

Pedro L. Ott

Engineering Consultant

Background & Core Competencies

Chemical process/project development engineer with 27 years experience in positions ranging from systems process engineer through Lead staff engineer in major projects. Expertise in process design and project development and Excel applications to develop calculation tools.

Key expertise and strengths:

- Grassroots and unit revamps/modifications process design to improve capacity/reliability
- Expert design of Gas Treating (amines, dehydration), LNG, Gasoline and Distillates Hydrotreating and Sulfur Removal processes (ARU, SWS, SRU, HDS), Fractionation.
- Expertise in process design and project development:
 - PFDs, P&IDs, MFDs, MOCs
 - Technology Selection
 - Project Economics
 - Proposals & Design Basis
 - Process Simulations
 - Hazard Reviews (HazOp), Relief Systems
 - System Hydraulics
- Proficient Excel user for programming engineering calculations
- Perform unit inspections, troubleshoot and start-ups

Experience

Optimized Gas Treating, Inc. (OGT), Buda TX (2018 – Present)

Sr. Applications Engineer (Business Development and Technical Support). Engineering Consultant

- Overlook and gain new business for OGT ProTreat simulation software. Provide technical support to customers and sales presentations to prospect customers.
- Develop and conduct ProTreat training material and workshops in gas treating.

The Global Edge Consultants, The Woodlands TX (2017–2018)

Senior Process Engineer (contract seconded to a Sabine Pass LNG Facility in Cameron, LA)

- Identify opportunities and develop business cases (economic evaluations) to implement small projects to improve and optimize unit performance, increase production, increase equipment reliability and decrease unscheduled unit downtime and LPO.
- Develop small projects FEL-0/1 level process engineering concept and scope of work to be later implemented by owners engineering team or by an outside engineering contractor.
- Unit monitoring and troubleshooting of four deep CO₂ removal amine units, 1,250 gpm aMDEA design, 1.8 mol% CO₂ feed.
- MOC for the LNG feed pre-treatment and liquefaction units.
- Development of spreadsheets tools with PI inputs for unit monitoring.
- Developed cost estimating and process modeling tools

ConocoPhillips Inc, Houston TX (2012—2015)

Staff LNG Engineer:

- Provided technical consulting for amine/SWS/SRU capital projects

- Process design engineer and technology services to existing licensed LNG Optimized Cascade Process facilities, simulation support to identify unit bottlenecks.
- LNG facility, Trinidad & Tobago, process design and optimization of feed pretreatment system, implementation of process design changes to improve reliability and minimize LPO in an LNG train.
- Process design for replacement of damaged de-ethanizer condenser and replacement with improved metallurgy.

Development of Excel bases system hydraulics tool connected with process simulator to address LNG facility pressure drop, compressor power optimization and plant layout.

ConocoPhillips Inc. Houston, TX (2009-2011).

Staff Lead Process/Project Development Engineer, lead detailed engineering and process scope during construction stages for new SRU, SWS, and AGRU units at two ConocoPhillips refinery sites.

- Achieved successful on time unit start-up, lead process design changes (MOC), P&ID updates, alarm reviews, plant manual reviews, operator training and system installation reviews; lead process inspections and PSSR.
- Coordinated process design of modular amine clean-up unit (particle filtration, carbon treating and HSS removal) licensed by MPR Services.
- Coordination with refining units and schedulers, engineering, commissioning and start-up of new rich DEA header on line with all units operating, while the old rich DEA was converted to a lean DEA header.

ConocoPhillips Inc. Houston, TX (2001-2009)

Staff Lead Process/Project Development Engineer, lead FEL/FEED process design & development of new and revamp Low Sulfur Gasoline and Ultra-Low Sulfur Diesel projects including Gas Plant, Utilities and Amine/SWS/Sulfur and Degassing Processing offsites at ConocoPhillips refinery site.

- Implemented project economic evaluations with Decision & Risk Analysis concepts to support technology selection and support company project approval process by senior management.
- Prepared environmental process basis that resulted in expedited on-time approval for the project environmental permit and saved project delays.
- Prepared process design basis and scope of work that minimized project changes and cost overruns.

Represented owner engineering at contractor offices, review and approval of engineering /design documents and enforced company standards. Process focal contact with EPC contractor.

ABB Lummus Global Inc. Houston, TX (1998-2001)

Senior Process Engineer. Amine and Hydrotreating technology processes.

- Optimized steps for process design and development technical proposals and turnover of technical bids for Crude/Vacuum/Cracking Hydro-Processing of Distillates cuts; steps from process simulation, PFD's with material balances, equipment layout and sized equipment list.
- Study for a CO₂ Recovery Unit from Flue Gas using MEA.
- Process design of two refinery facilities amine units DEA and DIPA, based solvents.

- Process design of Diesel, VGO Hydrotreating and other refining units (Alkylation, Isomerization). Preparation of all FEL process engineering specifications and project documents. Projects in the USA and Netherlands.

Fluor Daniel Inc. Houston, TX (1991—2006)

Systems Process Engineer. Refining processes.

- Systems process design, met and improved by 10% the unit capacity rate on systems design for an Aromatics Conversion Unit, Cat Feed HSD revamp, DEA amine Treating, SWS units and other refining units including utilities and flare systems.

GDM Davy KcKee, Caracas Venezuela (Summer 1988-1990)

As Process Engineer:

- Systems design of a natural gas TEG dehydration unit and expander for liquids recovery. Preparation of equipment, process specifications, P&ID's, hydraulic calculations, utility balances and process design for flare system.

Summary of Relevant Amine Treating and Sulfur Recovery Project Experience

Contract with The Global Edge Consultants (2017-2018):

- Unit monitoring, troubleshoot and optimization process revamp for a LNG CO₂ removal feed pre-treatment amine plant, 1,250 gpm aMDEA circulation.

With ConocoPhillips (2001-2008):

- Troubleshoot and process revamp for a LNG CO₂ removal feed pre-treatment amine plant, 450 gpm DGA circulation. Process design.
- Coordination process design for DEA amine clean-up system (Filtration, carbon treating and HSS removal) licensed by MPR Services. Owners engineering.
- New sulfur recovery tail gas unit 350/200 TPD, MDEA circulation. Owners engineering.
- New sulfur recovery (Claus) 350/200 TPD. Owners engineering
- New refinery gas treating facility, 350/200 TPD, 1200/800 gpm DEA circulation. Owners engineering.
- Design and start-up of a new rich DEA header and switch services from rich to lean amine on an older header to increase amine circulation capacity by 1,200 gpm. Online execution without unit shutdown.

With ABB-Lummus Global (1998-2001):

- New refinery gas treating facility, 142 TPD acid gas regeneration, 370 gpm MDEA circulation. Process and systems design.
- Process design studies to recover CO₂ from combustion flue gases, MEA solvent base including unit test run.
- Process design for amine contactors (trays and packing) on various naphtha and distillate hydroprocessing units.

With Fluor Daniel (1991-1995)

- New refinery gas treating facility 166 TPD acid gas regeneration, 480 gpm DEA circulation. Process and systems design.

Education, Training & Certification, Professional Activity

- AICHE Member (2015-present)
- Project Economics Appraisal with Decision and Risk Analysis (Excel based). Conoco Workshop Feb 2002
- Flare Systems. Fluor/Dupont Workshop Oct 1995
- H. Kister Distillation Course, April 2010
- Koch-Glitsch. Mass Transfer School. Apr 2013
- EFP/ENSPM, Paris France. Specialization in Petroleum Refining and Gas Processing. – Jul 1997
- Simón Bolívar University, Caracas Venezuela – B.S. Chemical Engineering, Oct 1988