

J. L. “Jack” Adams, PE

Summary – Jack Adams is a chemical engineer with 37 years of project management and process engineering experience. He is knowledgeable of refinery and coker design, economics, and operations. His career began as a process engineer employed by Pritchard and Litwin from 1974 through 1980.

In the 1980's, Adams worked for Koch Refining Co. and developed projects to expand the Texas refinery, including multiple FCCU expansions, a coker modernization, installation of a hydrocracker, a new CCR reformer, crude revamp, a Parex, and multiple petrochemical upgrades. In 1991-1992, Adams developed a heavy crude refinery upgrade plan for the refinery, including a new coker and offsites. In 1992, Jack joined Clark R&M to manage profitability and project execution improvement. He also participated in the analysis and acquisition of the Port Arthur, Texas refinery from Chevron.

He formed Adams Project Managers, Inc. in 1996 to provide project development and project management services. From 1996 to 2002, he was engaged to develop the scope, cost, and environmental permit for a grassroots refinery. Since 2003, he has worked mainly on coker projects. Experience includes revamp and grassroots projects, technology selection and economics analysis.

Background - Adams received a Master's Degree in Chemical Engineering from Arizona State University and is a Professional Engineer in Texas. Adams began his professional career as a process engineer working on gas plants, LNG, and refinery designs for Pritchard and Litwin in the 1970's.

In the 1980's, he was employed as the Manager of Project Development and Project Manager for Koch Industries and Koch Refining Company, developing over one billion dollars of refinery projects (four billion today's dollars.) In 1992, Jack joined Clark R&M as Assets Manager. He also led the technical evaluation and participated in Clark's acquisition of the Port Arthur, Texas refinery from Chevron.

In 1996, he formed Adams Project Managers, Inc. (APMI) and from 1996 through 2002, Adams was engaged by Arizona Clean Fuels to develop the scope, cost, technology package, proforma and permit basis for a grassroots refinery. Since, Adams has been active developing and managing coker projects.

In 2004, Adams was engaged to lead a refinery FEL study to identify the scope of work plus ISBL and OSBL cost estimate for construction of a new coker. During 2005 through 2008, Adams led an alliance of D-Cök and ConocoPhillips (“CoP”) on CoP's coker technology. Since 2008, Adams has provided project management on various refinery and delayed coker projects. In 2009, APMI and Process Engineering Associates ‘teamed’ to provide coker modernization studies for U. S. and international clients

Delayed Coking / Bottoms Upgrading Experience - In 1991-1992, Adams lead a heavy crude refinery upgrade team planning a grassroots coker and offsites definition. In 2004, Adams led an expansion project to converted asphalt to coker feed and construction a new coker. Since 1998, Adams worked on various coker and visbreaker analysis plus multiple coker revamp projects, including:

- Led the Coker Alliance between ConocoPhillips and D-Cök.
- Managed the plan of a refinery to construct a coker and revamp the refinery.
- Project Managers for developing a Coker Sludge injection system for a St. Croix refinery.
- Project Director responsible for the technology selection, environmental plan, and proforma for a grassroots 150,000 barrel-per-day Arizona refinery.

In summary, Adams has been responsible for process engineering and project management for all aspects of refinery revamps and heavy crude oil upgrading, specializing on refinery unit revamps.

Education & Professional Affiliations

Masters of Science Degree in Chemical Engineering, Arizona State University 1978
Bachelor of Science Degree in Engineering Science, Rockhurst University 1972
Professional Engineer in Texas, certification #78851

Jack Adams, PE

CHRONOLOGY OF EXPERIENCE

- Process Engineer and Startup Engineer**, Pritchard 1974-1979
- Process Engineer**, Litwin Engineering. 1979-1980
- Project Manager / Manager of Project Development**, Koch Industries Inc. 1980-1992
- Assets Manager / Manager of Projects**, Clark Refining & Marketing 1992 -1995
- Project Manager / Business Development**, Adams Project Managers, Inc. 1996-Present

CAREER HIGHLIGHTS

Adams Project Manager, Inc. (1996 - present)

Project Manager and Project Developer

- Project Manager and Project Development Services for various Coker studies.
- Project and Business Manager for Coker Alliance between ConocoPhillips and D-Cök. Led refinery coker revamps scope development (2005 to 2008.)
- Program Manager for client refiner's FEL1 development for a new Delayed Coker, associated refinery revamps, offsite definition, etc. (2004-2005.)
- Interex Global Business Advisor in Jatropa oil to BioDiesel company (2007.)
- Project Manager, Marketer for Burns & McDonnell and MKEC (2002 – 2004.)
- FEL-1 for Hovensa Coker Sludge injection while at Burns & McDonnell (2003.)
- Project Director responsible for the technology selection, environmental plan, and proforma for a grassroots 150,000 barrel-per-day Arizona refinery (Managed services of Bechtel, UOP, and URS from 1996-2002.)
- Multiple technical and acquisition analyses for industry clients.

Clark Refining and Marketing (1992 - 1995).

Manager of Projects / Assets Manager... responsible for the strategic plan, led the development and project management of the refining division capital budget.

- Acquisition of the Port Arthur refinery from Chevron – Led the technical analysis and participated in the economic analysis and presentations.
- Received Clark's President's Award for leading the Productivity team.
- Hartford FCCU and Alky. expansions were completed on budget and schedule.

Koch Industries, Inc. (1980 - 1992).

As Project Manager / Manager of Project Development for Koch Refining Company, responsibilities included management of engineering for capital projects, technology and contractor selection, contract negotiations, and economic evaluations. Participated in both the corporate and refining environments.

- As Manager of Project Development, led the economic analysis, project definitions, project estimates, and technical evaluations for multiple expansion projects including two crude unit revamps, two hydrotreater projects, and a new CCR reformer project, the relocation of a hydrocracker, multiple FCCU expansions, and a \$150 million paraxylene expansion.
- Project Manager responsible for a crude expansion (coker, hydrotreater, etc.)

Litwin Engineering, Wichita (1979-1980) - Process engineer for refinery projects.

Pritchard, Kansas City (1974 - 1979) - Process / Startup Engineer for LNG and gas plants.