

Last Name: Ebrahimzadeh

First Name: Mahdi

General Information

Present Communication Address:

Unit 96, No26 West Golestan St. North Janatabad St. Tehran, Iran

MBTI Personality Type result: INTP ([Myers-Briggs Type Indicator](#))

Date of birth: 1980

Marital Status: Not Married

Nationality: Iranian

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Education, Language and Computer Knowledge

Education Validation

- 1) MSc. Renewable Energy Engineering (Rewarded as 1st student) – 2013, [Material and Energy Research Center](#)
- 2) B.Sc. in Chemical Engineering - 2003, [Sharif University of Technology, Tehran](#)
- 3) Pre-University in Mathematics & Physics in 1998
- 4) Diploma in Mathematics & Physics in 1997

Languages Knowledge

Persian, Turkish and English (Reading writing and speaking)
IELTS (Academic Overall Band: 6.5)

Standards & Design Practice

API , ASME, ANSI (topics related to Process ,Pumps and Compressors)
IPS (Iran Petroleum Co. Standards), NPCS (National Petrochemical Co. Standards)
Familiar with ExxonMobil and Total company design procedures

General Software

MS Word, Excel, PowerPoint, Outlook

Programming Languages

Pascal, Quick Basic, C++, VB

Professional Software

Good at: Aspen Plus, Aspen Properties, Aspen Hysys, Hysys Dynamic, AutoCAD, Solid Works, FICHER, WindPro
Familiar with: Aspen BJAC, Fluent & Gambit, Primavera, WindSim, WasP, Maxwell

Training Courses

National Petrochemical Company Passed Training Courses:

Boilers	Pumps	Reactors
Compressors	Lubrication	PLC & DCS
Cooling Towers	Industrial Valves	Industrial Water
Storage Tanks	Heat Exchangers	Process Controlling
Distillation Columns	Combustion & Furnaces	English Training
Aspen HYSYS	Report Writing	ISO 14000 & 18000
Pre-commissioning and Commissioning	First Aid and Relief and Rescue	
FIHER Furnace Design and Simulation	Safety and Fire Fighting	
Chemical Treatment and Chemical Washing		
PDMS – Plant Design and management System		
HSEMS (Health, Safety and Environment Management System)		

Oversees Training course:

Process Technology Training Course and Site Visit Training Course
Consisting of Operation, Process Control, Control Philosophy and Design Principles
During 2010 at Gendorf Site (Germany)

Experience Summary:

A) Multi-Engineering Experiences and Ideas understudy or Done!

- Design and fabrication apparatus to measure absorption capacity of MOFs (Metal Organic Frame Works) in contact with gases (H₂, CH₄, CO, CO₂, NH₃) based on mechanical, metallurgical, electrical, control, electronic, chemical engineering and chemistry concepts – **Done!**
- Design and fabrication Mass Flow Controller for a wide range of gases – **Done!**
- Design and fabrication Electronic Pressure Controller – **Done!**
- Design and fabrication Electrical Proportional Valves – **Done!**
- Design and fabrication control system of Gas Chromatograph (under construction) – **Done!**
- Design and macing stirling engine (100W – under construction) – Under R&D!
- New type Savonius Wind Turbine design by modifying and controlling blades– Under R&D!
- Solar Aircraft, analyzing energy balance, design of energy, control and electronic systems– Under R&D!
- New Central receiver plant through optic fibers (new idea!) – Under R&D!
- Solar steam boiler pilot plant – Under R&D!
- HCl to Cl₂ Catalyst – Under R&D!
- Technologic Laboratory Instruments (Centrifuges, Heater Mixer, Vacuum Oven, ...) – Under R&D!

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- Chemical research Pilots (Design, Fabrication, Installation and Training) - – Under R&D!

B) My recent position in APC- Arvand Petrochemical Company (since 2011)

B.1) New Olefin Plant technology review supervisor

- Providing reports for all in use Ethylene Production Technologies
- Gathering technical information about Olefin Licensors and advantages of each one
- Site visits from installed olefins to collect experimental data from under operation Olefin plants (different Licenses)
- Exploring Oxidative Coupling of Methane (OCM) technology and its possibilities and necessities
- Developing summarized economical reports for comparing OCM and Olefin common technologies
- Cooperation with R&D department of National Petrochemical company on generation OCM license
- Collecting olefin projects week points through equipment-material supply and/or procurement points of view

B.2) R&D Senior expert

- Categorizing production problems through viewpoint of concept of modification necessities
- Data gathering, study and presenting conclusions of conceptual analysis of any necessary modification
- Preparing proposals to modify main process or fabrication new setups, pilot and/or demo plants
 - Using ultrasonic probe to proper solving of sodium chloride salt catalyst in EDC
 - Installing oxygen absorption system on feed chlorine line to eliminate vent inertisation system
 - Industrial consultant for “OXY Chlorination Catalyst synthesis and industrilization” project
 - HCl recovery from waste incineration unit
 - Converting chlorinated hydrocarbon wastes to carbon black
 - Hydrogen fuel boilers for HP generation
 - Completely hydrogen burning for EDC crackers (Natural gas elimination)
 - Using hydrogen for electricity generation by fuel cell technology
- Managing and supervising accepted proposals by R&D group
- Technical and scientific assessing of researching groups and individuals for R&D projects
- Utilization TRIZ (as a problem-solving, analysis and forecasting tool) in plant technical problems

C) This section consists of my Previous job experience in APC

Process Engineer of Arvand Petrochemical Company (APC-Iran) – Erection, Pre-commissioning Commissioning and Start-up Project specifically at EDC/VCM Plant (2007-2010).

As a Process Engineer my main activities were as follows:

- Conceptual studying of process descriptions, operating manuals, mechanical specifications, instrumentation documents and etc, for well understanding of design principles
- Checking P&IDs, PFDs, site PDMS files and/or other drawings to find fault with process and control design subjects, mechanical equipment, piping, Instruments and etc.
- Suggestions and recommendations to correct technical problems
 - Feed forward temperature controlling system for DC reactor
 - Modifying non-linear controlling loops (like pH) to linear ones
 - Correcting controlling system of refrigeration unit to automatic load up and load down of compressors
 - Correcting HCl column pressure controlling system
 - Defining monitoring systems such as cracking conversion, rough composition of vessels, ...
 - Correction flow controlling systems for low limits in vortex flow-meters used loops
- Programming and controlling of pre-commissioning, commissioning and start-up
- Supervising and inspection of erection and installation of equipment, piping, etc.
- Having weekly meetings with licenser and Design Engineering Consultant by considering site problems at special issues like piping, construction, progress formats, instrumentation, etc.
- Preparing production reduction and/or shut down reports as well as operation instructions for normal operation and shut down situations
- Controlling feed stocks, utilities and chemical/catalysts quality, delivery schedule and consumption

Personal Interests

Sports: Football (as coach of Technical Service Department team), Ping-Pong, Hiking

Home Studies & Activities : Social Science, Electronic, Control, Robotic, Music & Movies
