

### MAIRODI MANDIRI SEJAHTERA

TRAINING, CONSULTING & ENGINEERING SERVICES

Alamat: Gedung Dapenpos Lt.2, Jl. PH.H. Mustofa No.35, Bandung, Indonesia, 40124 Telp/Fax: +62-22-7215668, Homepage: www.mairodi-training.com

### Training Syllabus:

### EFFECTIVE ESTIMATING AND COST CONTROL FOR EPC PROJECTS

#### **COURSE OVERVIEW**

In this course you will focus on managing the typical constrains of many project such as; limit on time, human resources, materials, budget and specifications. Learn to master techniques such as estimating, forecasting, budgeting, monitoring, controlling, and analyzing and reporting costs and interpreting the meaning of earn value data. Learn a sound, logical framework for scheduling and controlling project activities and discover ways to work within the identified constraints without curtailing creativity and innovation.

### **OBJECTIVES**

An accurate and reliable estimate is the basis of every project and contract award. it gives control for all internal and external stakeholders. Small or large everything is related to investment costs and the costs throughout the project life cycle. Nevertheless a lot or projects overrun their budgets.

This workshop is specially intended for (technical) engineers/ managers who are involved in small, middle and large size projects and for those who are involved with feasibility studies and people who have m determine their own budgets. It will also elaborate typical cost engineering estimating methods, but will also put this in relation to accuracy of the estimate and project definition. This workshop also stipulates how after budget approval the cost can be controlled through by effective cost control.

The practical cases in this workshop based on industrial project gives the possibility to practice the techniques explained.

### **COURSE METHODOLOGY**

The Course is designed to be taught interactively with syndicates and personal exercises, facilitation of group discussions, training videos, and discussions of real life examples.

You will learn to

- LEARN about the art of assigning value to that which has been or will be engineered.
- GAIN more in-depth knowledge of cost engineering terminology.
- OBTAIN a more comprehensive curriculum with respect to estimating methodologies.
- FIND out how project can be estimated quicker and more accurate.
- UNDERSTAND the different requirement for estimating throughout the project life cycle.
- WORK out practical example cases on both detail and factor type estimates.

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- HEAR about practical experiences.
- GET familiar with global rules of contracting out.
- OBTAIN insight on hits and pitfalls for preparing contracts.
- LEARN to help the project team to execute projects in such way that projects will finish in time within budget.

### WHO SHOULD ATTEND?

The course is targeted at the Oil & Gas industry, Petrochemical, Power plant, Mining & Minerals, Chemical, Construction, EPC Company & Contractor, Fabricator, Vendors & Manufacturer, Creditor, Insurance Company and Government. The profiles of participants include but are not limited to

- Project Manager
- Project Engineering
- Cost Estimator
- Cost Engineer
- Project Cost Engineer
- Discipline leads
- Finance Project Executive / Manager
- Al executives involved in technical projects planning & cost estimation

### TRAINING MATERIAL OUTLINE:

- A. ESTIMATING IN EACH PHASE OF THE LIFECYCLE OF A PROJECT
  - 1. Present Project Life Cycle
  - 2. Desirable Project Life Cycle
  - 3. Operations
  - 4. Estimating Cycle
  - 5. Total Cost Ownership
- B. DEFINITIONS WITHIN ESTIMATING
  - 1. Allowances
  - 2. Contingency
  - 3. Overun Allowances
  - 4. Escalation
  - 5. Money of the Day
  - 6. Real Term / Constant Value Money
- C. FACTOR ESTIMATING METHODS
  - 1. What is factor Estimating
  - 2. Advantages and Disadvantages
  - 3. Factor Estimating Method\_0.6 Exponent or Power Factor
  - 4. Factor Estimating Method\_Lang Method
  - 5. Factor Estimating Method\_Hand Method
  - 6. Factor Estimating Method Improved Factor Method
- D. CASE 1: MAKING FACTOR ESTIMATE
  - 1. Preparing an Estimate using Factor Estimating Method

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- 2. Using Plot Process Flow & Equipment List Data Only
- WHAT DETERMINES ACCURACY
  - 1. Available Price Data
  - 2. Work Description
  - 3. Data System
  - 4. Estimator's Knowledge
  - 5. Influence on the Estimate
- F. QUANTITATIVE ESTIMATING METHOD
  - 1. Principles
  - 2. Advantages
  - 3. Disadvantages
  - 4. Quantitative Piping & Pipelines
  - 5. Quantitative Civil & Structural Steel
  - 6. Quantitative Mechanical Equipment
  - 7. Quantitative E & I Equipment
  - 8. Quantitative Indirect Cost
- G. CASE 2: ESTIMATING WITH QUANTITATIVE METHOD
  - 1. Preparing Descipline Estimates Using Quantitative Method
  - 2. Using Project Parameters only
- H. ESTIMATING OF EQUIPMENT
  - 1. Project Phases & Accuracy
  - 2. Requisition Types
  - 3. Price Determining Parameters of Equipment
  - 4. Sources of Pricing
- I. VALUE ENGINEERING
  - 1. Principles
  - 2. Value Engineering Exercise
- J. DETAIL ESTIMATING METHODS
  - 1. Discipline estimating
  - 2. Through percentages
  - 3. Quantitive method
  - 4. Unit rates
- K. THREE CASES IN DETAIL ESTIMATING
  - 1. Civil & Structural Estimate
  - 2. Pipeline Estimate
  - 3. Mechanical Estimate
- L. CONTRACTING
  - 1. Business objective of Contracting out
  - 2. What can be Contracted out
  - 3. Parties involved in the Contracting out process
  - 4. Contract types / Contract out processes
  - 5. Contract Agreements contents
  - 6. Liabilities

## MMS

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### M. CASE IN CONTRACTING

- 1. Determine Advantage / Disadvantages different contract types
- 2. See Relation in Time, Risk, Coordination and Cost for the different contract types

### N. COST CONTROL

- 1. Why Cost Control
- 2. Potential Influence on Costs
- 3. Example Registration & Control versus Effective Cost Control
- 4. Pre-requisites for Effective Cost Control
- 5. Cost Control Trends
- 6. Value of Work done method
- 7. Reporting

**INSTRUCTOR:** Pulung Susilo Rahardjo

**VENUE:** Jakarta (Maxone Hotel Menteng, Balairung Hotel Matraman, Sentral Hotel, Haris Tebet, Gd Muamalat Institute, Ibis Manggadua, Little Amaroossa Residence, Cosmo Amaroossa, Zodiak MT. Haryono, Grand Tjokro)

**DURATION:** 3 days

### **TRAINING TIME:**

Januari 2024	Februari 2024	Maret 2024	April 2024
3 - 5 Januari 2024	5 - 7 Februari 2024	4 - 6 Maret 2024	1 - 3 April 2024
8 - 10 Januari 2024	12 - 14 Februari 2024	12 - 14 Maret 2024	22 - 24 April 2024
15 - 17 Januari 2024	19 - 21 Februari 2024	18 - 20 Maret 2024	29 April – 1 Mei 2024
22 - 24 Januari 2024	26 - 28 Februari 2024	25 - 27 Maret 2024	
29 - 31 Januari 2024			
Mei 2024	Juni 2024	Juli 2024	Agustus 2024
6 - 8 Mei 2024	3 - 5 Juni 2024	1 - 3 Juli 2024	5 - 7 Agustus 2024
13 - 15 Mei 2024	10 - 12 Juni 2024	8 - 10 Juli 2024	12 - 14 Agustus 2024
20 - 22 Mei 2024	19 - 21 Juni 2024	15 - 17 Juli 2024	19 - 21 Agustus 2024
27 - 29 Mei 2024	24 - 26 Juni 2024	22 - 24 Juli 2024	26 - 28 Agustus 2024
		29 - 31 Juli 2024	
September 2024	Oktober 2024	November 2024	Desember 2024
2 - 4 September 2024	1 - 3 Oktober 2024	4 - 6 November 2024	2 - 4 Desember 2024
9 - 11 September 2024	7 - 9 Oktober 2024	11 - 13 November 2024	9 - 11 Desember 2024
16 - 18 September			
2024	14 - 16 Oktober 2024	18 - 20 November 2024	16 - 18 Desember 2024
23 - 25 September			
2024	21 - 23 Oktober 2024	25 - 27 November 2024	26 - 28 Desember 2024
	28 - 30 Oktober 2024		

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### **INVESTMENT/PERSON:**

- 1. Rp. 6.950.000/person (full fare) or
- 2. Rp. 6.750.000/person (early bird, payment 1 week before training) or
- 3. Rp. 6.500.000/person (if there are 3 persons or more from the same company)

### **FACILITIES FOR PARTICIPANTS:**

- 1. Training Module
- 2. Flash Disk contains training material
- 3. Certificate
- 4. Stationeries: NoteBook and Ballpoint
- 5. T-Shirt
- 6. Backpack
- 7. Training Photo
- 8. Training room with full AC facilities and multimedia
- 9. Lunch and twice coffeebreak everyday of training
- 10. Qualified instructor