



REACTORSAZ

Process & Green Energy Industrial Group

Design & Manufacture of Oil, Gas, Refinery & Petrochemical Industries Equipment

The First Manufacturer

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Reactor
Tower & Column
Pressure Vessel
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REACTORSAZ



**Field of Activity:
Design & Manufacturing**

Fix-Equipment

- Reactor
- Tower & Column
- Pressure Vessel
- Shell-Tube Heat Exchanger
- Test Separator
- Dearthor
- Heater
- Furnace

Chemical Packages

- Corrosion inhibitor
- Methanol injection
- Antifoam injection
- Demulsifier injection
- Glycol injection

Piping Equipment

- Pig-Launcher / Receiver
- Stone Trap
- Scrubber
- Filter

Tank Farm

- Spherical Tank
- Fix Roof Storage Tank
- Floating Roof Storage Tank

Flare Package

Steel Structure

Services

- Cladding
- Cold Forming
- Engineering



The Company > History & Capability

REACTORSAZ puts nearly half of the century experience to work for the manufacturing and production of Fix Equipment, Tanks and Chemical Packages established in 1974. This company is specialized exclusively in the design development and fabrication of equipment for Energy & Mineral Industries. Its factory is based in Ahwaz city, the center of Oil and Gas fields of Iran, is well placed to other areas in the Persian Gulf and the Middle East. Also REACTORSAZ set up second Factory in Bandar-Abbas port (Special Economic Zone) with dedicated loading dock in open sea in the south of Iran. REACTORSAZ product's can be seen in many On-shore & Off-shore site in Iran. All Products Manufacturer by REACTORSAZ have Two-Years Warrantee and Ten-Years after-sale Service.

REACTORSAZ > Bandar-Abbas Factory



The Company > The Workshop

Workshop	Office Area (sqm)	Covered Area (sqm)	Total Area (sqm)	Crane (Qty*max tons)
Ahwaz Factory	1,000	16,000	200,000	2*50 3*20
Bandar-Abbas Factory	250	8,000	120,000	2*300 6*10 2*100 2*40

The Company > Main Machinery

Rolling Machine
 Max Rolling Thk / Max wide : 150mm / 3000mm
 90mm / 3000mm
 75mm / 3000mm
 50mm / 2500mm
 30mm / 2000mm



Overlay Cladding Machine
 Column & Boom Welding Machine 9x8 m
 S.A.W Machine
 Weld overlay Cladding Machine
 Electroslag Welding Machine



Edge Mill Machine
 Length x MaxThk : 18,000 mm x100 mm



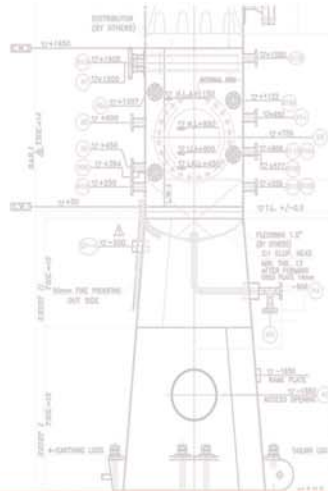
CNC Cutting Machine
 Length x Wide x MaxThk : 12000 x 4000 x 250 mm
 12000 x 3000 x 250 mm



Engineering

Technical Capabilities / Engineering Services

REACTORSAZ is fully qualified to offer a wide range of engineering services for production of industrial equipment. Services include preparation of calculations, assembly and detailed drawings, cutting plans, loading data, inspection reports, welding procedures, fabrication procedures, etc. The design office of the company is equipped with suitable computer hardware and software for the purpose. Design department develops the customer's Primary designs in proper detail designs in full compliance with design CODE and customers' standards and requirements.



CODES and Standards

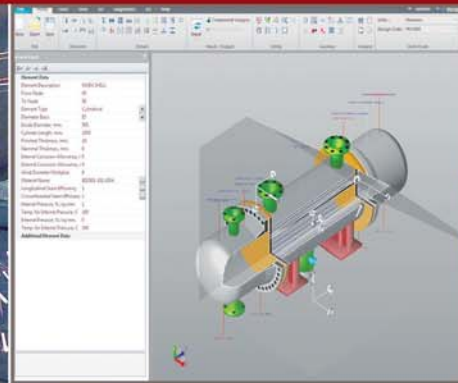
ASME - VIII Div.1
 ASME - VIII Div.2
 ASME - II, V, IX
 API 650
 API 620
 TEMA
 PD 5500
 UBC 1997
 NACE



Engineering Soft Wares



PV-Elite
 Ansys
 Compress
 Nozzle Pro
 ASPEN
 AutoCAD
 CATIA
 AME Tank
 SAP 2000



Types of Welding

Welding to 100% X-Ray and ultrasonic standards is carried out using manual metal arc, submerged arc, and Argon arc processes from welding procedures (WPS) drawn up and qualified in the factory (PQR) REACTORSAZ has all the facilities for qualifying welders to class-1 standards (WQR). And Electro slag welding for weld overlay.

Type of Material

Carbon Steel: A516, A285, A283, ST-52, A350, A106
 Carbon Manganese steel: A537, A662, A724
 Quenched & Tempered steel: A517, A533, A541
 Stainless steel: SS 304, SS 316, SS 321, SS347, Duplex
 Alloy steel: A203 Gr. D S3-A625
 Ni-Alloyed Steel : Monel , Inconel
 Cr-Mo steel: A387, A336



Weld Engineering & Testing

In the material testing laboratory, test plate is cut up to from specimens of the required size, shape and number.
 Cross joints tensile .All weld tensile and bend tests are carried out in the 50 ton tensile test machine notch ductility specimens are cooled to the desired temperature and tested. Vickers pyramid hardness surveys are done as required and band facing and specimens polishing machines, X-RAY, Ultrasonic, and dye penetrate And magentic particles are available. All specimens for vessels to be ultimately heat treated are factory site are initially stress relived in a temperature controlled electrically heated laboratory furnace.

Manufacturing Experience

Fix-Equipment

Pressure Vessel
Reactor
Tower-Column
Heat Exchanger
Heater
Furnace

Piping Equipment

Scrubber
Pig Luncher / Receiver
Strainer
Filter

Chemical Package

Methanol Injection
corrosion Inhibitor
Antifoam injection

Tank Farm

Spherical Tank
Floating Roof Storage Tank
Floating Roof Storage Tank

Flare Package

Steel Structure

Name of Project	Type	Client	QTY	Material	Dimension (mm)	Max Unit Weight (Project Weight) (ton)
Shiraz Refinery	Reactor	Shiraz Refinery Company	1	SA-336F22+SS347	Max THK:194+7	330
Persian Gulf Refinery	Column Drum	Faradast Energy FALAT	77	SA-662-C (N+SS) Monel-400 SA-516Gr.60,70	Max Body ID : 7,100 Max Length : 68,620 Max Skirt ID : 10,300	616 (8,398)
Persian Gulf Refinery	Reactor	Faradast Energy FALAT	21	SA-387-22CL.2+SS 347 SA-516Gr.60,70	Max Length : 31,785 Max THK : 95+4.5	316 (2,409)
South AZADEGAN Oil Field	Storage Tank	ASFALT-TOOS	4	SA-283-C	Max ID : 23,000	172 (688)
South Pars Phase 15-16	HP Drum Separator	SAFF Co.	5	SA-516 Gr.60N+HIC + Alloy 625 (Inconel)	Max THK : 130+4.5	129 (316)
South Pars Phase 9-10	Flare Stack	OIEC	4	SA-240 304L SA-516Gr.70	Max Length : 106,000	32 (146)
Salman Offshore Facility	Separators Drums	SADRA	14	A 516-70 + INCONEL625	Max ID : 3,100 Max THK : 114+3	60 (304)
South Pars Phase 6-7-8	Stabilizer Separator	PETROPARS STATOIL SADRA	26	SA240-TP316L SA516-Gr.60N+SS	Max THK : 74	123 (1,384)
AMIR KABIR PETROCHEMICAL COMPANY (6th OLEFIN PLANT)	Tower Pressur Vessel	EIED	9	SA-537-CL.1 SA516-60N	Max Length : 60,000	182 (498)
Biston Petrochemical Tank Farm	Storage Tank	SINOPEC	36	SA-283-C SA-516Gr.70	Max ID : 68,000	580 (4,500)
MAPNA Power Plants	Deaerator Drums	MAPNA	22	SA-516Gr.70N	Max length : 14,000	26 (169)
South Pars 6-7-8 (Off-shore)	Chemical Injection Package	PETROPARS STATOIL SADRA	21	Multi-Discipline	Antifoam injection Corrosion inhibitor injection	
South Pars 4-5 (Off-shore)	Chemical Injection Package	SADRA ENI	12	Multi-Discipline	Antifoam injection Corrosion inhibitor injection DEMULSIFIER injection	Methanol injection Glycol injection
Offshore Platform in ABOOZAR Oil Field	Chemical Injection Package	SADRA	6	Multi-Discipline	Antifoam injection Corrosion inhibitor injection Glycol injection	



REACTORSAZ >
Bandar-Abbas Factory

Products

Fix-Equipment > Reactor

- ISO-MAX Reactor
- Hydro-treating Reactor
- HDS Reactor
- Sweetening Reactor
- Dissolution Reactor
- Octanizer Reactor
- DSH Reactor



Plant	Oil Refinery
End User	Shiraz Oil Refinery
Project Type	EPC
Lisensor	Lorgi
Design Code	ASME-Soc-VIII, Div-2
3D Junction Item	Finite Element Method Iso-Max Reactor
Material	SA336 CL22 + SA347
Design Pressure	192 bar
Hydro-Test Pressure	380 bar
Design Temperature	330 C
Length	18 m
Thickness	194+7 Cladded
Weight	330 MT
Date of Delivery	2017



High Pressure Reactor



Products

Fix - Equipment > Tower / Column

- Scrubber
- Stripper
- Stabilizer
- Depenatanizer
- Absorber
- Refining
- Splitter
- Debutanizer
- Deisohexanizer
- Deethanizer

Plant Gas Condensate Refinery
 EPC FALAT
 Item Stabilizer
 Material SA662-C
 Thickness 43 mm
 Weight 190 MT
 Length 45 m



Plant South Pars Phase 6
 EPC TIJD
 Item DE-ETHANISER Column
 Material SA240-TP316L
 Thickness 52 mm
 Weight 124 MT
 Length 39 m



Plant Gas Condensate Refinery
 EPC FALAT
 Item De-IsolHexanizer
 Material SA-516-Gr.60
 Thickness 48 mm
 Weight 800 MT
 Length 75 m



Products

Products > Fix - Equipment

- Test Separator
- Separator (2&3 Phases)
- Deaerator
- De-Salter
- De-Gasser
- K.O.Drum
- Flash Drum
- Absorber
- Coalescer
- Slug Catcher
- Stone Trap
- Scrubber
- AIR RECEIVER
- DRAIN DRUM
- FEED WATER



Sodium Metoxide Plant
Dissolution Reactor
Half-pipe Cooled
2017

ASTME



ReactorSaz
14



Plant South Pars Phase 15
EPC SAFF
Item Test Separator
Material SA516 Gr.65+Inconel 625
Thickness 70+4.5 mm
Weight 21 MT
Lenght 8 m



Plant Gas Condensate Refinery
EPC FALAT
Item Hot Separator
Material SA387 Gr.II.CL.2(N)
Thickness 54 mm
Weight 83,5 MT
Lenght 24 m



Plant Isfahan Chemical Industry
EPC CNJPEC
Item DSH
Material SA-516-Gr.70N
Thickness 20 mm
Lenght 7 m
QTY 4



Plant Genaveh Power Plant
EPC MAPNA
Item Feed Water & Deaerator
Material SA-516-Gr.70
Thickness 24 mm
Weight 70 MT
Lenght 12 m



Products

Products > Fix - Equipment

- Refinery
- Petrochemical
- Oil/Gas Offshore Platform
- Gas Compressor Station
- Oil Field Gathering/Separation
- Mineral Industries
- Power Plant
- NGL Plant



Plant	Gas Condensate Refinery
EPC	FALAT
Item	Hopper
Material	SA516/SA387-Gr.11
QTY	24
Date	2014

Plant	South Pars Phase 6-Onshore
EPC	TJJD
Item	Suction K.O Drum
Material	SA240-TP316L
Thickness	74 mm
Weight	51 MT
Date	2004

Plant	Steel Production Plant
EPC	Foolad Khoozestan
Item	Deaerator
Material	SA516-Gr.70
Weight	22 MT
Length	12.5 MT
Date	2007

Plant	9th Olefin Complex
EPC	Sazeh-Snamprogetti
Item	Water Stripper
Material	SA516-Gr.60
Thickness	40 mm
Weight	54 MT
Length	10 m

Products

Rotary-Equipment > Chemical Injection Packages

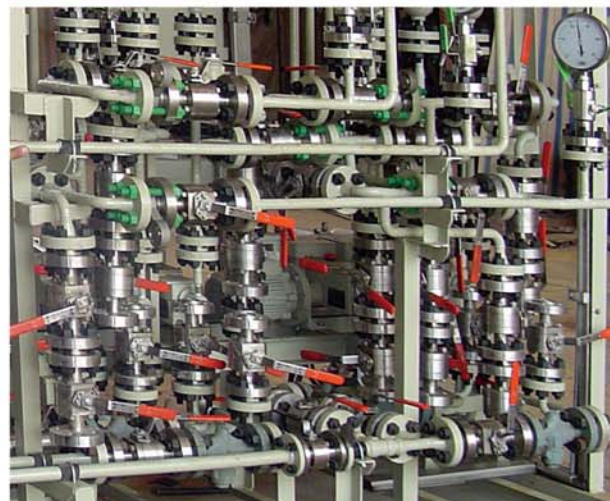
- Corrosion inhibitor Injection Package
- Methanol injection Package
- Antifoam injection Package
- Demulsifier injection Package
- Glycol injection Package
- Hypochlorite Injection Package
- Reverse Demo Injection Package
- Amine Injection Package



Plant South Pars Phase 4 Offshore
 EPC SADRA
 Item Chemical Injection Package
 Material CS/Inconel 625
 QTY 6



Plant South Pars Phase 6
 EPC STATOIL
 Item Chemical Injection Package
 Material SA516/SS316L/S235
 QTY 21



Plant Salman Offshore Platform
 EPC SDRA
 Item Chemical Injection Package
 Material CS/SS316L
 QTY 9

Products

Tank Farm > Floating Roof Storage Tank
Fix Roof Storage Tank
Spherical Tank



Crude Oil Floating Roof Storage Tank
1,000,000 & 500,000 BBL Khark Island



PTA-1 Production Plant
Mahshahr - 2004



Fiber Production Unit
Isfahan



South Azadegan Oil field
Water Storage Tank - 2016



Fix & Floating Roof Storage Tank
Razi Petrochemical - 2002



Export Terminal
Amir Kabir Petrochemical - 2004

Plant	Bistoon Petrochemical
EPC	SINOPEC
Item	Tank Farm
Total Capacity	160,000 m3
Total Weight	4500 MT
QTY Fix Roof	31
QTY Floting Roof	5
Max ID	63 m
Date	2004



Products

Fix-Equipment > Shell-Tube Heat Exchanger
Indirect Oil Heater

Fix-Equipment > Flare Package



Heater Package Heat Exchanger



Plant	South Pars Phase 9
EPC	OIEC
Item	Flare Stack
Material	SA-516-Gr.70 / SA240-TP316L
Lenth	106 m



Plant	BibiHakime Production Unit
EPC	NISOC
Item	Oil Heater Package
Material	SA-516-Gr.70
Unit Weight	105 MT
Fire Box Rating	2x5713 KBTu/hr
Coil Area	3294 ft2
QTY	6

Products

Products > Cladding Services



Weld Overlay : Column & Boom
(Shell Cladding Column & Boom - Rotator)
Weld Overlay



Weld Overlay : Head
(Head Cladding Column & Boom - Positioner)
Weld Overlay



Weld Overlay : Internal of Pipe
Column & Boom Internal Pipe Cladding
(min ID: 4 in - max length each side: 1 m)
Weld Overlay



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