



**THOMAS R. RUDDY II**

---

## SUMMARY OF QUALIFICATIONS

**River City Engineering, Inc.**, Lawrence, Kansas USA 1998-Present

Process Engineering Consultant for the Oil & Gas Industry providing design and technical support for gas and liquids processing/handling and oil production projects.

- Process consulting/development support for Gas-to-Liquids facility (Synthesis Gas and Fischer-Tropsch) with full product separation and treating. Support included development of fully integrated HYSYS process models for material and energy balances and economic evaluations of various processing schemes.
- AmeriGas, Chesapeake terminal – Detailed engineering for converting the propane heater from direct fired to indirect heating using an intermediate heating medium.
- Petrozuata, Venezuela – Preliminary engineering for gas dew-pointing of associated gas from heavy oil production for export.
- Angola LNG – Slugcatcher design for an onshore LNG plant.
- Kuwait Pipeline – Evaluation of ambient heat effects on an above-ground flowline.
- Enersea – CNG/ Peak-shaving LNG comparison study.
- COP Chittim plant – Evaluation of the heat exchange for relocating a fuel gas conditioner skid.
- MODEC, Gabon - Provided process engineering assistance in troubleshooting processing problems following start-up of an offshore production unit mounted on a converted jack-up. Analyzed data and identified problems related to off specification crude oil, excess vapor rates, and heat exchanger fouling. Performed preliminary studies to determine changes necessary to expand capacity.
- DPI - Analyzed existing skid-mounted gas plants for use in new services/feed compositions. Calculated potential propane recovery levels and determined which pieces of equipment would have to be replace/retrofitted.
- ConocoPhillips - Preliminary process design support for sand removal on an offshore production platform.
- Preliminary process design and cost estimating support for an offshore gas production platform. Compared offshore acid-gas treating and liquids recovery to onshore alternatives. Included evaluation of pipeline configuration options.
- Various - SAFE Chart (API-14C) development and Process Hazards Analysis (PHA) for several gas plants.
- Various - Preparation and analysis of Cause & Effect (C&E's) diagrams.

---

## PREVIOUS EXPERIENCE

**C.W. Nofsinger**, Kansas City, Missouri USA 1990-1993

Staff Process Engineer involved in the design and optimization of processing plants for a variety of clients. Responsibilities included process simulations, heat and material balances, process and engineering diagrams, cost estimates, and equipment specifications. Also performed laboratory and operations studies on crystallization pilot plant.

Major Projects:

- Universal Oil Products (UOP) - Prepared Schedule A design packages for two Catalytic Cracker Gas Recovery units.

- Goodyear Tire and Rubber - Prepared process study of an isoprene extraction plant which allowed Goodyear to process a new feedstock.
- A.E. Staley - Participated in the design of a new \$35MM fructose crystallization process and expansion of an existing corn syrup refinery.
- Koch Refining - Prepared Schedule A design for a new crystallization unit to purify two specialty chemicals.

## **THOMAS R. RUDDY**

---

### **EDUCATION**

#### **University of Kansas**

Lawrence, Kansas

B.S. Chemical Engineering (with Distinction), 1986-1990

#### **University of Kansas Chemical Engineering Department, (M.S. Program) 1994-1997**

Lawrence, Kansas

Research Assistant in Plasma Reactor Laboratory

- Performed experiments on plasma reactors to determine relationship of control variables to critical process conditions such as ion and electron concentrations in various plasma gases. Plasma reactors are used in the manufacture of semiconductors.
- Completed graduate level course in Thermodynamics, Kinetics, Statistics, Heat, Mass and Momentum Transport Phenomena, Engineering Calculations, and Plasma Processing.

---

### **PROFESSIONAL MEMBERSHIPS**

Engineer-In-Training (EIT/FE), Kansas  
American Institute of Chemical Engineers

---

### **PUBLICATIONS**

Pennybaker, K.A., and S.E. Wolverton, S.W. Chafin and T.R. Ruddy, "A Comparative Study of Propane Recovery Processes," Proceedings of the Seventy-Eighth GPA Annual Convention, Nashville, Tennessee, March 1-3, 1999.

Pennybaker, K.A., S.E. Wolverton, S.W. Chafin, T.R. Ruddy and C.W. Pritchard, "A Comparative Study of Ethane Recovery Processes," Proceedings of the Seventy-Ninth GPA Annual Convention, Atlanta, Georgia, March 13-15, 2000.