Mastering Fluid Catalytic Cracking Unit (FCCU) and Residue Fluidised Catalytic Cracking Unit (RFCCU) Technology

YOUR EXPERT TRAINER

Steve Kalota
Founder,
Expertech Consulting Professional Engineer

Steve Kalota is Founder and President of Expertech Consulting, specializing in the design, operation, and inspection of Fluid Catalytic Cracking Units worldwide.

Steve has more than 30 years professional experience in the petroleum refining industry, with significant concentration and expertise in Fluid Catalytic Cracking Unit (FCCU) technical service, engineering, operations, startup, troubleshooting, raining, inspection, and environmental functions.

In his 35+ years experience, Steve has provided on-site support for the commissioning of 17 grassroots units, 20+ revamps and conducted numerous troubleshooting, engineering, technology evaluation, and training efforts for all major FCC unit designs, including ExxonMobil, Shell, UOP, M.W. Kellogg, and Stone & Webster. He has also developed and presented training programmes for BASF, CHS, Conoco Phillips, Ecopetrol, Grace Davison, Hovensa, Indian Oil Ltd, Kuwait National Petroleum, Murphy Oil, Navejo Refining, Pemex, Petrobras, Placid Refining, Refining Process Services, Sasol, Tesoro, Valero, amongs others. Steve began his career with UOP in 1977 and worked in FCCU technology startup and continuing technical service positions for 6 of his 8 years of employment. In 1984, Steve was employed first as the FCCU Process Engineer at the Champlin Petroleum Corporation refinery in Wilmington, California, and then promoted to Technical Services Manager in 1986. As TS Manager, he was responsible for a team of engineers to provide process design and operations support for all the refinery processes, including CCR Platforming, HF Alkylation, Butamer, and Delayed Coking, as well as FCCU.

Key Takeaways:

- Learn about the operations, technology components, process and mechanical design
- Evaluate the performance of catalyst impact
- Be able to optimise, control and troubleshoot the FCC Unit
- Understand the procedural aspects of the Fluid Catalytic Cracking Unit
- Understand the important parameters to achieve improved yield performance
- Learn how to increase equipment reliability and reduce operating costs
- Discover a broad working knowledge of the FCCU process technology
- Be able to operate startup, shutdown and emergencies smoothly
More About Your Expert Trainer

Steve was employed by Coastal Corporation as the Operations Manager at their refinery in Rodeo, California from 1987 to 1990. He oversaw the entire refinery operations and operating personnel, while also involved with selection and generation of a Process design package for a new SWEC FCCU for the refinery.

In 1990, Steve was employed by M.W. Kellogg as a Process Design Manager in their FCCU Technology group. He held this position for 3 years, completing 2 grassroots unit designs and numerous revamp design projects. In 1993, he assumed responsibility as Technical Service Manager for all licensed Kellogg FCCU. In this function, he provided all on-site technical support for 60+ operating FCCU throughout the world to resolve processing, design, or technology issues.

Expertech Consulting Inc. was formed in November 1997 for the purpose of providing specialized technical services for all aspects of the Fluid Catalytic Cracking process, utilizing skills gained from service and design positions at M.W. Kellogg, two U.S. refiners, and UOP, as well as the industry’s foremost experience with on-site commissioning activities. Expertech’s mission statement is to provide rapid, cost-effective, professional operations, engineering, project support, technology evaluation, and training services to clients to boost their profitability through improved performance, equipment design, and reliability.

Expertech Consulting Inc. also is networked to other consulting groups and individuals to provide a full range of services. We are allied with The Process Group for professional support in FCCU downstream fractionation and absorption efforts and have access to independent M.E.

Why Attend This Workshop

The course will focus on the operation, technology components, process and mechanical design, catalyst impact, optimization, troubleshooting, control, and procedural aspects of the Fluid Catalytic Cracking Unit. This will provide a detailed knowledge and understanding of the important parameters to achieve improved yield performance, increased equipment reliability, and reduced operating costs. Upon successful completion of the course, participants will obtain a broad working knowledge of the FCCU process technology and be able to interact with others currently working in this field.

Who Should Attend

This program is ideal for personnel involved in refinery process engineering, unit operations, catalyst sales, and technical services. Process engineers from design and construction companies and those providing services to Fluid Catalytic Cracking Units in the petroleum refining industry would also find this course beneficial.

Specific Job Titles would include:

- Superintendents and Supervisors
- Operations/Production Managers
- Process Engineers
- Design Engineers
- M&E Foremen, Technical Coordinators
- Technicians
- FCCU Engineers
- Contractors
Steve holds a B.S. degree in Chemical Engineering from the University of California. Expertech Consulting Inc. has completed work for most U.S. refining companies as well as a significant number of international clients. Mr. Kalota has substantial hands-on experience with all FCC design types (gas oil or residue) including UOP, KBR, SWEC, Exxon, and Shell. He has also been involved with Fluid Coking, and circulating, fluidized solids applications in Biomass and Canadian Tar Sands. A partial list of clients and units is below.

### UNIT LOCATION TYPE

**Ampol-Brisbane**
- Australia
  - UOP SxS
  - UOP SxS/Exxon Model 4

**Ampol-Kurnell**
- Australia
  - MWK Model C
  - SWEC R2R

**BP-Brisbane**
- Australia
  - UOP Stacked
  - UOP Stacked

**BP-Kwinana**
- Australia
  - UOP Stacked
  - UOP Stacked

**CHS**
- Montana
  - UOP Stacked/KBR Model A

**Conoco-Commerce City**
- Colorado
  - Exxon Model IV

**Conoco-Ponca**
- Oklahoma
  - Exxon Model II

**Conoco-Billings**
- Montana
  - MWK SxS

**Conoco-Humber**
- England
  - MWK Model F

**Conoco-Alliance**
- Louisiana
  - MWK Model II

**Conoco-Bayway**
- New Jersey
  - MWK Model II

**Conoco-L.A.**
- California
  - MWK Model II

**Conoco-Borger**
- Texas
  - MWK Model II

**Conoco-Sweeny**
- Texas
  - Mexican

**Conoco-Trainer**
- Pennsylvania
  - Exxon Model IV

**Conoco-Wood River**
- Illinois
  - Exxon Model IV

**Corporven-El Palito**
- Venezuela
  - Texaco SxS

**Corporven-PLC**
- Venezuela
  - Texaco SxS

**Corporven-Amuay**
- Venezuela
  - Texaco SxS

**Chinese Petroleum**
- Taiwan
  - Texaco SxS

**Crown Central**
- Texas
  - Texaco SxS

**Coastal**
- Texas
  - Texaco SxS

**Eg3**
- Argentina, S.A.
  - MWK Ultraorthoflow
  - MWK Ultraorthoflow

**Elf-Total-Fina Oil**
- France
  - MWK Ultraorthoflow
  - MWK Ultraorthoflow

**Engen**
- S. Africa
  - MWK Ultraorthoflow

**Fina**
- Texas
  - MWK Ultraorthoflow

**Holly Corp.**
- Utah
  - MWK Ultraorthoflow

**Hovensa**
- U.S.V.I.
  - MWK Ultraorthoflow

**Imperial Oil**
- Canada
  - MWK Ultraorthoflow

**IOCL**
- India
  - MWK Ultraorthoflow

**Kyokuto Petroleum**
- Japan
  - Exxon Model II

**Lyondell**
- Texas
  - Exxon Model II

### UNIT LOCATION TYPE

**Marathon**
- Illinois
  - UOP SxS

**Marathon**
- Louisiana
  - Exxon SxS

**Mobil**
- Australia
  - MWK RFCC

**MOL**
- Hungary
  - UOP SxS HER

**Murphy Oil**
- Louisiana
  - UOP SxS HER

**Natref**
- S. Africa
  - UOP SxS

**Navajo Refining**
- N. Mexico
  - UOP SxS

**OMV**
- Austria
  - UOP Stacked

**Pemex-Salina Cruz**
- Mexico
  - MWK Stacked

**Pemex-Tula**
- Mexico
  - MWK Stacked

**Petrobras-RDUG**
- Brazil
  - MWK Model F

**Petrobras-RPAR**
- Brazil
  - MWK Model C

**Petrobras-RPBC**
- Brazil
  - MWK Model C

**Petrobras-RVAP**
- Brazil
  - MWK Model B

**Petronor**
- Spain
  - WK Ultraorthoflow

**Petroplus**
- France
  - Shell SxS

**Petroplus**
- Germany
  - Exxon Model IV

**Repsol**
- Spain
  - MWK Ultraorthoflow

**Saras**
- Sardinia
  - UOP SxS

**Scanriff**
- Sweden
  - MWK Ultraorthoflow

**Sun Oil-Girard Point**
- Pennsylvania
  - MWK Model II

**Sun Oil-Point Breeze**
- Pennsylvania
  - MWK Ultraorthoflow

**Sun Oil-Marcus Hook**
- Pennsylvania
  - UOP SxS

**TAMOIL**
- Switzerland
  - FP R2R

**Tohoku Oil**
- Japan
  - MWK RFCC

**Tesoro - Avon**
- California
  - UOP Model II

**Valero-Ardmore**
- Oklahoma
  - SWEC R2R

**Valero-Houston**
- Texas
  - UOP SxS

**Valero-St. Rose**
- Louisiana
  - UOP SxS

**Valero.-3 Rivers**
- Texas
  - UOP SxS HER

**Valero-Wilmington**
- California
  - UOP SxS HER

**YPF**
- Argentina, S.A.
  - Exxon Flexicracker