Contents

List of Illustrations Introduction		VIII X	
PA	RT ONE	PLANNING FOR EXPENDITURE	
1	Cost estimating		3
	Form 2	A general purpose estimating form Equipment and materials cost estimates Project cost and price summary	
2	Simple a	and discounted cash flow	14
	Form 5	Cash flow parameters Cash flow schedule Calculation of net present value	
PA	RT TWO	PROJECT AUTHORIZATION	
3	Project authorization procedure		27
		Project authorization Schedule of supply	
4	Project register procedure		38
	Form 9	Project register	

PART THREE PLANNING FOR WORK - IN OUTLINE

5	Bar chart	S	43
	Form 10	14-period bar chart	
	Form 11	28-period bar chart	
	Form 12	1 year bar chart, months	
	Form 13	2 year bar chart, months	
	Form 14	3 year bar chart, months	
	Form 15	4 year bar chart, months	
PAI	RT FOUR	PLANNING FOR WORK - IN DETAIL	
6	Network preparation		
	Form 16	Preliminary network activity list	
7	Planning	and scheduling by computer	52
		Program checklist	
	Form 18	Control data checklist	
	Form 19	Resource parameters	
	Form 20	Network update	
8	Work allocation within departments		58
	Form 21	Activity list	
	Form 22	Holiday chart	
	Form 23	1-week planner	
	Form 24	2-week planner	
	Form 25	5-week planner	
	Form 26	14- or 28-period planner	
	Form 27	Histogram planner	
PAI	RT FIVE	PROGRESSING AND EXPEDITING WORK	
9	Purchase	progressing and expediting	71
	Form 28	Purchase schedule	
	Form 29	Expediting and inspection report	
	Form 30	Shortage list	
	Form 31	Subcontract job order	
10	Solutions to some manufacturing hold-ups		79
	Form 32	Engineering query	
	Form 33	Production permit/concession	
	Form 34	Inspection report	
	Form 35	Immediate action order	

		Cont	tents	vii
PAI	RT SIX I	PROJECT CHANGES		
11	Project va	riations		87
		Project variation Project variation register		
12	Engineeri	ng changes		90
		Engineering change request Engineering change request register		
PAl	RT SEVE	N COST CONTROL		
13	Cost repo	rting and assessment		97
	Form 41 Form 42	1-year cost report 3-year cost report Cost and achievement analysis Project cost report summary		
PA	RT EIGH	PROJECT DOCUMENTATION AND RECORDS		
14	Planning	document distribution		111
	Form 44	Document distribution		
15	Build records			115
	Form 46	Document index Document schedule Master record index		

119

Form 48 Master record index, continuation sheet

Form 49 Project closure (simple)
Form 50 Project closure (comprehensive)

Closedown documentation

16

Illustrations

Figure		
1.1	Engineering design cost estimate for a small project	6
1.2	Manufacturing cost estimate for a small project	7
1.3	Materials estimate	11
1.4	Project pricing example	13
2.1	Set of cash flow rules for a construction project	16
2.2	Cash flow schedule	17
2.3	Table of discount factors	21
2.4	Net present value calculation for a heating system replacement project	22
3.1	Project authorization	29
3.2	Schedule of supply	36
3.3	Alternative application of Form 8	37
4.1	Project register	39
5.1	Principles of the bar chart	45
6.1	Preliminary network activity list	50
7.1	Control data checklist	54
7.2	Preliminary list of resource parameters	56
8.1	Work loading chart (method A)	61
8.2	Work loading chart (method B)	62
8.3	Simple resource histogram	64
8.4	Departmental resources for a project	65
8.5	Company annual sales plan for all projects, coded for major clients	66
9.1	Purchase control schedule set	73
9.2	Subcontract job order	77
13.1	One method for displaying project costs graphically	99

List of illustrations ix

13.2	Principle of cost and progress reporting by milestones	100
13.3	Cost reporting method which includes predicted costs to completion	102
13.4	Significance of timing in reporting the costs of purchasing	103
13.5	Ledger method for evaluating achievement and predicting	
	costs remaining to completion	105
14.1	Detail from a document distribution matrix to show the method of use 112	
14.2	Document distribution matrix example used by a large	
	international company	113
16.1	Simple version of a project closure notice	121
16.2	Comprehensive version of a project closure notice	122