DONALD F. SCHNEIDER, P.E.

Don Schneider, P.E. is founder and president of Stratus Engineering, a Houston, Texas based process engineering and project management firm focusing on petroleum refining, chemical, and gas processing industries. Mr. Schneider has 35+ years of experience involving process design, process troubleshooting equipment specification, equipment design, process hazard analysis, mechanical integrity, instrumentation design, incident investigation and project management.

EDUCATION

M.S., Chemical Engineering, Texas A&M University, 1985
B.S., Chemical Engineering, University of Missouri-Rolla, 1983

PROFESSIONAL REGISTRATIONS

Registered Professional Engineer, Texas

TEACHING AND SEMINARS

- University of Houston Asian American Studies Instructor – Instructed Chinese business professionals on various chemical processing topics.
- Operator & Foreman Refinery Training – Developed training material and taught process specific classes for operators and foremen.
- Engineering Training – Taught pressure relief systems analysis workshop to refinery engineers.
- Industrial Influent Water Systems Seminar Instructor – Developed training material and taught Hydraulics to a class of engineers.

TECHNICAL EXPERTISE

- Refinery, Chemical and Gas Processes Design and Troubleshooting
- Analysis of Deficiency in Design
- Process Hazard Analysis
- Instrumentation Design
- Process and Control Troubleshooting
- Hazard and Operability Analysis
- Process Safety Equipment
- Mechanical Integrity Analysis
- Project Process

TECHNICAL EXPERIENCE

As a process engineering, process safety and project management expert Mr. Schneider has been involved in numerous projects. Representative projects include the following:

- Alkylation Units – Unit expansion and deluge system pump upgrade.
- Ammonia Plants – Plant optimization, ammonia storage, PSV study.
- Aromatics – Solvent regeneration design, SRC column study, fractionation feasibility study, extraction column revamp, unit optimization.
- Cogeneration – Viability study.
- Coker – Coker fractionators debottlenecking study.

- Crude and Vacuum Units – Grass roots crude unit design, numerous revamps, crude oil stabilizer grass roots design, furnace process design, Kerosene stripper process design, preheat train evaluations and revamps, depropanizer vessel spec and reboiler design, process control optimization and tuning, alternate crude studies and numerous projects involving crude unit design.
- Deasphalting – Furnace specification, production plant support, ROSE unit study.
- Ethylene – Grass-roots process design, crude cracking, steam air decoke system design, furnace upgrade, pitch system revamp, various design and operating reviews.
- Propylene – C-3 splitter revamp, C3 splitter relief study, C3 splitter grass roots study, cumene propylene supply optimization.
- C4-Olefins – 1,3-BD emissions reduction process design and project management, C-4 import systems.
- Isoprene – Purification process support, C5 import systems.
- Benzene – Benzene emissions reduction process design and project management.
- FCCU – Reactor/Regen revamp, Reactor/Regen debottlenecking, Catalyst cooler addition, Replacement FCC main frac design, FCC primary abs chiller revamp.
- Furnace – Refinery furnace emergency system process design.
- Hydrocracker – Debottleneck, additional reactor and fractionation modifications.
- Hydrotreater – Lube oil hydrotreater catalyst change, C5 selective hydrogenation catalyst change, unit relief capacity evaluation, hydrogenation catalyst change, Diesel hydrotreater debottleneck, reactor design, Kerosene hydrotreater simulation, Cat Gas hydrotreating study.
- Treating – Treater outlet settler replacement, fuel gas treater design, C3 treating troubleshooting, C3 treater replacement study, amine system balance and troubleshooting.
- LPG – Deisobutanizer/Debutanizer revamp, propane treating design, deethanizer troubleshooting and optimization, EP drier design, depropanizer support, gas plant restart, gas plant capacity study and expansion, depropanizer capacity expansion process design, grass roots depropanizer study, fuel gas injection.
- Lube Oil – Advance control project manager, manufacturing support.
- Natural Gas – Grass-roots dehydration design, start-up and trouble shooting.
- Environmental – Air emissions inventory system development manager, continuous emission monitoring design.
- Reformer – Reformate splitter design, simulation, heat and material balance.
- Sat Gas Plant – Saturated Gas plant study.
- Utilities – Deaerator design, cooling water systems design, fuel gas knock out drum design, potable water system study, GOHT spare H2 compressor, air system studies, and cooling water tower specification.
- Vacuum Stripper – System revamp design.
- Waste Water Treating – Waste water treatment plant upgrade design, effluent filters system analysis and upgrade.
- Water Treating – Raw water treatment plant design, PTU clarifier upgrade, raw water clarifier upgrade.
- Training – Flare gas recovery operator training, refinery operation operator training.
- Hydrogen – PSA reliability work, PSA alternative study, H2 system balance and optimization.
- General – Power failure studies, air failure studies.
- Turnaround Planning – Turnaround planning and support efforts including develop work list, manpower schedule, bid packages, and bid/procured major equipment.
- Information System development - Designed and implemented an information-gathering package for managing several complex-wide systems including: Hydrogen, Fuel Gas, Natural Gas, Sour Gas, Sulfur Plants.
- Safety Incident Investigations – Supported clients in on-scene investigation of catastrophic incidents and plant emergency shutdown incidents.
- Litigation Consultant – Supplied expert analysis of transcripts and procedures for firms involved in industrial lawsuits.

- Hazard and Operability Analysis – 25 years of experience with HAZOP analysis on existing and new facilities. Assisted with HAZOP follow up work.
- Process Hazard Analysis (PHA) – 25 years of experience with process hazard analysis on existing and new facilities.
- Gas Processing Mechanical Integrity System - Assisted in establishing mechanical integrity systems to comply with requirements set by OSHA'S 29 CFR 1910.119. The purpose of the Mechanical Integrity Process was to eliminate the potential for a catastrophic release of flammable or highly hazardous chemicals from processing equipment and to mitigate the effects of such releases on plant personnel and the public.
- Process Safety Valves Studies – Performed numerous process safety studies including Ammonia plants, Crude Units, Chemical batch reactors, Gas Oil Hydrotreaters, Hydrocarbon storage, reactors and plant wide studies.
- Flare Systems – Flare Gas Recovery systems grass roots design, project management support, training and start up assistance, flare load studies, and flare hydraulics studies.

WORK EXPERIENCE

Stratus Engineering, Inc.
Houston, TX (January 1996 to Present)

Founder and President of Stratus Engineering, Mr. Schneider specializes in process design, process safety management, project management and litigation support. He has performed numerous projects in the refining, chemical and gas processing industries. His project work has included process design, equipment specification, and project management. Mr. Schneider has been involved in many unit safety hazard analysis and hazard and operability studies. He has provided incident investigation services and litigation expert support.

MPEC Inc.
Houston, TX **(**July 1994 to Jan. 1996)

As Engineering Consultant, Mr. Schneider was responsible for process design of many units including Crude Unit Revamps, FCC Gas Plant Debottlenecking, and LPG/Butamer Plant Revamp. Mr. Schneider also conducted numerous Hazard and Operability Reviews.

Stone and Webster Engineering, Inc.
Houston, TX (Dec. 1992 to July 1994)

As Senior Process Engineer, Mr. Schneider's responsibilities included process design of Olefin plants, Crude Units, FCCU Reactors, and Diesel HDS. He also conducted many Hazard and Operability Reviews and Process Hazard Analysis.

Shell Oil Co.
Deer Park, TX (June 1985 to Dec. 1992)

As Process Engineer, Mr. Schneider was responsible for supporting the Lubrication plant and the Olefins plant. He also functioned as Project Manager for various multi-million dollar projects including a large DCS project. As the Process Engineering Supervisor for his unit he was responsible for leading a team of engineers and paraprofessionals.

COMPUTER SKILLS

ProII, Aspen, UniSim and HYSYS process simulators. Developed and marketed engineering software products. Knowledgeable in all MS Office products, Visual Flow, Flarenet, Visio, AutoCAD, Process Engineering ToolS (PETS®), and Web Page Development.

PUBLICATIONS

- “Avoid Sulfolane Regeneration Problems,” D. Schneider, Chemical Engineering Progress, July, 2004.
- "Improving Plant Reliability: Look Beyond the Usual Suspects," D. Schneider, Chemical Engineering, October, 2003.
- “Heat Integration Complicates Heat Pump Troubleshooting,” D. Schneider, Hydrocarbon Processing, May, 2002.
- “Improve Catalyst Removal Methods,” D. Schneider, Hydrocarbon Processing, October, 2000.
- “Practical Process Hydraulics Considerations,” D. Schneider, M. C. Hoover, Chemical Engineering, August, 1999.
- “Plant Power Failure and its Indirect Effects: a Case Study,” D. Schneider, Petroleum Technology Quarterly, Winter 1998/99.
- “Select the Right Hydrocarbon Molecular Weight Correlation,” D. Schneider, Chemical Engineering Progress, December, 1998.
- “Steady-State Simulators for Design,” D. Schneider, Chemical Processing, December, 1998.
- “Build a Better Process Model,” D. Schneider, Chemical Engineering Progress, April, 1998.
- "Deep Cut Vacuum Tower Processing Provides Major Incentives,” D. Schneider, J. Musumeci, Hydrocarbon Processing, November, 1997.
- "Debottlenecking Options and Optimization," D. Schneider, Petroleum Technology Quarterly, Autumn, 1997.
- "Programming, It's not Just for Programmers Anymore," D. Schneider, Chemical Engineering, May, 1997.
- “Deep Cut Vacuum Tower Incentives for Various Crudes,” D. Schneider, J. Musumeci, L. Suarez, Presented @ the AIChE 1997 Spring Nat’l Mtg.
- “Process Simulation: Matching the Computer’s Perception to Reality,” D. Schneider, Presented @ the AIChE 1997 Spring Nat’l Mtg.
- “Debottlenecking Economics - Maximizing Profitability with Minimum Capital,” D. Schneider, Presented @ the NPRA 1997 Annual Mtg.
- “Analysis of Alky Unit DIB Exposes Design, Operating Considerations,” D. Schneider, J. Musumeci, R. Chavez, Oil & Gas Journal, September 30, 1996.
- “How to Calculate Purge Gas Volumes,” D. Schneider, Hydrocarbon Processing, November, 1993.
- “Development of Microprocessor Control for a V-6 Engine Fueled by Prevaporized Methanol,” D. Schneider, Texas A&M University, Master of Science Thesis, August 1985.