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We strive for excellence.
Taghtiran Kashan Co was established on a 70 hectare hillside area of Karkas mountain range in 1986. Starting with manufacturing distiller equipments, Taghtiran could rapidly enter Oil and petrochemical industries by training and employing highly educated engineers as well as manufacturing personnel. Manufacturing hundreds of equipments for various industries including, Oil, Gas, Chemicals, Petrochemicals, Pharmaceuticals as well as the variety of quality components for steel industry makes Taghtiran one of the leading companies in steel industry. Since these years Taghtiran has delivered variety of carbon steel and stainless steel equipments designed, inspected and manufactured by its professional engineers and personnel according to her customers demands considering their proposed standards ie, ASME, AWS, ASTM, TEMA, BS, API, ANSI, etc.

Taghtiran is specialized in design and manufacturing various equipments including: pressure vessels, towers, mixers, reactors, variety of heat exchangers, bundles, convection coils, fermentors, air coolers, recuperators, etc. as well as parts for steel industries such as, inner covers, spray headers, rollers, panels, spray pipes, etc.
Taghtiran Kashan has offered a wide range of services among a broad spectrum of industrial and research institutes using experienced personnel and specialists in relevant areas.

**Scope**

*The international level*

Taghtiran is mainly a project-oriented company specialized in design and manufacturing middle size and heavy equipments, machineries and parts made from stainless steels as well as other super alloys, alloy steels, carbon steels, or aluminums for various industries according to international standards and customer demands.

As an importer of alloy steels, Taghtiran is one of the major customers of well-known steel producers in Europe and East Asia to supply certified steel with various shapes, including, sheet, bar, pipe, profile, etc. not only for her contracts but also for many other companies in Iran.

Our installation team in cooperation with a number of other construction companies makes joints to enable us to handle EPC projects.

Taghtiran’s machining workshop is equipped with CNC milling, turning and boring machines to manufacture complicated parts as well as parts in batch sizes.

**Field of Activities**

*Industries we serve*

Taghtiran gives services to the following industries by manufacturing variety of equipments and parts:

- Oil & Gas and Petrochemical industries
- Steel industries
- Food industries
- Pharmaceutical and Chemical industries
1. Shell & Tube Heat Exchanger
2. Pressure Vessels
3. Storage Tanks
4. Reactors
5. Towers
6. Air Coolers
Shell & Tube Heat Exchanger

Using the latest engineering knowledge, tools and softwares including ASPEN & HTRI, Taghtiran is capable of designing and manufacturing heat exchangers for Oil & Gas industries according to ASME and TEMA standards. Double pipe and plate type HEs, shell and tubes, kettles and U tubes weighted up to 16 tons with 1700 mm ID and 8000 mm length are among the list of our products.

CNC milling and turning machines, employed to manufacture various accurate parts of heat exchangers e.g. tube sheets; tube to tube sheet expanders; and automatic welding machines are the tools utilized for proper assembling of shell and tube heat exchangers.
Taghtrian has a precious experience on designing and manufacturing of various types and sizes of tanks and pressure vessels including jacketed vessels for food, medical, chemical and oil industries. Our professional engineers use engineering softwares including PV-Elite, Nozzle pro and Tank to design parts according to ASME, EN, DIN, etc standards. The vessels could be polished, electro-polished or pickled according to our customers’ surface finish demand or made by clad plates or rubber-lined.

Taghtiran Co was the sub-contractor of many European companies to manufacture the equipments for a number of large projects (e.g. Ahwaz sugar cane development project, Qarb paper mill Co., Sari antibiotic Co., etc) with more than 100 pieces of vessels, fermenters, reactors, heat exchangers, etc.

Taghtiran is also one of the main contractors of large consulting companies including Nargan, Farasahel, Namvaran, Sadra, etc. in Iran.

02 Pressure Vessels
03

Storage Tanks

Taghtiran has designed and manufactured plenty of small and large size storage tanks with fixed and floating roofs for various industries according to their required standards including API.
Reactors and mixers

Reactors and mixers are one of the main equipments in chemical, petrochemical, food and medical industries. These equipments may need to work at high pressure and temperature. Designing a suitable mixer and sealing system with mechanical or magnetic seals are one of the key points in manufacturing these equipments which is one of our main expertises. Jackets or half pipes are designed according to ASME Sec VIII to provide the required temperature for the reactors.

Some of our glorious products are: reactors manufactured for Tabriz, Orumieh, EElam and Arak Petrochemicals with up to 18m height and 50 tons weight; Sari antibiotic reactors; Hemmat Industry complex research reactor with up to 100 bar working pressure and double mechanical seal; Marageh and Qarb paper mill companies' reactors. Some of these reactors were designed and ordered by German and Austrian companies for their customers in Iran.
Arak petrochemical and Ahwaz sugar cane development plant are some of our tower customers in Iran. We have also manufactured various sizes of packed and tray towers for petrochemical industries and refineries.
Various air coolers have been provided for steel making companies like Foolad Mobarakhe, Zobe Ahan and Foolad Khuzestan.

Taghtiran has manufactured various sizes of tube bundles with and without fins made from copper, aluminum, brass, galvanized CS, SS, etc for our customers e.g. Mobarakeh Steel Co, Zobe Ahan steel Co and Foolad Khuzestan steel complex. We have also orders for both integrated fins and fins made from plates or wires and expanded out of circular or oval pipes from steel industry.
1. Recuperators
2. Cooling Panel
3. Protection Bell
4. Rollers
Recuperators

As one of the main manufacturers of recuperators for steel industry in Iran, Taghtiran has acquired an uncompetitive experience in producing various sizes of quality recuperators for our customers e.g., Mobarakeh Steel Co and Foulad Khozestan steel complexes.

- 1. Recuperators

Over 100 sets of various type of recuperators were produced with straight and U shape pipes from certified 321, 310S, 309S, 310L, 309L and 304L stainless steel materials imported by our procurement department from European companies.

Especial machines were made in Taghtiran for pipe bending and all recuperators are protected with a suitable structure during delivering.
These equipments are produced in different dimensions but the general functioning is the same.

Cooling Panel

Panels are one of our customers’ important equipments used to prevent wasting furnace heat by recovering the exhaust heat especially in steel companies.

High amortizations rate of these panels are because of high temperature and corrosiveness of in-pipe fluids as well as the heat shocks that necessitate special attention on the material used for these parts and their welding procedure specification.

Our quality reliable cooling panels are the results of our precious experience acquired from our research in the relevant fields and manufacturing various sizes of panels.
Procurement unit of TKC can provide the material of this equipment without any limitation in different sizes (diameter-height-thickness).

Protection Bell

TKC is the first manufacturer of the inner covers of protection bells used for annealing in steel companies in Iran.

We developed a special forming process for the first time that enables us to form the wavy shape of the shells of these parts. These SS309 parts are specially ordered by Mobarakeh Steel Complex to withstand up to 1000° C heating temperature.
We supply a wide range of industrial pumps in a variety of configurations and manufactured to the international standards including API, ANSI and ISO. Pumps range in size from small industrial 25mm end suction designs to large between bearing API 610 compliant machines.

1. Positive Displacement pumps
   - Gear pump
   - Progressing cavity pump
   - Roots-type pumps
   - Peristaltic pump
   - Reciprocating-type pumps

2. Impulse pumps
   - Hydraulic ram pumps

3. Velocity pumps
   - Centrifugal pump
   - Radial flow pumps
   - Axial flow pumps
   - Mixed flow pumps
   - Eductor-jet pump

4. Other Configurations
   - Regular Types

Steel companies are the permanent consumers of these parts because of their gradual wearing during transferring hot plates or forming them.

- Rollers
  Despite the great wearing resistance of the materials used for the rollers, they are considered as one of the consumable parts in steel industry because of their high number of contacts and load cycles.

Accordingly, we have manufactured rollers from 80mm diameter and 4 meters length to 900 mm diameter rollers from various materials e.g. centrifugally casted HHIII imported from European and Canadian Companies. We also clad the used rollers by special welding material for our customers in steel industries.
1. Reactor and Mixer
2. Fermentors
3. Towers
4. Screw Conveyor
Reactor and Mixer

Manufacturing some reactors and mixers for the first time in this company like manufacturing Sari antibiotic reactors, provides independence and omission of import.

TKC provides a high business in manufacturing different reactors and mixers for paint and resin and petro chemistry companies so that the equipments from TKC are competitive by foreign ones.

Cooperation of EKATO Co. from Germany in manufacturing Ilam petro chemistry reactors and also ANDRTIZ Co. from Austria in manufacturing Maragheh and West Paper mixers and satisfaction of these companies, shows our competence. To achieve this competence, TKC has provided designing soft wares and expert technical human forces.

Manufacturing some reactors and mixers for the first time in this company like manufacturing Sari antibiotic reactors, provides independence and omission of import.
Fermentors
03
Towers
The main activities of this department are divided into 3 sections:

**Project assessment** is responsible for the assessments of the proposed projects to the company. The experienced team in this section is completely aware of the details and costs embedded in design, material, manufacturing, finishing and delivering the equipments of a project to offer a competitive price to customer considering the market.

**Design and drafting** section joint with R&D and manufacturing engineers is employing professional design engineers to design parts and equipments utilizing engineering softwares and international standards, e.g., ASME, DIN, EN, ISO, etc.. After customer’s approval of the design, the shop drawings and then the bill of materials (BOM) are generated in this section. BOM is then electronically sent to the Ordering section to place order, the materials not available in our stores, for procurement department.

**Process planning** is the last section in this department that receive shop drawings from design and drafting section to specify detailed process plan and manufacturing time for producing each part and product assembly.

Our strategic goal is to provide the simplest and lowest cost quality product to effectively achieve the specified objectives of a particular application.
This department utilizes the universities’ professors, R&D institutes as well as Taghtiran’s skilled personnel to run variety of applied researches to:

- Develop the company on various fields
- Improve the quality of products and inspections
- Optimize product design and create new products, machineries, and process equipments
- Acquire, select, apply and protect the company’s knowledge
- Perform research services to our customers for developing new product, production line and machineries

The list of some machineries and equipments studied and designed by this department is:

1. Supper-critical CO2 liquid-liquid extraction
2. Super-heat water extraction
3. Two Phenyl ethanol extraction from second distillation of rose waste water
4. Flanging machine for 1.5 meter head diameter
5. Flanging machine for 6 meter head diameter and 40mm thickness
6. Vessels head edge cutting machine
7. CNC flame cutting machine
8. 200 and 1000 tons presses
9. Heavy pipes roll bending machine
This department consists of various workshops with machineries installed for our scope of work.

**Cutting workshop** is equipped with CNC, optical and manual cutting machines using plasma and oxygen cutting torches for plates as well as various sawing machines for bars and pipes.

**Forming workshop** is equipped with a 1000 ton hydraulic press and several smaller ones, flanging machines for making heads with up to 6 meter diameter and 30 mm thickness, and miscellaneous roll bending machines for thin sheets and plates, up to 40 mm thickness, pipes with up to 4 inches diameter and 15 mm thickness. Our subcontractors give us services for other sizes.

**Sheet metal workshop** includes our professional welders managed by very experienced engineers and supervisors. Various parts from all other sections are gathered in this workshop for welding and fabricating according to the operating procedure plan generated by engineering department. Parts are welded by various manual and automatic welding machines including GTAW, GMAW, SAW, SMAW, PAW, etc. by certified welders.

**Machining workshop** is equipped with CNC lathes, boring, and milling as well as variety of general purpose workshop machineries for turning and milling small to medium size parts with up to 1.5 meter diameter and 6 meter length.

**Our casting section** enables us to sand cast small parts for our products and customers.
The difference is in the details.
TAGHTIRAN

A LEADING EDGE, HIGH PERFORMANCE COMPANY.