

Curriculum Vitae



Personal Details

First Name: Mahdi
Surname: Razifar
Nationality: Iranian
Place of Birth: Khoy (Iran)
Date of Birth: 15 May 1979

Educational Background:

- Sep 2003 – Des 2005 MSc. Chemical Engineering from Iran University of Science and Technology (IUST), www.iust.ac.ir
Certificate: M.Sc. in Chemical Engineering / Process Design, Simulation and Control. Graduated
MSc Thesis: *kinetic modeling for hydroisomerization of normal paraffins*
- Sep 1998 – Nov 2002 BSc. Chemical Engineering from Iran University of Science and Technology (IUST), WWW.IUST.AC.IR
Certificate: BSc. in Chemical Engineering / Process Design
BSc. Research Topic: *Introduction of Natural gas dehydration processes*
- Sep 1993 – Jun 1997 Iranian National Diploma in Mathematics & Physics at Modarres High School, Khoy, Iran.

Work Experience:

- Project manager in petroleum refining division at Research Institute of Petroleum Industry (RIPI) (From 2009- Present).
- Director of Mehrzad Petro Farayand Consulting Engineers Company (from 2019- Present)
- Major responsibilities and activities held at various companies:

- Project Manager: Basic Design of Esters (Methyl Acetate 99%, Ethyl Acetate 98%, Isopropyl Acetate 98%, Butyl Acetate 99%) & Methylal (DMM) 99% Production Unit for Chemi Mehrghan Pajouhesh (SMP) Co.
- Project Manager: Basic Design of Gas Condensate Hydrotreating Unit for Aftab Oil Refinery (AOR) Co.
- Project Manager: Basic Design of Amine Sweetening Unit for Aftab Oil Refinery (AOR) Co.
- Project Manager: Basic Design of Catalytic Reforming Unit for Aftab Oil Refinery (AOR) Co.
- Project Manager: Basic Design of Solvent Production Unit for Aftab Oil Refinery (AOR) Co.
- Project Manager: Technical and economical feasibility studies project manager of Group 400, pentane and hexane solvent production unit for Lavan Oil Refining Company
- Project Manager: Basic Design of Lamard hydrocarbon Refinery with a capacity of 250 tons per day for Hormoz Star Petro-Refining Company.
- Project Manager: Basic Design of Solvent Deasphalting Unit (SDA) for Imam Khomeini oil refinery heavy products quality upgrading project based on using delayed coker
- Project Manager: Basic Design of Solvent Deasphalting Unit (SDA) for Bandar Abbas oil refinery heavy products quality upgrading project based on using delayed coker
- Project Manager: Study of Kermanshah Oil Refinery Capacity Upgrading and basic design of Spadan Co. (SSC).
- Project Manager: Basic design of Bitumen Blowing Unit (BBU) with the capacity of 400 MTD for Shokouh-Sanat Spadan Co. (SSC).
- Project Partner of basic design of Methanol to Propylene (MTP) at Petrochemical Research and Technology Company.
- Project Partner of basic and detail design of pilot plant for dehydration and demercaptanization of propane and butane for SPGC phases 9, 10 and chairman of HAZOP Study team.
- Project Manager: Basic Design of Furfural Extraction Unit for Aftab Oil Refinery (AOR) Co.
- Project Manager: Basic Design of MEK/Toluene Dewaxing Unit for Aftab Oil Refinery (AOR) Co.
- Project Manager: Process Design of Gas Condensate Desulfurization Unit by Olefinic Alkylation of Thiophenic Sulfur (OATS) method for Aftab Oil Refinery (AOR) Co.
- Process Design of Methyl Acetate Production Unit for Aftab Oil Refinery (AOR) Co.
- Process Design of Vacuum Distillation Unit (VDU) for Aftab Oil Refinery (AOR) Co.
- Project Manager: Revamping of existing Atmospheric Distillation Unit for Aftab Oil Refinery (AOR) Co.
- Project Manager: Process Design of Flare Network System for Aftab Oil Refinery (AOR) Co.

- Project Manager: Feasibility Study of new CDU & VDU units with the feed capacity of 650,000 t/y condensate and heavy crude oil in different scenarios for Aftab Oil Refinery (AOR) Co.
- Project Manager: Market Study of the current status of production and consumption of high quality base oils in Iran and worldwide, economical study of the production process for the base oil group III from lube-cut, study of the positive effects of the GTL wax upgrading processes to improve its economy and study on the wax upgrading catalysts.
- Conceptual design of surface facilities for Gardan Gas field (Simulation of the onshore production facilities & production pipeline network and cost estimation).
- Conceptual design of surface facilities for HOMA Gas field (Simulation of the onshore production facilities & production pipeline network and cost estimation).
- Project Manager: Bitumen Blowing Unit Project for Syrian Oil Refinery.
- Project Manager: Technology Survey for Processes of Production of Base Oils: Group II & III.
- Project Partner: Reservoirs Studies of Ahvaz and Yadavaran Oil fields with the aim of modeling, development and providing operational solutions; at RIPI.
- Project Partner: Detail design of Demercaptanization of Condensate (DMC) unit for phases 2-3 of south pars gas field with the capacity of 80,000 BPD.
- Project Partner with Tehran Energy Consultants (TEC) in technical judgement of Crescent Contract tribunal, in process discipline (Gas Export from Salman platform to Sirri & from Sirri to Mobarak platform).
- Preparation of technical proposal for Indonesian Condensate Refinery with the capacity of 150000 BCPD.
- Project Partner: Basic design of Visbreaker Unit for Syrian Oil Refinery.
- Simulation and process equipments design for Topping Project (Bitumen production from vacuum bottom) for Indonesian Refinery.
- Head of Simulation for Topping Project (Bitumen production from vacuum bottom) for Sahar Oil Refinery Co.
- Conceptual design of surface facilities for EOR Pilot of Yadavaran oil field.
- Conceptual design of surface facilities for Abteymour oil field (Simulation of the onshore production facilities & production pipeline network and cost estimation (Capex + Opex) by Questor software for all of the production scenarios).
- Conceptual design of surface facilities for Tousan oil field (Simulation of the onshore and offshore production facilities & transmission pipe line hydraulic calculations and cost estimation (Capex + Opex) by Questor software for all of the production scenarios).
- Conceptual design of surface facilities for Balal oil and gas fields (Simulation of onshore and offshore production facilities & transmission pipe line hydraulic calculations and cost estimation (Capex + Opex) by Questor software for all of the production scenarios).

- Project Manager: Basic design and detail review of demercaptanization of condensate (DMC) unit for phases 22-24 of South Pars gas field with the capacity of 80,000 BPD.
- Project Manager: Basic design and detail review of demercaptanization of condensate (DMC) unit for phase 13 of South Pars gas field with the capacity of 80,000 BPD.
- Simulation of DMC unit for phases 2,3; 4,5; 9,10; 12; 13; 14; 17,18; 19; 20,21,22-24 of South Pars gas field with the capacities of 80,000 BPD with hysys software.
- Simulation of Bandar Abbas Oil Refinery Co. distillation unit for new feed formulation.
- Project Manager: Modeling of wax deposition on the crude oil stripper column trays”
- Simulation of ethylene recovery unit for HRCE process.
- Project Manager: Basic Design and Detail Design of Sulfur degassing unit for Shahid Hashemi Nejad Gas Processing Company in Koosha Metal Industries Co and chairman of HAZOP Study team.
- Project Manager: Basic Design of New Vacuum Distillation (VDU) Unit for Bitumen and Lubcut production of LAVAN Oil Refinery Company in Petro Paguhesh Sharif Co.).
- Technical Consultant at SEKAF Technical & Construction Co. for EPC projects of Khonj & Jahrom Gas Compressor Stations.
- CO2 Capture from stack flue gas of MAPNA power plants for injection in to beside oil fields for EOR purposes for Tehran Energy Consultant Company.
- Conceptual design of MAPNA Condensate refinery with the capacity of 60000 BPSD.
- Conceptual design of PETRO PALAYESHE SHARGHE KHAVARMIANEH Condensate refinery with the capacity of 60000 BPSD.
- Conceptual design of DANA Condensate refinery with the capacity of 60000 BPSD.
- Simulation of municipal solid waste gasification in fix bed reactor.
- Simulation of the distillation unit of the Lavan oil refinery and debottlenecking of this unit for the purpose of the plant capacity increment.
- Basic design of Sour Water Stripping (SWS) unit for Tehran Oil Refinery Co. (TORC).
- Process design of MOS (Mobile Oil Separator) for SABAN SANAT Co.
- Design of PDA-TAR/DAO heat exchangers for IRANOL Co.
- Simulation of Used Oil process.
- Simulation of Ethylene Oxide production process.
- Simulation of Ethyl Acetate process with Aspen Plus for Petro Sakht Co.
- Simulation of Ammonium Bicarbonate production process with Aspen Plus for Petro Sakht Co.

- Cooperation with IRAN ITOK Consultants for simulation of gas condensate production facilities for sarajeh gas field and design of related equipment's such as heat exchangers and separators.
- Cooperation with ENERGY GOSTAR SINA for simulation and design of oil and gas surface facilities for RIG, DUDRO and SHUROM field.
- Cooperation with TAM Irankhodro for MTO preparation of heat exchangers for Kish gas refinery tender.
- Cooperation with Fiber Chemical Co. as a process engineer for basic and detail design of ammonium sulfate recovery unit as a part of Acrylonitrile plant (2009).
- Cooperation with Research Institute of Petroleum Industry (RIPI).WWW.RIPI.IR. as a researcher to design integrated courses in upstream and downstream industries (2007-2009).
- Experimentation with hydrogen peroxide rockets (2006-2007).
- Experimentation with hydrogen peroxide concentration with vacuum distillation and Reboiled Absorber with Dry Air (2006-2007).
- Cooperation with MMTE Co. as a researcher to simulation of MIDREX@ PROCESS (direct reduction of iron oxide to produce metallic iron) by ASPEN PLUS simulation software (2006-2007).
- Cooperation with Fiber Chemical Co. as a researcher for simulation of Acrylonitrile production process by HYSYS and Aspen Plus simulation software (2005-2006).
- Cooperation with Behran Oil Co. as a part-time researcher in the R&D department.www.behranoil.com (2004 –2006).
- Worked as a Research Assistant with Dr. Maghsoudi, Chairman of Chemical Engineering Faculty of Iran University of Science and Technology (2003-2005).
- Conducted a research for National Iranian Oil Company about Natural Gas Dehydration Process and Simulation of this unit by HYSYS.

Teaching Experience:

- Teaching ASPEN PLUS, HYSYS, HYSYS DYNAMIC, ProII, PROMAX (Process Simulation Softwares), EDR (Exchanger Design & Rating) and HTRI (Heat Exchanger Design softwares), PIPESYS, PIPESIM (Piping Simulation software), PETROSIM (Petroleum Refining Simulation Software), FLARENET (Flare Network Design & Rating), Design of Process equipments course, PFD and P&ID at:
Tehran University, Iran University of Science and Technology, Islamic Azad University of Gachsaran, Islamic Azad University of Guchan, Research Institute of Petroleum Industry (RIPI), Behran Oil Co.,Tasha Co., Novin Parsian Training Center, Aflak Training Center, Petro Pajuhesh Sharif Training Center, Jihad Daneshgahi Sharif Training Center, Petro Sakht Co., Bandar Abbas Oil Refinery Co., Lavan Oil Refinery Co., Tehran Oil Refinery Co., Sepanir Oil & Gas Consultant, Havayar Co, Oil Design & Construction Co (ODCC), Oil

Engineering & Construction Co. (NIOEC), MAPNA Co., Petrochemical Research and Technology Co., Monenco Co., Esfahan Chemical Industry Co., South Zagros Oil & Gas Company, Shiraz Oil Refinery, Fajre Jam Gas Refinery, Takhteh Jamshid Petrochemical Co., Ilam Gas Refinery (2003 –Present)

- Teaching assistant at Iran's University of Science and Technology in "*Fluid Mechanics*" Course for 4 terms. Prepared new course notes including lecture notes, homework solutions, etc. (2003-2005)
- Teaching assistant at Iran's University of Science and Technology in "*Mass Transfer*" Course for 4 terms. Prepared new course notes including lecture notes, homework solutions, etc. (2003-2005)

Conference Papers, Lectures and Interviews

- Article "Technology survey in production processes of Base Oils Group II & III" was published at "First national Congress of Refining Processes in Tabriz" in Iran (2016).
- Article "Technology survey in production processes of Base Oils Group II & III" was published at Iranian journal of Ravansazha, (2017).
- Article "Base oil production in GTL Process" was published in Iranian journal of Ravansazha, (2017).
- Article "Special Lubricants in Cement Industry" was published in Iranian journal of Ravansazha, (2017).
- Interview "Effective economic factors in the investment of GTL units" was published in Iranian journal of Ravansazha, (2017).
- Article "Hydrocracking process, the best alternative to the solvent extraction process in the production of base oil" was published in Iranian journal of Ravansazha, (2017).
- Article "*Hydroisomerization of n-Alkanes, Lump kinetic modeling and n-Hexadecane Experiments*" was accepted in "11th International Chemical Engineering Congress" in Iran (2006).
- Article "*Long chain n-alkanes Hydroisomerization process*" was published in "10th International Chemical Engineering Congress Symposium" in Iran (2005).
- Presenting several lectures on *Hydrotreating Process* and *High quality Base Oil Production Process*, which were published in several magazines of Iran like IChE Journal , Ravansazha and peyame behran

Publications

- Mahdi Razifar, "*Process design of 2 phase and 3 phase separators in oil, gas and petrochemical industry*", Andisheh Sara Publishers, Inc. 2010.
- Mahdi Razifar, "*Process equipment design in oil, gas and petrochemical industry*", Andisheh Sara Publisher, Inc. 2012.
- Mahdi Razifar, "*Introduction of the drawing of the process diagrams such as: BFD, PFD , P&ID, UFD, ESD*", Andisheh Sara Publishers, Inc. 2013.

- Mahdi Razifar, “*Simulation of the refinery processes with the PROMAX software*”, Andisheh Sara Publishers, Inc. 2014.

Software Skills:

Aspen Plus, Aspen Flarenet, Aspen Icarus, Exchanger Design & Rating (EDR), HTRI, Hysys, Hysys dynamics, Pipesys, Pipesim, ProII, Promax, Petrosim, Proplan, Olga, Photoshop, AutoCAD, Microsoft Office and other windows related programs.

Research Interests:

- Process Engineering, designing process equipment, Scale up, FS (Feasibility Study)
- Catalyst

Languages:

- Turkish (native language).
- Farsi (Persian)
- English

References:

1- Research Institute of Petroleum Industry (RIPI), West Blvd, Azadi Sport Complex, P. O. Box: 14665-1998, Tehran, Iran.

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