



**Sabz Engineering Co. (SEC)** as an Iranian company capable of providing wide range of engineering services in the field of detail engineering, fabrication support services up to equipment delivery to sit.

Our Company has been established in 2000 to perform the mechanical and structural design, fabrication drawing preparation, procurement and supply of material, fabrication, shop and site supervision for Oil, Gas and Petrochemical equipment.

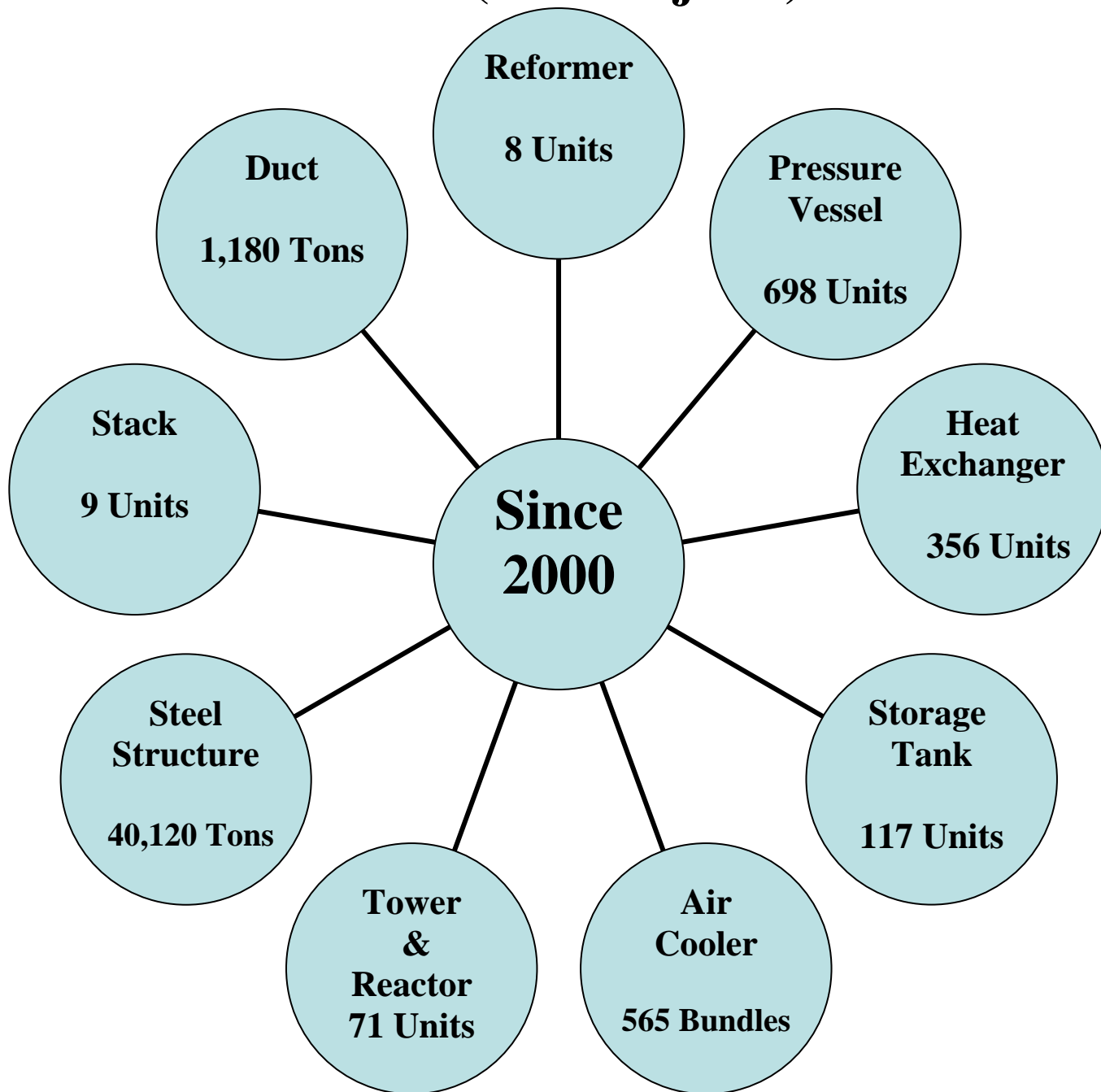
Our company , being able to implement projects with a capacity of 200,000 man hours per year, is structured in such a way to provide the most professional engineering services to projects and companies. To explain our capabilities in the summarized form, we are able to carry out the following items:

- 1- **Project Management**
- 2- **Process design**
- 3- **Piping consisting of 3-D modeling in PDMS**
- 4- **Structural design including fabrication drawing preparation by X-Steel**
- 5- **Mechanical equipment including fabrication drawing preparation for:**
  - **Air coolers**
  - **Towers**
  - **Drums / Vessels**
  - **Storage Tanks**
  - **Heat Exchangers**
  - **Fired heaters (Reformers)**
- 6- **Electrical engineering**
- 7- **Instrumentation engineering**
- 8- **Material management and fabrications supervision**
- 9- **Planning (Scheduling / Progress reporting)**

SEC is prepared to furnish its services to your Iranian or non-Iranian projects in the Middle East area or elsewhere.

We would be pleased to elaborate our services as required by you.

## Projects in a Glance (136 Projects)



# Petrochemical Projects

## 3<sup>rd</sup> Aromatics

- ❖ MTO for 35 Units of Storage Tanks
- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 84 Units of Pressure Vessel
- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 80 Units of Heat Exchanger
- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 132 Units of Air Cooler

## 1<sup>st</sup> Urea – Ammonia

- ❖ Design, MTO, Fabrication Drawing for 34 Units of Pressure Vessel
- ❖ Design, MTO, Fabrication Drawing for 29 Units of Heat Exchanger
- ❖ Design, MTO, Fabrication Drawing for 11 Units of Tower
- ❖ Design, MTO, Fabrication Drawing for 4 Units of Reactor
- ❖ Design, MTO, Fabrication Drawing for 2 Units of Stack
- ❖ Design, MTO, Fabrication Drawing for 10 Units of Air Cooler
- ❖ Design, MTO, Fabrication Drawing for 2,300 Ton Steel Structure
- ❖ MTO, Fabrication Drawing & Project Control for 1 Unit of Reformer (1,300 Ton)
- ❖ Design, MTO, Procurement & Fabrication of 21 Units of Duct (300 Ton)
- ❖ MTO, Fabrication Drawing of Platforms for 2 Units of Ammonia Tank

## Kermanshah Urea – Ammonia

- ❖ Design, MTO, Procurement & Fabrication of 1 Unit of Stack (55 m)
- ❖ MTO, Fabrication Drawing & Project Control for 1 Unit of Reformer (850 Ton)
- ❖ Design, MTO, Procurement & Fabrication of 42 Units of Duct (200 Ton)
- ❖ Design, MTO, Procurement & Fabrication of 2 Units of Stack (30 Ton)
- ❖ Design, MTO, Fabrication Drawing for 20 Units of Heat Exchanger

## 2<sup>nd</sup> Urea – Ammonia

- ❖ Design, MTO, Fabrication Drawing for 34 Units of Pressure Vessel
- ❖ Design, MTO, Fabrication Drawing for 29 Units of Heat Exchanger
- ❖ Design, MTO, Fabrication Drawing for 11 Units of Tower
- ❖ Design, MTO, Fabrication Drawing for 4 Units of Reactor
- ❖ Design, MTO, Fabrication Drawing for 2 Units of Stack
- ❖ Design, MTO, Fabrication Drawing for 10 Units of Air Cooler
- ❖ Design, MTO, Fabrication Drawing for 2,300 Ton Steel Structure
- ❖ MTO, Fabrication Drawing & Project Control for 1 Unit of Reformer (1,300 Ton)
- ❖ Design, MTO, Fabrication Drawing of 21 Units of Duct (300 Ton)
- ❖ MTO, Fabrication Drawing of Platforms for 2 Units of Ammonia Tank

## MEG Assaluyeh

- ❖ Design, Fabrication Drawing for 18 Units of Pressure Vessel
- ❖ Design, Fabrication Drawing for 20 Units of Heat Exchanger
- ❖ Design, MTO, Fabrication Drawing for 450 Ton Steel Structure

## 2<sup>nd</sup> Zagros Methanol

- ❖ Design, MTO, Fabrication Drawing for 106 Units of Air Cooler
- ❖ Design, Fabrication Drawing for 100 Ton Grating

## 4th Methanol

- ❖ Design, Fabrication Drawing for 3 Units of Storage Tank Roof (64 m)
- ❖ Design, Fabrication Drawing for Grating & Handrail

## 1<sup>st</sup> Butten

- ❖ Design, MTO, Fabrication Drawing for 24 Units of Pressure Vessel
- ❖ Design, MTO, Fabrication Drawing for 7 Units of Heat Exchanger

## Shiraz Petrochemical Complex

- ❖ Design, MTO, Fabrication Drawing for 1 Unit of Soda Ash Tower
- ❖ Design of New Training Building

## Assaluyeh Incineration

- ❖ MTO, Fabrication Drawing for 1 Unit of Reformer (200 Ton)
- ❖ Design, MTO, Fabrication Drawing for 200 Ton Steel Structure

## EO / EG

- ❖ Design, Fabrication Drawing for 9 Units of Pressure Vessel
- ❖ Design, Fabrication Drawing for 9 Units of Heat Exchanger
- ❖ Design, MTO, Fabrication Drawing for 700 Ton Steel Structure

## MEG Kharg

- ❖ Design, MTO & Fabrication Drawing for 9 Units of Tower
- ❖ Design, MTO & Fabrication Drawing for 11 Units of Pressure Vessels

## Evaluation of Iranian Vendor

- ❖ Evaluation of 80 Iranian Vendor for Petrochemical Equipment
- ❖ Evaluation of 40 Iranian Vendor for Petrochemical Raw Material

## Poly Propylene

- ❖ Design, Fabrication Drawing for 2 Units of Tower
- ❖ Design, Fabrication Drawing for 1 Unit of Pressure Vessel

## 4th Aromatics

- ❖ MTO for 36 Units of Storage Tanks

### **Aria Sasoul Polymer**

- ❖ Design, MTO & Fabrication Drawing for 1 Unit of Storage Tank

### **Acid Acetic**

- ❖ Design, MTO & Fabrication Drawing for 3 Units of Storage Tank

### **NGL 1200 / 1300**

- ❖ Expediting of 40 Purchase Order

### **MTBE**

- ❖ Design, MTO & Fabrication Drawing for 6 Units of Pressure Vessel

### **LAB Kermanshah**

- ❖ Design, MTO & Fabrication Drawing for 3 Units of Tower

### **NF3 OF BIPC**

- ❖ Design, MTO & Fabrication Drawing for 2 Units of Tower
- ❖ Design, MTO & Fabrication Drawing for 5 Units of Storage Tank

### **Kavian Olefin Plant**

- ❖ Design, MTO & Fabrication Drawing for 2 Units of Pressure Vessels
- ❖ Design, MTO & Fabrication Drawing for 5 Units of Storage Tank

## **Gachsaran Olefin Plant**

- ❖ MTO, Fabrication Drawing & Project Control for 9 Units of Heater (3,500 Ton)

## **Ammonia – Urea Plant in Golestan, Zanjan and Lordegan**

- ❖ MTO, Fabrication Drawing for 6 Units of Urea Bulk Storage (1,350 Ton / Each)
- ❖ MTO, Fabrication Drawing for 4500 Ton Steel Structure for Each Project

## **Ammonia – Urea Plant in Shiraz**

- ❖ Design, MTO & Fabrication Drawing for 1 Unit of Stack
- ❖ Design, MTO & Fabrication Drawing for 2 Units of Hopper

## **Bandar Abbas Refinery**

- ❖ Design, MTO & Fabrication Drawing for 25 Units of Pressure Vessels

# Oil Projects

## 2<sup>nd</sup> Darquein

- ❖ MTO, Fabrication Drawing for 3 Unit of Reformer (240 Ton)
- ❖ Design, MTO & Fabrication Drawing for 3 Units of Tower

## Shiraz Refinery

- ❖ Design, MTO & Fabrication Drawing for 2 Units of MTBE Storage Tank

## Bandar Abbass Debottlenecking

- ❖ Expediting of 8 Units Pressure Vessel
- ❖ Expediting of 46 Units Heat Exchanger

## Siri Off-Site

- ❖ Design, MTO & Fabrication Drawing for 5 Units of Pressure Vessel
- ❖ Design, MTO & Fabrication Drawing for 1 Unit of Storage Tank

## LPG Recovery

- ❖ Design, MTO & Fabrication Drawing for 5 Units of Pressure Vessel

## Kermanshah Refinery Expansion

- ❖ Design, MTO & Fabrication Drawing for 1 Unit of Storage Tank

## Abadan Refinery Expansion

- ❖ Design, MTO & Fabrication Drawing for 18 Unit of Towers
- ❖ Design, MTO & Fabrication Drawing for 89 Unit of Pressure Vessels
- ❖ Design, MTO & Fabrication Drawing for 10 Unit of Storage Tank

### **Abadan Refinery Expansion**

- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 34 Units of Heat Exchanger
- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 97 Units of Air Cooler
- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 6 Units of Towers

### **Esfahan Gasoline Production Plant**

- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 48 Units of Heat Exchanger
- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 6 Units of Towers
- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 106 Units of Air Cooler
- ❖ Design, MTO, Fabrication Drawing & Expediting for 34 Units of Ladder & Platforms

### **Construction of New CDU & VDU**

- ❖ Design, MTO, Procurement, Fabrication Drawing & Expediting for 6 Units of Pressure Vessels

### **Shazand Arak Refinery Expansion**

- ❖ Design, MTO, Fabrication Drawing for 142 Units of Pressure Vessels

### **Mansuri New Production and Desalting Unit**

- ❖ Design, MTO, Fabrication Drawing for 5 Units of Storage Tanks

### **Cheshmeh Khosh Fields Gas Gathering & Injection**

- ❖ Design, MTO, Fabrication Drawing for 23 Units of Pressure Vessels

### **Tabriz Gasoline Production Plant**

- ❖ Design, MTO, Fabrication Drawing for 24 Units of Pressure Vessels
- ❖ Design, MTO, Fabrication Drawing for 17 Units of Heat Exchangers

- ❖ Design, MTO, Fabrication Drawing for 6 Units of Towers
- ❖ Design, MTO, Fabrication Drawing for 5 Units of Storage Tanks

### **Bandar Abbas Refinery Expansion**

- ❖ Design, MTO, Fabrication Drawing for 5 Units of Storage Tanks
- ❖ Design, MTO, Fabrication Drawing for 25 Units of Pressure Vessels

# Gas Projects

## IGAT-V

- ❖ Design, MTO, Fabrication Drawing for 112 Units of Air Cooler

## IGAT-IV

- ❖ Design, MTO & Fabrication Drawing for 5 Units of Pressure Vessel

## Homa Gas Refinery

- ❖ Design, MTO, Fabrication Drawing for 530 Ton Steel Structure

## Gas Fars Pipe Line

- ❖ Providing of GIS Files for Pipe Lines

## Cement Projects

- ❖ Design, MTO, Fabrication Drawing for Fars Nov Cement Factory (22 Ton)
- ❖ Design, MTO, Fabrication Drawing for Firooz Kooh Cement Factory (330 Ton)
- ❖ Design, MTO, Fabrication Drawing for Fars Cement Factory (95 Ton)
- ❖ Design, MTO, Fabrication Drawing for Pre heater of Khuzestan Cement Factory (3,200 Ton)
- ❖ Design, MTO, Fabrication Drawing for Main Stack of Lamerd Cement Factory (117 m)
- ❖ Design, MTO, Fabrication Drawing for Bojnoord Cement Factory (80 Ton)

## Steel Structure Projects

- ❖ Design, MTO, Fabrication Drawing for Tasha Shelter (1,000 Ton)
- ❖ Design, MTO, Fabrication Drawing for Azar Poolad Shelter (700 Ton)
- ❖ Fabrication Drawing of Grating for Binak Gas Gathering (30 Ton)
- ❖ Fabrication Drawing of Ladder & Platform for Bandar Abbass Refinery (60 Ton)
- ❖ Fabrication Drawing of Ladder & Platform for 9<sup>th</sup> Olefin (80 Ton)
- ❖ Fabrication Drawing of Ladder & Platform for Arvand Petrochemical (30 Ton)
- ❖ Fabrication Drawing of Ladder & Platform for Abouzar Platform (15 Ton)
- ❖ Design, MTO, Fabrication Drawing for LPG Line Bandar Imam (180 Ton)
- ❖ Design, MTO, Fabrication Drawing for Salah-e-Din Kala Project (250 Ton)
- ❖ Design, MTO, Fabrication Drawing for Qom Gas Injection (50 Ton)
- ❖ Design, MTO, Fabrication Drawing for Power Transfer Line 66 Kv
- ❖ Design, MTO, Fabrication Drawing for Power Transfer Line Genaveh
- ❖ Design, MTO, Fabrication Drawing for Anchor Bolts of 10<sup>th</sup> & 11 Olefin
- ❖ Design, MTO, Fabrication Drawing for Shelter & Rest House of Tarh – O – Palayesh in Assaluyeh (350 Ton)
- ❖ Design, MTO, Fabrication Drawing for Anchor Bolts of Shazand Arak Refinery Expansion

## Customer List

We worked directly / indirectly with the following Customer / Clients:

- TOYO
- CHIYODA
- KAWASAKI
- LINDE
- KTI
- SEI
- ODCC
- COMESSA
- HOWDEN
- BTT
- COFIMCO
- AMIR KABIR PETROCHEMICAL
- BORZOOYEH PETROCHEMICAL
- BOUALI SINA PETROCHEMICAL
- FANAWARAN PETROCHEMICAL
- JAM PETROCHEMICAL
- MAROUN PETROCHEMICAL
- KERMANSHAH PETROCHEMICAL
- QAED PETROCHEMICAL
- BISTOON PETROCHEMICAL
- ZAGROS PETROCHEMICAL
- ARVAND PETROCHEMICAL

- SHIRAZ PETROCHEMICAL**
- PIDMCO**
- PIDEC**
- SAZEH CONSULTING ENG.**
- CHEGALESH**
- NCE**
- OIEC**
- ENERCHIMI**
- TARH-O-PALAYESH**
- NARGAN**
- NIOC**
- KERMANSHAH REFINARY**
- BANDAR ABASS REFINARY**
- SHIRAZ REFINARY**
- ABADAN REFINARY**
- LAVAN REFINARY**
- FARS & KHUZESTAN CEMENT FACTORY**
- FARS NOV CEMENT FACTORY**
- CEMENT ENGINEERING SERVICES**
- GHARB CEMENT FACTORY**
- FIROUZKOOH CEMENT FACTORY**
- LAMERD CEMENT FACTORY**
- GRIIN**

## Iranian Related Vendors

We had been working directly with the following Iranian vendors:

- AZARAB
- PAYSAZ
- TASHA
- FATEH SANAT KIMIA
- CONDOR FELEZ
- AZAR POOLAD
- DAMAFIN
- SUPER ACTIVE
- RAICO TECNIC
- POOLAD SAZAN FARAYAND
- TAGHDIS
- FARS TAKAB
- FOOLAD AZHANG
- ESKELET-e-KAVAH
- ASAS SANAT PARS
- JAHAD TAHHIGHAT-e-PARS
- MACHINE SAZI ESTEHKAM
- MASHAYE
- MOFID SEPAHAN
- MOSHABAK PARDAZAN
- PASARGAD
- Machin Sazi Pars

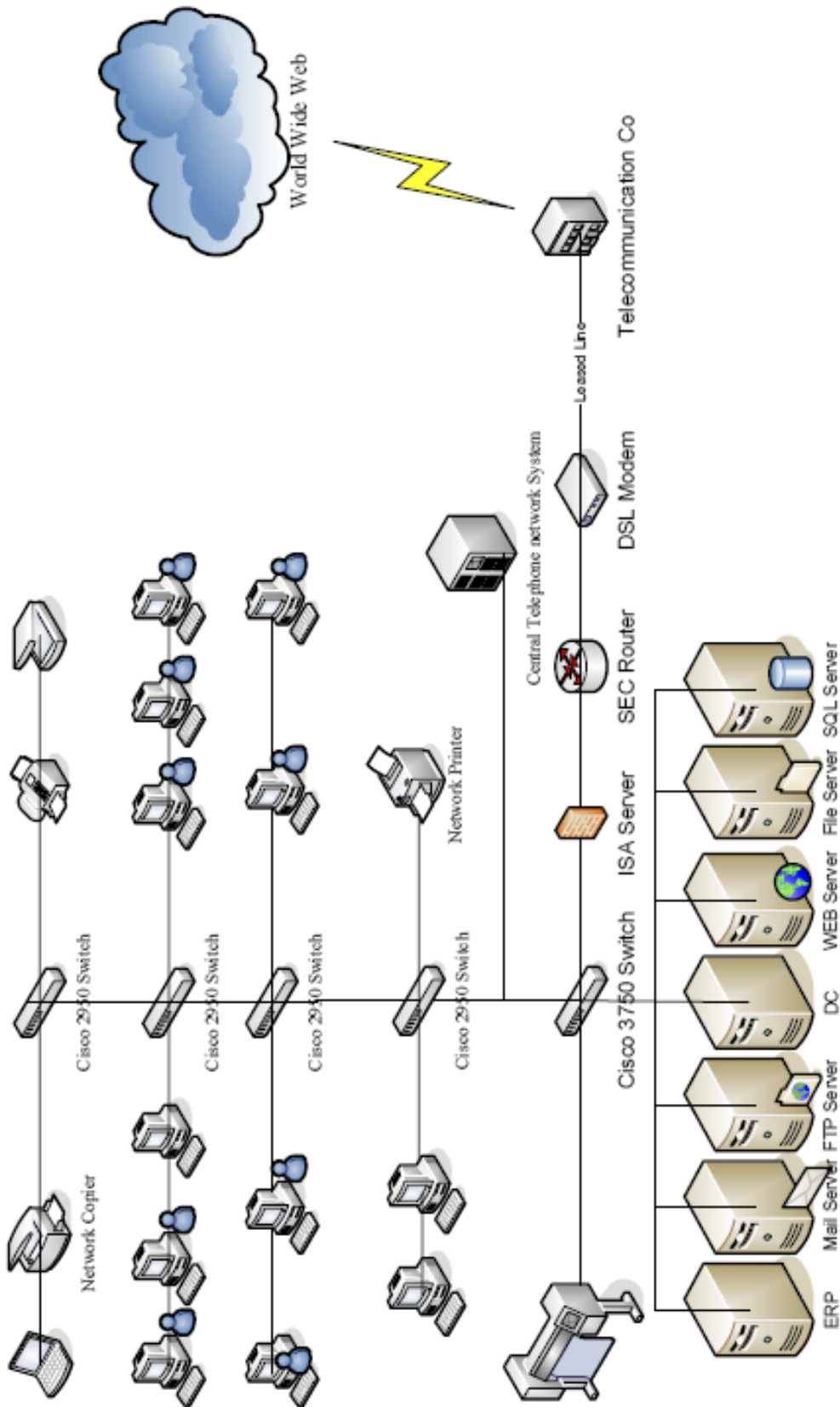
# Capabilities

- Feasibility Study
- Requisitioning
- Procurement
- Material Take-Off
- Thermal Design
- Mechanical Design
- Structural Design
- Piping Design
- Fabrication Drawing
- QC Documentation
- Planning & Scheduling
- Expediting
- Reporting
- GIS

## Hard Wares Facilities

<input checked="" type="checkbox"/>	<b>PC (P-4)</b>	<b>75</b>	<b>Units</b>
<input checked="" type="checkbox"/>	<b>Network Server</b>	<b>6</b>	<b>Units</b>
<input checked="" type="checkbox"/>	<b>A0 Plotter</b>	<b>1</b>	<b>Unit</b>
<input checked="" type="checkbox"/>	<b>A3 Printer</b>	<b>2</b>	<b>Units</b>
<input checked="" type="checkbox"/>	<b>A4 Printer</b>	<b>6</b>	<b>Units</b>
<input checked="" type="checkbox"/>	<b>Copy Machine A3</b>	<b>1</b>	<b>Unit</b>
<input checked="" type="checkbox"/>	<b>Scanner A3</b>	<b>1</b>	<b>Unit</b>
<input checked="" type="checkbox"/>	<b>Scanner A4</b>	<b>1</b>	<b>Unit</b>

# Network Map



## Soft Wares Facilities

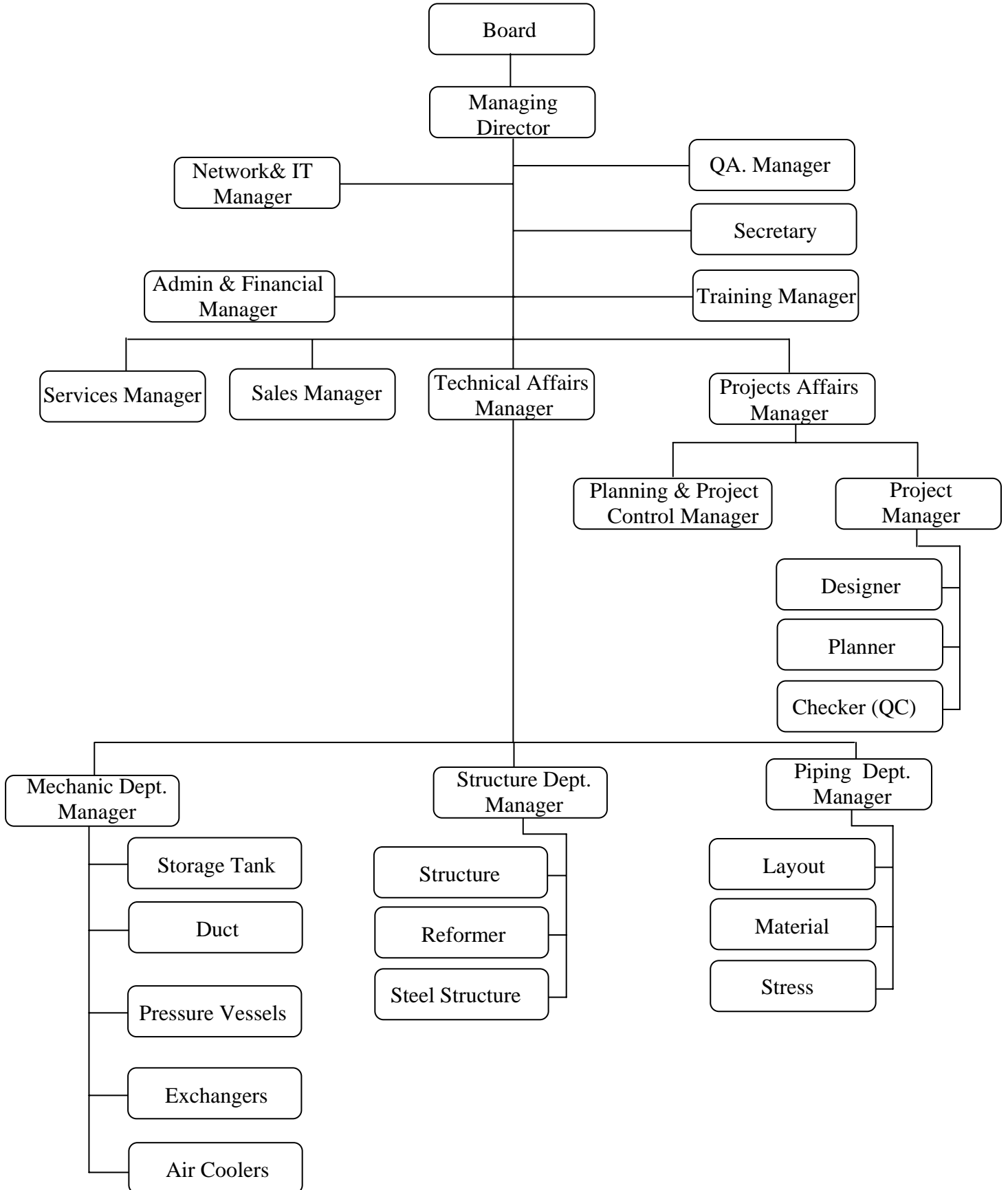
No.	Subject	Rev.	SEC CD No.
1	Aspen B-Jac	2006	SEC-SIN-0205
2	PV-Elite	2007	SEC-SIN-0225
3	Primavera	5	SEC-SIN-0206
4	Microsoft Project	2007	SEC-SIN-0224
5	Ansys	11	SEC-SIN-0219
6	X-Steel	12	SEC-SIN-0223
7	ETABS	7	SEC-SIN-0119
8	SAP	8.33	SEC-SIN-0119
9	Maxpower	2002	SEC-SIN-0152
10	Hextran	8.02	SEC-SIN-0127
11	PDMS	11.6	SEC-SIN-0209
12	CAESAR-II	4.5	SEC-SIN-0170
13	SAFE	8.08	SEC-SIN-0119
14	CSI COL	8	SEC-SIN-0119
15	Section Builder	8	SEC-SIN-0119
16	STTAD Pro	2003	SEC-SIN-0119
17	Microsoft Office	2007	SEC-SIN-0224
18	Auto Cad	2008	SEC-SIN-0213
19	HTFS	2006	SEC-SIN-0205
20	NOZZLE PRO	2006	SEC-SIN-0201
21	E-TANK	1.6	SEC-SIN-0201
22	Aspen HTFS	2006	SEC-SIN-0169
23	E-Tank	2000	SEC-SIN-0201
24	Mesh pro	6	SEC-SIN-0201
25	Mesh Pro	2005	SEC-SIN-0201
26	Alpro		SEC-SIN-0201
27	Axi pro	2.1	SEC-SIN-0201
28	FEPipe	4.2	SEC-SIN-0201
29	Matpro	1	SEC-SIN-0201
30	StressPlot	1	SEC-SIN-0201

# Design Standards

All equipments designed by SEC are based on the latest edition of the following standards:

- TEMA
- UBC
- AISC
- ANSI
- API
- AWS
- ACI
- ASME
- ASTM

# Organization Chart



## Board Members Resume



**Esmail – Esmaili**

**E-mail:** [Emaili@sec-ir.com](mailto:Emaili@sec-ir.com)

**Address:** P.O. Box 71345-3195 Shiraz / Iran

**Birth Day / Nationality**

- 1951 / Iranian

**Education**

- A.D Steel Structure

**Experience**

- B.S in Mechanical Engineering
- Site Engineer Djahad Sazandegi
- Technical manager of Telecommunication Manufacturing Company (I.T.MC) Joint venture with Siemens Germany
- Factory Manger of Telecommunication Industries (I.T.I) Joint Venture NEC Japan
- Managing Director of Condor Felez
- Chairman of board SEC
- Board Member Azar Poolad
- Chairman of the Board Fars Niroom
- Advisor Managing Director I.T.I

## Board Members Resume



**S.Ali – Fatemi**

**E-mail:** [Fatemi@sec-ir.com](mailto:Fatemi@sec-ir.com)

**Address:** P.O. Box 71345-3195 Shiraz / Iran

### Birth Day / Nationality

- 1956 / Iranian

### Education

- M.S. In Mechanical Engineering Shiraz University - IRAN.

### Experience

- 1985 Till Date : Petrochemical Industries Design & Engineering Company (PIDEC); Shiraz – IRAN
- 2001 Till Date: Project Manager (Ammonia / Urea Project No. 1 in Assaluyeh)
- 2004 Till Date: Project Manager (Kharg Island Gas Gathering & Compressor Platform Project - IDDC)
- 1997 – 2001: Project Manager (MTBE Project – BIPC)
- 1995 – 1997: Quality Director (PIDEC, ISO-9000 Coordinator)
- 1994 – 1995: Project Engineer & Procurement Representative in Germany (Aromatics Project – BIPC)
- 1993 – 1994: Project Engineer (Khorasan Petrochemical Project.)
- Engineering Manager Construction of Ammonia Plant, Erection and Construction Co.
- 1991 – 1992: Project Management Training (Germany)
- 1988 – 1991: Project Engineer (Isfahan Petrochemical Project, Aromatics Plant)
- 1985 – 1988: Detail Engineer / Project Engineer (Shiraz Methanol Plant)
- 1983 – 1985: Engineering and Production Manager in Iran Telecommunication Company (ITMC)
- 2004 Till Date: Project Manager (Ammonia / Urea Project No. 2 in Assaluyeh)

# Board Members Resume

**M. Sadegh – Khoshnami**

**E-mail:** [md@sec-ir.com](mailto:md@sec-ir.com)

**Address:** P.O. Box 71345-3195 Shiraz / Iran



**Birth Day / Nationality**

- 1966 / Iranian

**Education**

- B.S. In Mechanical Engineering Shiraz University - IRAN.

**Experience**

- 1994 Till 1999: Petrochemical Industries Design & Engineering Company (PIDEC); Shiraz – IRAN
- 1996 Till 1997: Air Cooler Design Engineer (Methanol Project / in Kharg )
- 1997 Till 1998: Air Cooler Design Engineer (MTBE Project / in BIPC )
- 1998 Till 1999: Air Cooler Design Engineer (HDPE Project / in BIPC )
- 1999 Till Date: Managing Director of SEC
- 1999 Till 2001: Air Cooler Design Engineer (3rd Aromatic Project / in BSPC )
- 2001 Till 2002: Air Cooler Design Engineer (1st Urea - Ammonia Project / in Assaluyeh )
- 2002 Till 2004: Air Cooler Design Engineer (2nd Zagros Methanol Project / in Assaluyeh )
- 2004 Till 2006: Air Cooler Design Engineer (IGAT-V Gas Station Project / in Assaluyeh )