldrich-Germany	1
10	Heavy Duty lathe CNC (SAFOP)	Center Height Over Bed 560 mm Max. Machining Dia. 760 mm Distance Between Centers 10000 mm Admitted Weight 18 tons	Safop - Italy	3
11	Turning Lathe (A6)	Max. Swing Over Bed 1025 mm Max. Distance Between Centrs 6300 mm	Wholenberg Germany	3
12	Key Type Milling (A8)	Head Stock Vertical Travel 1200 mm Ram Cross Travel 970 mm Column Longitudinal Travel 8300 mm	Mecof -Italy	1
13	Floor Type Milling (A3)	Column Cross Travel (x) 6000 mm Head Stocks Vertical Travel (Y) 2000 mm Work Spindle Stroke (W) 1000 mm	Dorries Scharmann-Germany	2
14	Internal Hole Boring & Grinding	Height of Center 600 mm Max. O.D 400 mm Max. Boring/Grinding Lenght 1350 mm Max. Work Piece Length 5800 mm Max. Admitted Weight 10 Tons	Safop - Italy	1
15	Traveling Type Radial Drill	Max. Drilling Dia in Steel 100 mm Max. Drilling Dia in Cast Iron 120 mm Max. Vertical Movement of Radial Arm 1260 Max. Length of Base Plate 28000 mm	Cepel hungary	4
16	Radial Arm Drill	Max. Distance of Spindle to Base Plate 3500 mm Min. Distance of Spindle to Base Plate 250 mm Travel of Head on Arm Max. 3090 mm Max. Drilling Dia.125 mm	Cepel hungary	5
17	NC-Single Spindle Drill	Max. Drilling Dia in Steel 50 mm Max. Drilling Dia. in Cast Iron 60 mm Max. Work Picece Weight 2000 kg Table Area 1000*1600 mm Distance Between the Table & Spindle Nose 1030 mm	M.S.A Czechoslovakia	2

www.azarab.ir

# AZAR AB INDUSTRIES CO.

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
18	Multi Spindle Drill (HOMMA)	Max. Drilling Dia.60 mm Max. Distance Table & Spindle 700 mm Min. & Max. Distance two Spindle 130-220 mm Table Area: 4000*4000 mm No. of Spindle: 8(2*4)	Homma-Machinery Japan	1
19	Universal Drill	Max. Drilling Dia.50 mm Rotation of Spindle Stock 360 Deg. Tilting of Head with Spindle Stock 180 Deg.	Czechoslovakia	1
20	Planer & Miller (A5)	Max. Work Piece Dimension 6000*2000*1600 mm Min. & Max. Table Struck 530-6150 mm Max. Section of Planning Tool 60*60 mm	Czechoslovakia	3
21	Auto pipe facing	O.D Dia: 500-1200 mm 406-653 mm 200-600 mm 38.163.5 mm	Italy & IHI Japan	13
22	Panel Facing M/C With Metal Saw	Max. Panel Width. 4000 mm Tupe O.D. Dia 45-114.3 mm Allowable Number of Tube Per Panel 0-99 mm	IHI -Japan	2
23	Gear Hobbing M/C (A7)	Max. Gear Dia. 5000 mm Max. Gear Dia. by Hobbing 4300 mm Max. Dia. of Helical Gears. 4300 mm Max. Work Piece Weight 30 tons	Germany	1



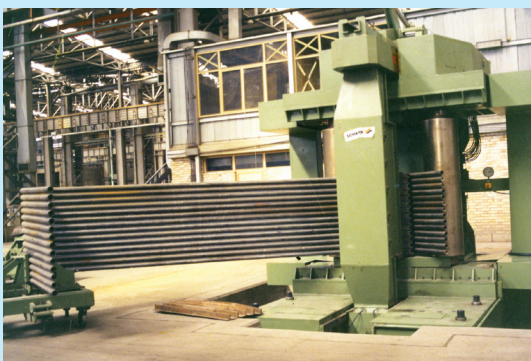
## Rolling Machines

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Plate Bending Roll	Max. width of Plate: 4000 mm Max. thk. (in Max. width): 90 mm (cold Roll) 140 mm (Hot Roll) Max. thk of plate with 1500 mm width: 120 mm (Cold Roll) 260 mm (Hot Roll)	Hausler Switzerland	1
2	Section Bending Roll	IPE: (Max.h=300 mm, Min.R=5000mm) INE(Max.h = 300mm, Min.R3000 mm) HE(Max.h= 240 mm, Min.R=6000 mm) UNP(Max.h= 240 mm, Min.R=3500 mm)	Bolderini - Italy	1

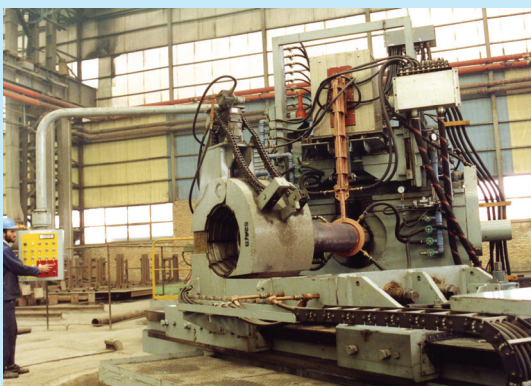


▲ Plate Bending Roll





▲ Membrane wall tube bender machine (panel bending)



▲ High frequency pipe bending machine

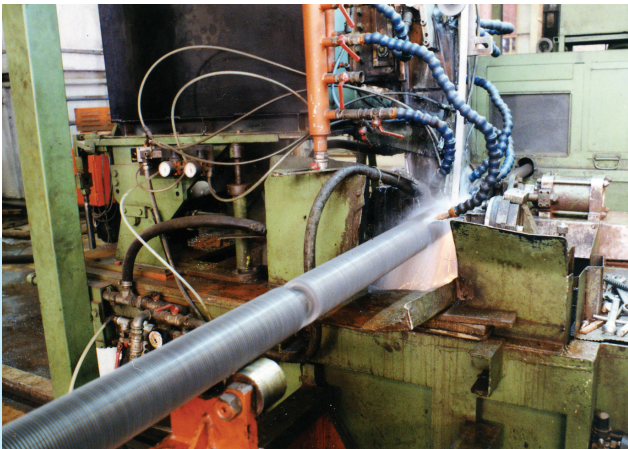
## Forming Machines

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Hydraulic press brake	Max. Press Power 6400 KN Table width 300 mm Operation working: (4550 * 80h) mm	Hausler Switzerland	2
2	Hot Expansion Roll	Min. & Max. Pipe Height 800-1480 mm Max. thk 20 mm Min. & Max. Pipe Dia. 730-1480 mm Max. Expand 120mm	Bolderini- Italy	1
3	High Frequency Pipe bending	Min. & Max. Pipe O.D. 114.3-609.6 mm Bending Radius: Min. Arm: 324-3100 mm Auxiliary Arm: 160-830 mm Wall Thickness: 4.5-100 mm Bending Angle 0-180 deg Max. Length Pipe 12000 mm	DAI-IHI Japan	1
4	Pipe Bending	Max. Pipe O.D. 216.3 mm Max. thk. 12.7 mm Bending Angle 0-180 deg. Bending Radius: Main Arm: 324-3100 mm Auxiliary Arm: 160-830 mm	IHI-Japan	6
5	Membrane wall tube bender machine	Max. Panel Width 1800 mm Tube O.D. 50.8.76 mm Tube thk. 3-10 mm Bending Angle 30~140 deg.	Schafer-Germany	3
6	Continuous Long Tube Bending	Max. Pipe Size O.D. 63.5*13 thk. mm Min. & Max. Bending Radius 45-1200 mm Max. Tube Length 42000 mm Max. Dia. of the Pipe end Angle 185 deg	IHI-Japan	1
7	Pipe Reducer	Max. Pipe Dia. 108 mm Max. Length of Reduction 290 mm Max. Dia. of the Pipe end Formed 133 mm	Laeiss Germany	1



## Fin Tube:

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Fining Tube High Frequency M/C	Dia. of Tube: 25-219 mm Min. & Max Lgh. of Tube: 1000-25000 mm Min. & Max. thk.of Tube: 2-25 mm Width of fin: 8-35 mm Thk. of Fin: 0.9-3 mm Fins per Inch: 2-7 mm Contact Welding Unit: 300 kW, 400 khz Comprising Materials: Carbon Steel-Super Alloy-Alloy Steel- Stainless Steel	L.p Spa - Italy	3



▲ Finned tube high frequency machine



▲ Finned tube Shop

## Heat treatment

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Stress Relief Furnace	Dimension Furnace: Length: 20 m Width: 6 m Height: 6 m Max. Temp: 1000 C Max. wagon Load: 150 Tons	Ircast-Iran	2
2	Hot Roll Furnace	Dimension Furnace: Length: 12 m Width: 5 m Height: 5 m Max. Temp: 1200 C Max. wagon Load: 100 Tons	Guina Spain	1
3	Local Post Weld Heat Treatment Equipments	Ability: Local Post Weld Heat Treatment(P.W.H.T) any Size & any Dimension	Cooper Heat -U.K	15
4	Oil & Water Quench Hardening Furnace	Dimension Furnace: Length: 2400 mm Width: 1140 mm Height: 1240 m m Max. wagon Load: 350 Kg Operation Temp: 2102 F (1150 C) -Solution Treatment - Oil & Water Quench Hardening	Azarkar- Iran	6

► Stress relief furnace





## Cutting Machine

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Universal Coordinate Flame Cutting C.N.C	Dimension Work Piece: Length: 8000 mm Width: 4000 mm Max. Vertical Cut: 300 mm Angle Cutting: 30-45 deg. Max. Plate Thickness (V Type Cutting): 150 mm	Messre Grisham Germany-British Oxygen Company England	3
2	Gas Cutting	Max. Vertical Cut: 250 mm Max. Angle Cutting: 45 deg	Hancoplane England	2
3	Gas Cutting Pipe	Max. Pipe Dia: 609.6 mm Max. Pipe thk: 7.9mm Min. Cutting Angle on the Pipe: 30 deg	Japan	3
4	Plasma Cutting	Max. thk Cutting: 50 mm	Switzerland	5
5	Edge Milling	Dimension Work Piece: Length: 12000 mm Width: 4000 mm Max. Plate Thickness for Beveling: 300 mm Swiveling Angle of Milling Head: 45 deg	Homma Machinery Japan	1
6	Gillotine	Max. Plate Thickness: 25mm Max. Cutting: 4080 mm Max. Work Height: 900 mm	Pullmax Switzerland	3
7	Circular Cold Saw	Saw Dia 1400 mm Max. Work Piece Dia. 490 mm Max. Squares Work Piece 440 mm	Gairu - Spain	6



▲ Edge milling machine

## Shot Blasting

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Plate	Max. Plate Width: 4000 mm Max. Height of Work Piece: 4200 mm Max. Plate Speed: 0.7 m/min Min.& Max. Range of Cleaning: 0.3-1.2 mm	Gostal Yugoslavia	1
2	Pipe	Min. & Max. Pipe Dia: 20-115 mm Material Flow Through the Machine: 4-24m/min	IHI -Japan	1

**AZAR AB**  
INDUSTRIES CO.

[www.azarab.ir](http://www.azarab.ir)



## Welding Facilities

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Membrane Wall Welding	Panel Dimension: Width: 1800 mm Length: 16000 mm Thk. of Fin: 6-9 mm Length of Fin: 8000-16000 mm Diameter of Pipe: 45-114.3	IHI /Imk Japan	1
2	Auto Tube Butt Welding	Max. Pipe Dia: 38.1-63.5mm Max. Pipe Thk: 3-13mm Max.length 42000mm Thk.of Fin: 0.9-3 mm Out Put Curent 0-500 amp	IHI -Japan	3
3	Auto Pipe Welding	Max. Pipe Length 100-15000 mm Pipe O.D. 60-1000 mm Thickness of pipe 4-130 mm	Idkra/RodissYugoslavia	7
4	Auto Submerge Arc Welding	Max. Dia Electrode: 2.4-6.4 mm Out Put Current 100-2000 amp	Otc Japan	30
5	Stud/Stick/Tig/Mig Welding	Dia of Wire: 2.4-6.4 mm Out Put Current Range: 100-2000 amp Hopper Capacity 6Lit	Holies- Germany	335
6	Welding Boom	Max. Vertical Stroke 7600 mm Max. Boom Length 10000 mm Column Swivel Range 360 deg	India	14
7	Tuning Roll	Dia Range of Work 300-7000 mm Max. Load 120 Tons Remote Control	Yaskawa Japan	53

[www.azarab.ir](http://www.azarab.ir)



▲ Clad Submerge Arc Welding



▲ Auto Pipe Welding

## Crane

No.	Name of equipment & machine	Type, Capacity & others	Name & Country of Manufacturer	Quantity
1	Double Beam Bridge (Double Hook)	Max. Welding of Useful Load 150 Tons Max. Lifting Height 17.2 m Max. Span of Bridge 30 m	Min Yugoslavia	35
2	Jib Crane	Max. Welding Hook 5 Tons Max. Lifting Height 5.7m Length Arm 12 m	Min Yugoslavia	15



▲ Crane





## Main examination & testing equipment

No.	Equipment name	Type	Quantity	Capacity or precision	Manufacturer
1	Linear accelerator	Varian 1000	1	2 Mev, 6 Mev	USA
2	X-Ray machine	Andrex	2	300 KV	Denmark
3	X-Ray machine	Radio flax	1	250 KV Japan	Japan
4	X-Ray machine	Seifert	1	420 KV	Germany
5	Iridium192 Radiography camera	Kovamat SU 50	2	Maximum 75 KV	Germany
6	Iridium192 radiography camera	Gammamat TIF	1	Maximum 135 KV	Germany
7	Cobalt60 radiography camera	Gammamat TK 30	1	Maximum 30 KV	Germany

[www.azarab.ir](http://www.azarab.ir)



▲ Chemical Quantitative Analyzer Arcment



▲ Impact Tester (charpy)

AZAR AB INDUSTRIES CO.



▲ Universal Length Measuring System (DMS Microrep)

## Main examination & testing equipment

No.	Equipment name	Type	Quantity	Capacity or precision	Manufacturer
8	Cobalt60 radiography camera	Tech OPS	1	Maximum 10 KV	USA
9	Radioscopy machine (RTV)	Seifert	2	225 KV	Germany
10	Ultrasonic fault detector	Krautkramer USL 32	1	_____	Germany
11	Ultrasonic fault detector	Krautkramer USN 52	1	_____	Germany
12	Ultrasonic fault detector	Karl Deutsch 1016	2	_____	Germany
13	Ultrasonic fault detector	Panametrix EPOCH II B	1	_____	USA
14	Ultrasonic fault detector	Karl Deutsch 1085	1	_____	Germany



## Main examination & testing equipment

No.	Equipment name	Type	Quantity	Capacity or precision	Manufacturer
15	Ultrasonic fault detector	Karl Deutsch 1023	1	_____	Germany
16	Ultrasonic fault detector	Mitsubishi FD 650	1	_____	Japan
17	Magnetic yoke test+ black light	Tiede	1	_____	Germany
18	Magnetic testing	Tiede	8	2500 ampere	Germany
19	Magnetic testing	Tiede	1	4000 ampere	Germany
20	Magnetic testing	Karl Deutsch	1	6000 ampere	Germany
21	Universal testing machine	AMSLER	1	1000 KN	Germany

www.azarab.ir



▲ Tensile Tester (Amsler)



▲ Ultrasonic Tester

## Main examination & testing equipment

No.	Equipment name	Type	Quantity	Capacity or precision	Manufacturer
22	Impact testing machine	Avery Denison	1	300 J	Britain
23	Cryogenic testing	Montford	1	-70°C to 200°C	Britain
24	Hardness testing	EQUO Tip	1	0-1200 LD	Switzerland
25	Hardness testing	WOLPERT	1	C, B Rockwell	Germany
26	Ultrasonic thickness measurement	Krautkramer	3	0.5 mm to 200 mm	Germany
27	Surface filter machine	Hommelwerke Tester T500	1	Ra, Rt, Rz	Germany
28	Metal analysis machine	Metorex ARC- MET 900	1	0.01 in weight mode	Finland



## Main examination & testing equipment

No.	Equipment name	Type	Quantity	Capacity or precision	Manufacturer
29	Metal analysis machine	Metorex ARC-MET 930	1	0.01 in weight mode	Finland
30	Standard gauge blocks (dimensional-angle)	TESA-Gauge Block	10	0.5 mm-1000 mm grade 0, 1	Switzerland
31	Balance	Kern	1	0.0001 gr	Japan
32	Polisher	Struers	2	600 rpm	Russia
33	Optic microscope	OLYMPUS DP 12	1	Optical magnification by 1000times and digital magnification by 2000 times	Germany
34	Laboratory furnace	Nabertherm W 1000	1	Maximum 1300°C, workpiece dimension: 1600mmx800mmx800 mm, for workpiece weight of up to 3000 kg	Denmark
35	Incubator	Lovibond	1	Precise temperature regulation between 2°C to 40°C	Japan

[www.azarab.ir](http://www.azarab.ir)

## Main examination & testing equipment

No.	Equipment name	Type	Quantity	Capacity or precision	Manufacturer
36	Metal analysis machine	METASCOP	1	Quality measurement	Germany
37	Hardness testing	EQOU TIP2	1	Convertible to all units	Britain
38	Coating thickness gauge	Sunoco	2	Up to 1000 microns	Britain
39	Pinhole/Holiday detector	Sheen S 315	2	150 mm-300 mm	Switzerland
40	Pinhole/Holiday detector	Sheen Type 84	1	Maximum 300 mm, V: 1 mv-1000 v, A: 1 µA-10 A	Japan
41	Digital multimeter	PC 5000	1	Ohm: 1 Ω-3f -50 MΩ-3f, C: 1 nF- 9999 nF, F: 1 MHZ-2MHZ	Japan
42	Standard temperature furnace	Microcal T-500	1	Up to 600°C	Italy



## Main examination & testing equipment

No.	Equipment name	Type	Quantity	Capacity or precision	Manufacturer
43	Standard temperature furnace	LAND P1600B	1	0°C -1600°C	Britain
44	Standard goniometer	ETALON RA 700	1	770 mm/0.3 µm	Switzerland
45	Digital scale	Kern 880-32	1	Maximum 30100 gr/1 gr	Germany
46	Standard weight set	Kern	2	1 gr-10 kg Class M2	Germany
47	Hot mounting press	Prestopress-3	1	40 KN	Denmark
48	Cutting	Discotom-2	1	Cutting with thickness of less than 0.5 mm	Denmark
49	Optic microscope	ZSM-100	1	Maximum magnification of 40 times	Iran
50	Hand held XRF analyzer	delta	1	0.1 in weight mode	USA

**AZAR AB**  
INDUSTRIES CO.



## Codes, Standards and Software Used in Design, Construction, Testing and Inspection

1-International codes and standards used in design, engineering of plants for steam production are:

DIN	ASME
BS	IEC
API	ISO 3834-2

2-Standards used for design of refinery towers, heat exchangers, storage tanks and pressure vessels are:

TEMA	API
ASME	AD-MEHRKBLA
DIN	AISC
BS5500	UBC

3-Codes and standards used in power piping are:

ASME  
ANSI

4-Standards used in automatic design of control systems and precision tools are:

NEPA	IEEE
VDE	ISO
IEC	ISA

5-Standards used in structure design are:

ASCE	ACI
UBC	BS

AISC

6-Codes and standards used in construction and quality control (tests and inspections) are:

ASNT-TC-IA	BSI
AWS	ASME

DIN

7-Softwares used in Design and Engineering Department are:

CAM	PAFEC	DUTY OF BOILER
SUPER SAP	CAESAE II	PERFORMANCE OF BOILER
ODMS	TANKS	
HIFS	AUTO VESSEL	
PV-ELLITE	ANSYS	
ASPEN-JAC	COSMAS	
COMPRESS	ALGOR	
X-STELL	SAP2000	
ETAB	AUTO CAD	
HYSYS	NOZZLE PRO	



NOTE:.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....



# AZAR AB INDUSTRIES CO.

[www.azarab.ir](http://www.azarab.ir)

Head Office:NO. 15 Mollasadra Ave.,Vanak  
Sq.,Tehran 19919 IRAN, P.O.Box: 15875-3591  
TEL:(+98 21)84921  
FAX:(+ 98 21) 88799443  
Factories:Km5 ARAK-QOM Road,  
P.O.Box:38135-835 ARAK-IRAN  
TEL:(+98 86) 33136201-9  
FAX:(+98 86) 33134084



QMC-001-B  
June 2015  
M a n a f o r m  
086-32248111-3221690