Oil Refinery Cost Management

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Introduction

In today’s modern refining environment, the use of innovative cost management practices that can accurately allocate refined intermediate and product manufacturing costs, may assist refiners to optimize their production, improve their profitability and competitiveness.

Cost management is concerned with the process of planning and controlling the budget of a project or business. Cost management can also be applicable to refinery management systems and it can be a very important part of the refinery production processes. It must be appreciated however, that production costs are a synthetic index that can reflect the effectiveness of production planning and scheduling. How to successfully control and manage production costs is a complex set of issues for refineries but it can be used to monitor and control refinery unit performance.

This GLOMACS training course on Oil Refinery Cost Management will assist in creating cost structures for refinery process units and assist in allocating costs to individual refinery intermediates and finished on-specification products. Important aspect of process plant optimization is related to system energy management and energy consumption reduction. Furthermore, process monitoring that includes advanced controls and new technologies also present opportunities for refinery optimization. Additional opportunities can include Crude Unit Utilization with opportunity crudes of lower quality and price.

This GLOMACS training course will highlight:
- Lectures, tutorials and group work in all areas of refinery cost management
- Actual Case Studies that illustrate technical solutions with observable results benefits
- Use of basic cost management software tools in excel will be made available to participants
- Transfer of instructor’s broad hands-on industrial experience
- Open reflection on real life situations in participants’ own refineries

Objectives

By the end of this GLOMACS training course, participants will be equipped with the knowledge to conduct the following activities in their refineries:
- Determine by various techniques the cost of individual streams in the refinery and individual processes
- Use these costs to calculate the enhancement potential for blending lower cost on specification products
- Optimize refinery utility systems such as cooling water, steam and power generation
- Apply energy saving techniques to develop energy saving projects
- Enhance the production planning activities of the refinery via cost management

TRAINING METHODOLOGY

Oil Refinery Cost Management is a hands-on, stimulating learning experience. This GLOMACS Finance & Budgeting training course on Oil Refinery Cost Management will be highly interactive. With opportunities to advance one’s opinions and ideas. Participation is encouraged in a supportive environment.

To ensure the concepts introduced during this GLOMACS Finance & Budgeting training course are understood, they will be reinforced through a mix of learning methods, including lecture style presentations, open discussions, case studies, and short videos. Hands-on computer software and simulations will be provided to illustrate the application of costing and cost management. The case studies provided for group work will be re-enforced with practical exercises in excel and there will be ample opportunities for discussion and sharing of experiences.

Organisational Impact

In sending delegates to this GLOMACS training seminar, the organization will gain the following benefits:
- Improved creation of cost structures for refinery process unit production planning and scheduling
- Greater commitment to the process of planning and controlling costs and budgets
- More rapid reaction to changes in the business environment
- Closer alignment of strategic and operational goals
- More cohesive system energy management
- Improved planning and scheduling approach with sustainable plant profitability and optimization

Personal Impact

In attending this GLOMACS training seminar, individual delegates will gain the following benefits:
- Practical ideas for developing and allocating cost structures for refinery process unit
- Enhanced competency in making a more effective contribution to strategic and operational planning
- Up-to-date understanding of main trends in refinery margins
- Greater confidence in dealing with strategic and operational risk
- Familiarization with state-of-the-art spreadsheets for cost management
- Improved ability in appreciating that production costs are a synthetic index that directly affects the bottom line

Who Should Attend?

This GLOMACS training course on Oil Refinery Cost Management is designed to provide technical and practical approaches to executing a petroleum refinery related cost management.

This GLOMACS training course is suitable to a wide range of professionals but will greatly benefit:
- Refining Oil & Gas Field Engineers
- Process Plant Energy Managers / Coordinators
- All Professionals involved in Production, Planning and Scheduling
- Blending Professionals
- Financial Analysts
# Seminar Outline

## DAY 1

**Overview of Cost Management**
- Introduction to Cost Management
  - Resource Planning
  - Cost Estimating
  - Cost Budgeting
  - Cost Control
- Energy and its Effect on Refinery Profitability
- Refinery Material & Energy Balance
- Energy Benchmarking
- Fuel, Power and Steam Costing Methodology

## DAY 2

**Crude Oil Refining**
- Types of Refinery
- Key Process Units
- Refinery & Process Utilization
- Global Refining Situation
- Refining Costs
- Refining Investment
- Size and Complexity
- Location and Logistics
- Maintenance Costs

## DAY 3

**Refinery Process Unit Operational Costs**
- Physical Separation: Crude & Vacuum Unit Distillation
- Product Enhancement:
  - Hydrotreating
  - Catalytic Reforming
  - Fluid Catalytic Cracking
  - Hydrocracking
  - Bottom of the Barrel Upgrading
- Process Simulations
- Advanced Process Control and its Benefits
- Blending for Product Specifications
- Blending to Reduce Product Costs

## DAY 4

**Economic Evaluation and Cost Management**
- Cost Estimation
- Refinery Complexity and Netback
- The Gross Refining Margin
- The Net Refining Margin
- Factors that Influence Margins
- Margins According to Region
- Refinery Utility System
- Steam and Power System Optimization
- Energy Efficiency: The Effect of Energy on Refinery Profitability
- Quantification of Fuel Loss, Oil Accounting

## DAY 5

**Process Heat Integration & Equipment Efficiency: Effective Energy Management**
- Process Heat Integration
- How heat integration works?
- Introduction to Pinch Technology
- Heat Availability Curves and Energy Targeting
- Equipment Efficiency: Effective Energy Management
  - Fired Heaters
  - Rotating Equipment
  - Heat Exchangers
- Energy Focused Organisation
- Course Review and Close
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4 WAYS TO REGISTER

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TERMS AND CONDITIONS

- Fees - Each fee is inclusive of Documentation, Lunch and refreshments served during the entire seminar.
- Mode of Payment - The delegate has the option to pay the course fee directly or request to send an invoice to his/her company/sponsor. Credit card and cheque payments are both acceptable.
- Cancellation / Substitution – Request for seminar cancellation must be made in writing & received three (3) weeks prior to the seminar date. A US$ 250.00 processing fee will be charged per delegate for each cancellation. Thereafter, we regret that we are unable to refund any fees due, although in such cases we would be happy to welcome a colleague who would substitute for you.
- Hotel Accommodation – is not included in the course fee. A reduced corporate rate and a limited number of rooms may be available for attendees wishing to stay at the hotel venue. Requests for hotel reservations should be made at least three (3) weeks prior to the commencement of the seminar. All hotel accommodation is strictly subject to availability and terms and conditions imposed by the hotel will apply.
- Attendance Certificate – a certificate of attendance will only be awarded to those delegates who successfully completed/attended the entire seminar including the awarding of applicable Continuing Professional Education Units/Hours.
- Force Majeure – any circumstances beyond the control of the Company may necessitate postponement, change of seminar venue or substitution of assigned Instructor. The Company reserves the right to exercise this clause and implement such amendments.
- Fair Access / Equal Opportunities – In the provision of its services as a world-class Training Provider, the Company is committed to provide fair access/equal opportunities throughout the delivery of its courses and assessment leading to the completion of training seminars, or 3rd party qualifications/certifications.