

Designing & Manufacturing of:

- Heat Recovery Steam Generators (HRSG)
- Auxiliary Boilers
- Fin Tube for Boilers & other Equipment
- Co-Genera HRSG
- Pressure Vessels
- Process Towers
- Heat Exchanger
- Storage Tanks
- Steel Structures



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**Power Plant, Petrochemical, Oil & Gas
Equipment Manufacturer**

**WE ARE A MEMBER
OF THE FAMILY
YOU CAN TRUST**

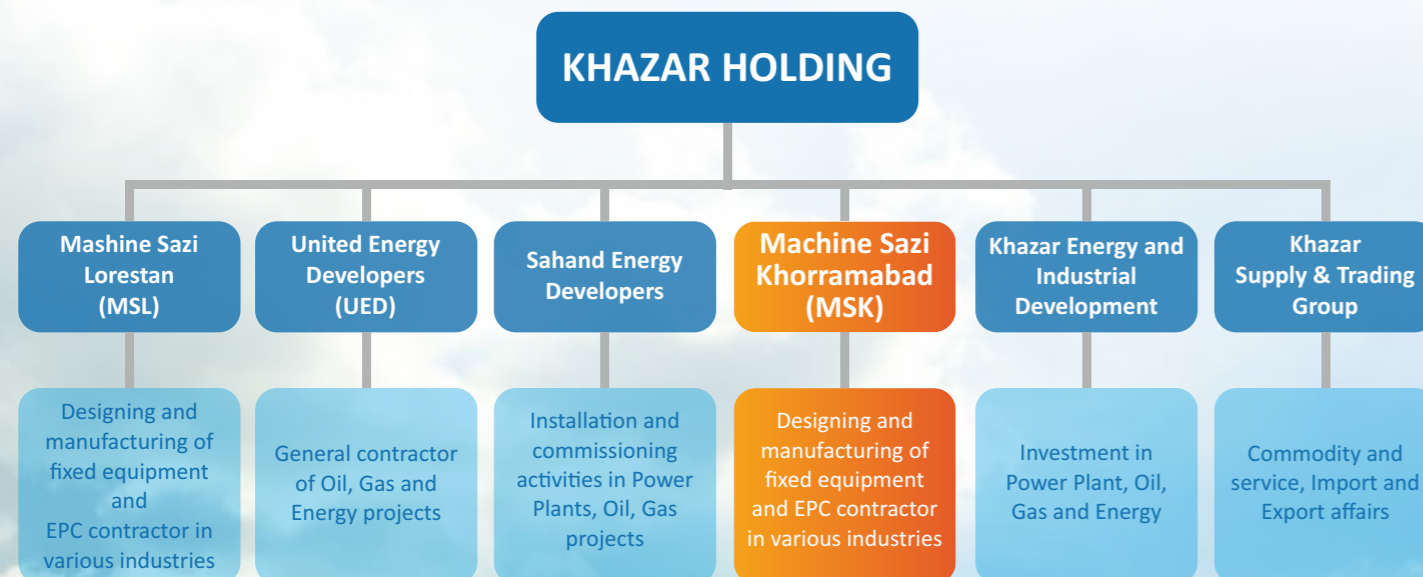


Contents

| | |
|---|----|
| SUBSIDIARIES COMPANIES | 01 |
| INVESTMENT CHART | 02 |
| HISTORY | 03 |
| STATEMENT | 05 |
| STRATEGIC GOALS | 06 |
| POLICIES | 08 |
| BUSINESS PARTNERS | 09 |
| AGREEMENTS | 10 |
| INDUSTRIAL AREA | 13 |
| ROLLING MACHINE | 15 |
| PRODUCTION CAPACITY | 16 |
| FACTORY EQUIPMENT | 17 |
| PRODUCTS & SERVICES | 19 |
| HEAT RECOVERY STEAM GENERATORS (HRSG) | 21 |
| TYPE OF HRSGs | 22 |
| FINNED TUBE | 23 |
| MULTI MATERIAL TUBE FINNING MACHINE | 25 |
| TYPE OF FIN TUBES | 27 |
| STEEL STRUCTURE MECHANIZED PRODUCTION LINE | 29 |
| QUALITY CONTROL (QC) | 31 |
| PROJECTS | 33 |
| STEEL STRUCTURE PROJECTS | 35 |
| EPC PROJECTS | 37 |
| BRIDGE CONSTRUCTION & INSTALLATION PROJECTS | 38 |
| ACCOMMODATION | 39 |
| OFFICE | 40 |
| CORPORATE SOCIAL RESPONSIBILITIES (CSR) | 41 |



Organization Chart



MSL UED SED **MSK** KEID KST



United Energy Developers (UED)

In the form of increasing company capital

Sahand Energy Developers

In the form of increasing capital and investment to build "Seashine", a commercial and residential project

Machine Sazi Lorestan (MSL)

In the form of buying factory equipment and increasing company capital

Khazar Supply and Trading Group

In the form of increasing company capital and providing liquidity for exporting products

Machine Sazi Khorramabad (MSK)

In the form of buying factory equipment and increasing company capital

Khazar Energy and Industrial Development

In form of the investment phase of the "Anamis" power plant construction project



History

In the 1990s, on a 50,000 square meter piece of land in the city of Khorramabad, a 10,000 square meter industrial shed along with a three thousand square meter office plus an engineering and warehouse building were built. This was to serve as the base industrial factory in achieving industrial development in Iran. This complex was used for designing and manufacturing high capacity hydraulic presses which was originally named “PRESS IRAN” Factory. During its early years, Press Iran was involved with leading international companies both in partnership and in joint ventures executing large scale national projects.

ultimately In 2018, the factory with all its facilities, equipment, know-how and intangible assets was transferred to MSK.

Benefitting from the infrastructures, machineries, technical know-how and intangible assets of “PRESS IRAN Company”, MSK, in partnership with international companies which possess know-how and modern technology, stepped into the field of manufacturing heat recovery steam generators (HRSG), pressure vessels, thermal exchangers, storage tanks and steel structures; and has been moving through increasing the capacity of local manufacturing capabilities, oil, gas and petrochemical industries facilities and machineries fields of operations.



OUR MISSION

MSK Company is engaged in engineering, procurement and construction of power plants, oil, gas and petrochemical projects and manufacturing equipment in the industries at a world class level.

OUR VISION

The vision of MSK Company is to be known for its efficiency and quality in the field of production of heat recovery boilers (HRSG) and process equipment in Iran, Middle East and C.I.S. countries.

MISSION

VISION

VALUES

OUR VALUES

- Customer Orientation
- Innovation
- Organizational Excellence
- Commitment to society and the environment

- ☑ MSK Company intends to be the first manufacturer of "F Class" boilers in the Middle East and C.I.S. countries by 2026 with a production capacity of two boilers per year.
- ☑ MSK Company intends to be recognized as a leading manufacturer of process equipment for the oil and gas and petrochemical industries, mining and power plants by 2026 and to increase its production capacity in this field to 30,000 Tons per year.
- ☑ MSK Company intends to operate as a first-class manufacturer of steel structures with a capacity of 24,000 Tons per year by 2026.
- ☑ MSK Company intends to allocate at least 30% of its product portfolio to implement projects in the form of P, EP and EPC contracts in the oil, gas and petrochemical industries by 2026.



**world class level
manufacturer**

- Applying state-of-the-art technologies and methods
- Human Resource Constants Growth
- Customer Centricity
- Organizational Excellence
- Social & Environmental Responsibility and Commitment
- Development of Innovation and Creativity





Joint venture by **SAMIC** and **IDRECO** for engineering Services

Joint venture by **PTE Limited** for **NGL 3100** Engineering Services



MSK Agreement Corporation with SAMIC for Designing and Manufacturing of Pressure Vessels, Column, Reactors and Heat Exchangers.



MSK Agreement Corporation with BHI for Design, Procurement, Fabrication, Erection, Test and Commissioning of HRSG (Heat Recovery Steam Generator)



MSK Agreement Corporation with BHI for Design, Procurement, Fabrication, Test of Boiler and Static Equipment such as Pressure Vessels and Shell & Tube Heat Exchangers.

MSK Agreement Corporation with CIM for Engineering, Fabrication, Supervision and Training of Hydraulic Press Machine up to 8,000 ton.





Industrial Area

- ▶ Fifty thousand square meter land
- ▶ 10,000 square meter industrial shed with more 20 meters in height
- ▶ 2600 square meter office building
- ▶ 1044 square meter roofed warehouse
- ▶ 450 square meter sandblast with 12 meters in height



Rolling Machine

- ▶ 4 Rolls with Planetary technology
- ▶ Max. thickness 180mm- Cold

Production Capacity

- ▶ HRSG (Class F & F⁺): 1 unit / year
- ▶ Fin Tube: 12,000 pcs / year
- ▶ Pressure Vessels: 2,500 Ton / year
- ▶ Steel Structure: 6,000 Ton / year



Major Factory Equipment

| Equipment's Name | Qty. | Equipment's Name | Qty. |
|--|------|---|------|
| Fin Tube machine | 1 | Overhead crane (75 Tons) | 2 |
| Rolling machine (Up 180 mm) | 1 | Overhead crane (50 tons with a span of 18 meters) | 1 |
| Milling machine | 6 | Overhead crane (20 tons with a span of 30 meters) | 2 |
| Boring machine | 1 | Overhead crane (16 Tons) | 1 |
| Universal / Vertical / NC Milling Machine | 3 | Overhead crane (10 Tons) | 1 |
| Radial drills machine | 7 | CNC flame cutting machine | 1 |
| Band Saw with a diameter of 320 x 350 | 4 | H-Maker machine | 2 |
| Hydraulic five-function punch machine | 1 | Box-Maker machine | 2 |
| Grinding machine with a diameter of 5000x8000 mm | 1 | H-straightener machine | 1 |
| Mechanical press 40 Tons | 1 | CNC Turning machine | 2 |
| Hydraulic press 50 Tons (H From) | 1 | Heat Treatment Furnace(10mx10mx5m) | 1 |
| Forklift | 3 | Welding machine | 25 |
| Electro Slag Welding Machine (Submerged Arc Welding (SAW)) | 1 | Co2 Welding machine | 16 |
| | | Air compressor 600 cfm | 2 |



Fin Tube Machine

- ▶ **FINNED TUBE** is used to increase the heating surface.
- ▶ Generally, the **SERRATED TYPE** is applied to increase heat transfer and makes it more efficient.
- ▶ **FINNING** method is a high frequency resistance welding.

Machinery Equipment

- ▶ 36 sets
- ▶ With different types by qualified brands



CNC Machine (2 Sets)



Overhead Crane

- ▶ 75 Tons 2 set
- ▶ 50 + 10 Tons 1 set
- ▶ 20 Tons 1 set
- ▶ 16 Tons 1 set
- ▶ 10 Tons 1 set



Rolling Machine

- ▶ Rolling Machine (Max. thickness 180 mm-Cold)



Heat Treatment Furnace

- ▶ Automatic Control
- ▶ Inside Dim : 10m x 5m x 5m
- ▶ Max Temperature : 750°C



Electro Slag Welding Machine (Submerged Arc Welding (SAW))

- ▶ Automatic
- ▶ Column and boom with various sizes
- ▶ 3 sets

Designing and Manufacturing of Fix Equipment and EPC Contractor in Various industries.



Horizontal Drum Units

Horizontal drum HRSG units are the most popular type of steam generator. The flow of gas is horizontal while the water is heated in vertically-arranged evaporator tubes, producing a natural, cost-effective circulation effect. With decades of OEM experience, cutting-edge research and development, and extensive field service experience, we are an experienced manufacturer in the horizontal HRSG segment.

Vertical Drum Units

With vertical gas flows across horizontal evaporator tubes, this drum-type HRSG is ideal when site space is at a premium, for example, in add-on applications. We offer vertical drum HRSG solutions for both gas and oil operations, which are particularly well-suited for heavy fuel oil applications.

Horizontal Once-Through Units

The horizontal once-through HRSG employs the same basic arrangement as the standard horizontal HRSG, but eliminates the high-pressure drum. This results in greater thermal flexibility, high efficiency, and the ability to support unlimited daily cycling



Finned Tube

With completion of the factory production line, machineries and purchasing of the necessary equipment for production of the heat recovery boilers (HRSG) including “Finning Machine” and “Bending Machine”, the construction of heat recovery boilers (HRSG) has been selected as the main product of Machine Sazi Khorramabad Company.

These machines have been purchased from JTC company and with the transfer of the latest technology from Korea to this factory, we are the manufacturer of *high frequency welding finned tubes* in Iran.

Previously, Finned Tubes required for combined cycle power plant units (class F), were purchased from foreign companies due to lack of production inside the country, expending a lot of time and money. Purchasing of Finned Tube production line by Machine Sazi Khorramabad Company provides the possibility of production and supplying of two types of products :

A) Complete product :

- HRSG Power Plant Recycling Boiler
- HRSG boiler used in process units

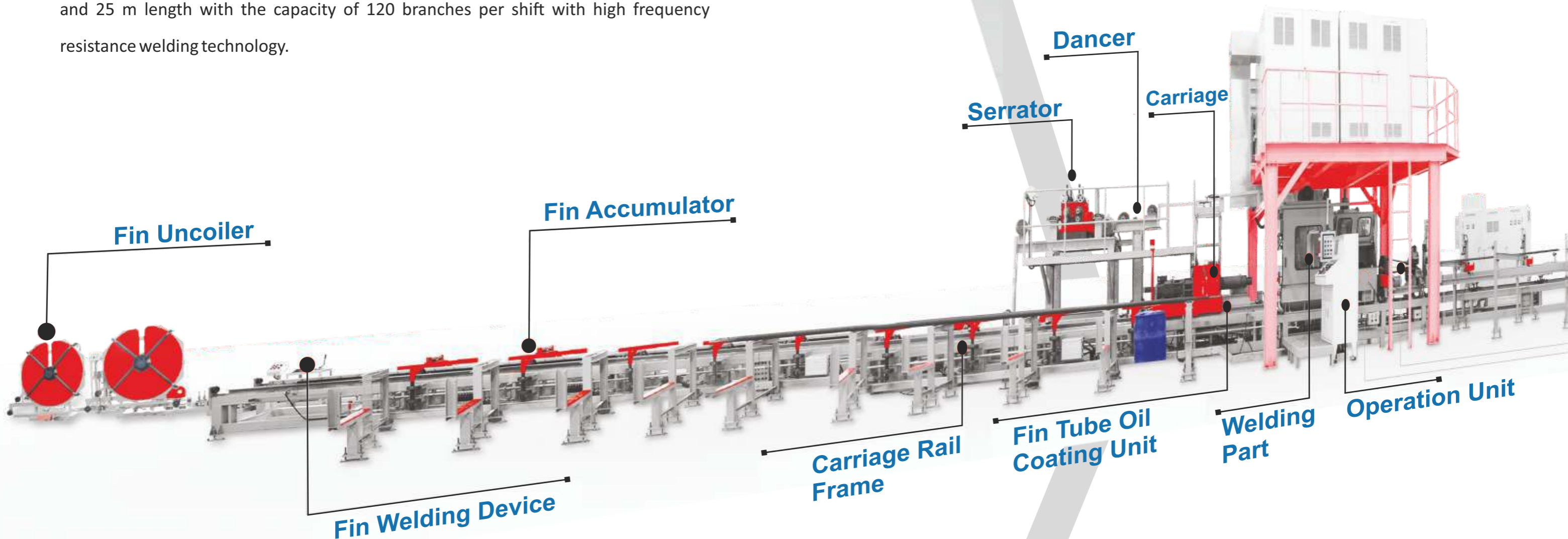
B) Semi-finished Product :

- Production of finned tubes required by domestic and foreign manufacturers



Multi Material Tube Finning Machine

The machine produces the finest finned tube in the world. These machines offer the versatility, speed, durability and efficiency you require to maximize the potential of the finned tube manufacturing operations. It is able to produce finned tube in a wide variety materials and sizes, such as carbon steel, alloy steel, nickel alloy up to 4 inch diameter and 25 m length with the capacity of 120 branches per shift with high frequency resistance welding technology.



*we will support you
to meet your
needs based on the technology we have*

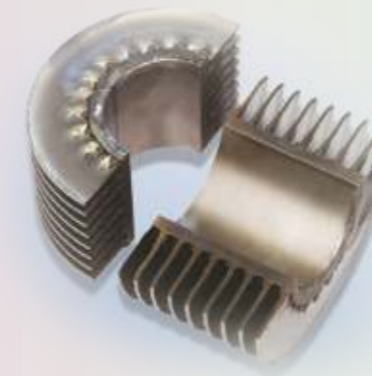
Types of Fin Tubes

Product Outline

Finned Tube is a newly developed revolutionary product for heat exchangers and is suitable for a wide range of applications. In addition, it could be made of variety of materials (Carbon, Stainless, Inconel and etc.) that offer excellent heat transfer performance, durability, heat resistance and corrosion resistance.

Advantages of the new product

1. Compact design with improved heat transfer efficiency.
2. Dynamic range of fin pitch and thickness leads to cost-effective design.
3. Adopting bimaterial welding enables wide range of design to suit various operating conditions.
4. Less deformation, good efficiency and durability even under the condition of rising temperatures.
5. Competitive price due to high productivity.



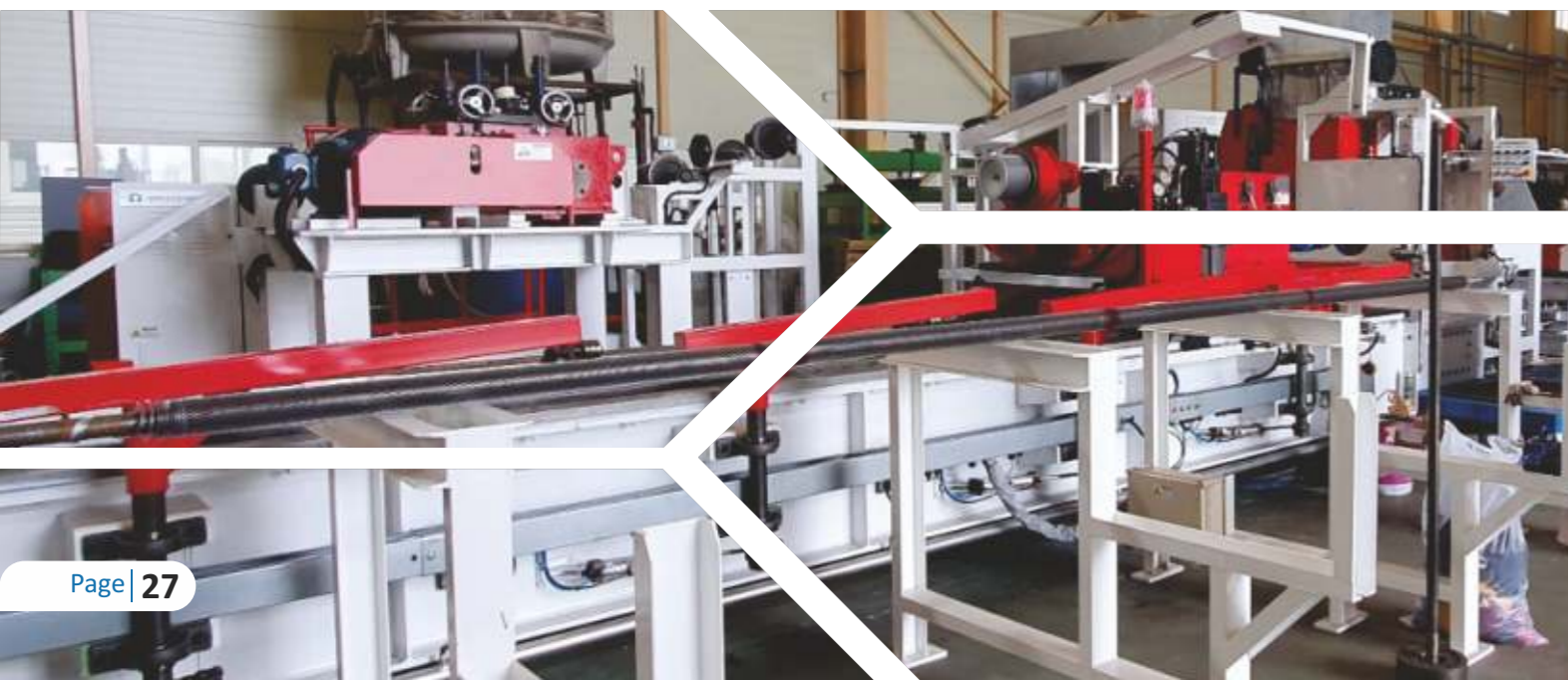
SS TUBE : O.D ϕ 34.3 x t 3.4
SS 409 FIN :
t 1.0 x H 13.9 x 6 F/IN



Inconel TUBE : O.D ϕ 34.5 x t 3.5
SS 316L FIN : t 1.0 x H 13.9 x 7.5 F/IN



SS TUBE : O.D ϕ 34.1 x t 3.4
SS FIN : t 1.0 x H 13.9 x 6 F/IN



Steel Structure Mechanized Production Line

50 thousand square meters area and 10 thousand meters well equipped industrial shed makes MSK one of the greatest factories in steel structure production. There is capability to carry out heavy industrial projects in the field of Oil and gas, petrochemical, power plants and tower construction. A fully mechanized production line of steel structure is placed in the industrial sheds with a height of about 23 meters and 50, 30, 20 and 16 ton crane. A new brand box-making machine, an H-straightener with the ability to assemble both beam wings simultaneously, a CNC machine, 20 ton rotating device, a 20 millimeter guillotine, automatic welding machines (know as beam and column welding machine) with transverse and longitudinal welding capability is a part of factory facilities.



Submerged arc welding
(S.A.W)/Electro Slag
04



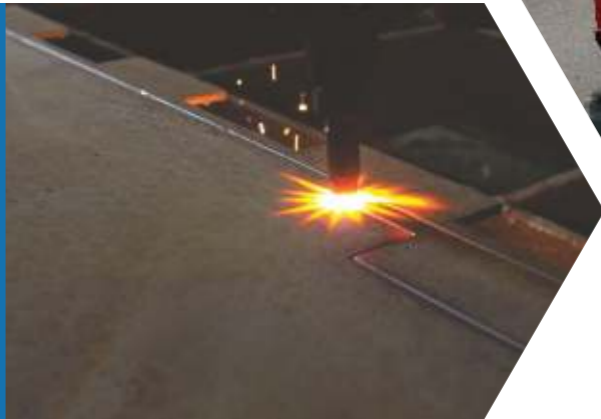
Band Saw Machine
03



CNC Machine
02



Arc Cutting
01



Box-Maker
05



H-Rotator
06



H-Maker
07



H-Straightener
08



Quality Control (QC)

In the quality control unit of Machine Sazi Khorramabad Company, in order to maximize the QUALITY, we are focused to make the highest level of quality control systems operational.

All control stations are designated and developed based on relevant standards. All raw materials are inspected from entry stage up to the final product.

According to the integrated quality management system methods, all Non-Conformities are recorded and after analysis, the methods and instructions are modified to prevent discrepancies.



Certificates



Projects



Steel Structure Projects

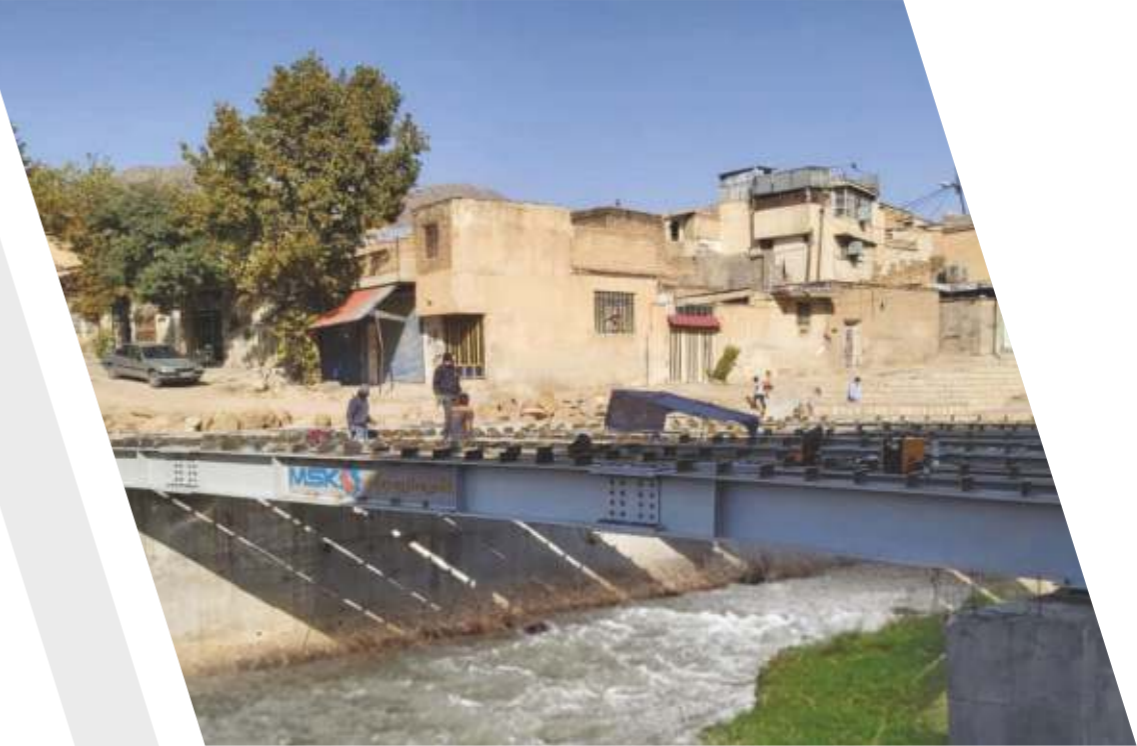
Management Contractor (MC)

- ACC Steel structure: 1060 Tones
- ACC Steam Duct: 480 Tones
- Condensate Receiver Tank (CRT): 28 Tones

Manufacturing Projects :

Engineering, Procurement, Fabrication, Erection, Pre-Commissioning and Commissioning Such as :

- Manufacturing, Transportation of B.O.P (part A, B, C) Pipe Rack Steel Structure
- Manufacturing, Transportation of B.O.P (part N) Pipe Rack Steel Structure
- Manufacturing, Transportation of Water Treatment Plant Steel Structure
- Manufacturing, Transportation of Turbine Hall Platform Steel Structure
- Manufacturing, Transportation of Turbine Hall Pipe Rack Steel Structure
- Manufacturing, Transportation Shelter of GPRS Steel Structure
- Manufacturing and Erection of chimney and furnace wall of 32 MW amps of Fartak factory
- Manufacturing and Erection of many types of bridges
- Design, Supply of Materials & Construction of DIR direct transport from shahid kharazi area to steel making plant /Ehdas management
- Design, Supply of Materials & Manufacture of 7 devices bin and hopper, hot air duct and 23 gates/ Lime project of Hormozgan stone and steel factory/ Ehdas management
- Manufacturing & Transportation of 1500 Tons Steel Structure for KPRC
- Manufacturing & Transportation of 3000 Tons Steel Structure for Kimiya Sanate Mabna
- Manufacturing & Transportation of Heat Exchanger for Lavan
- Manufacturing & Transportation of Steel Structure for Fartak, Silicon Metal EPC Formalin Project of Nakhle Asmari



EPC Projects

Engineering, Procurement Services of NGL 3100 Dehydration and C2+Polishing Units

NGL3100 plant is planned to be constructed near the existing oil production unit of Cheshmeh Khosh, in Ilam Province, West of Iran. The feed to the plant is about 240 MMSCFD (in summer) composed of associated gas from West Paydar Asmari, Cheshmeh-Khosh, Dehloran, Danan, Azar, and West Paydar Bangestan, oil & gas fields.

Phase EP1 consists of Units 300 (Dehydration Unit) and 700 (C2+ Polishing Unit) utilizing mole sieve beds.

MSK in a joint venture with Petro-Techna is providing basic engineering, detailed engineering design, procurement and fabrication of key components for this phase of the project. Sour gas, after treatment in acid gas removal (AGR) unit (Unit 200) using formulated MDEA, will go through complementary processing for water and mercury removal in unit 300 to avoid hydrate formation and to protect brazed aluminum heat exchangers in cryogenic conditions of NGL extraction section (unit 400). C2+ (ethane and heavier hydrocarbons) recovered in Unit 400 is routed to unit 700 for complementary polishing (treatment) to meet required specification of downstream olefin (steam cracking) petrochemical plants, including Dehloran petrochemical complex which will be located near Dehloran City in Ilam province, west of Iran.



Bridge fabrication and installation projects

Fabrication and installation of bridges to help people in flood-prone regions.





Accommodation

Welfare facilities are provided for accommodation near the factory, which include a dormitory, dining room, kitchen, library, green spaces, sports and walking area, gym room car park, etc.

Office

The newly built and equipped office building has been allocated as the central office, which in addition to being in a good position in terms of easy access, includes parking, office spaces, conference rooms, a roof garden, dining room and prayer room.



Corporate Social Responsibilities (CSR)

Helping the victims of natural disasters

Planting seedlings for each employee with a plaque in her name

Creating jobs in deprived areas

Improving labor policies

Participating in fair trade

Charitable giving

Volunteering in the community activities

Corporating policies that benefit the environment

Socially and environmentally conscious investments

Collaborating in education and culture building

