



CHAPTER 2

JOB COSTING

LEARNING OBJECTIVES:

After studying this chapter you should

- Understand the concept of job costing
- Record material, labour and overhead costs in a job costing environment
- Calculate the manufacturing costs in total and per unit
- Calculate profits and losses per job
- Calculate overheads over or under applied

CHAPTER 2

ACCOUNTING ENTRIES FOR A JOB COSTING SYSTEM

INTRODUCTION

A costing system represents a specific method according to which the manufacturing costs of a particular product or group of products are accumulated, processed and reflected.

JOB COSTING

The method of calculating costs per units is used where goods are manufacturing according to clients specifications. Products are manufactured using the same production facilities. A common type of business where a job costing system is used is a repairs and maintenance type of business, where each job is specific to the customers needs, for e.g., repairing a video machine or even a motor car. The time and material required for two different video machines may be very different as the fault with each machine is probably different.

RECORDING OF COSTS

The costs of each job are recorded separately, i.e., the direct material, direct labour and manufacturing overheads. The general ledger will house the control account, while the sub-ledger will house accounts for the different jobs.

ILLUSTRATION

Zap (Pty) Ltd purchased 1500 units of raw material during July 2000.

During this month, Job A and B were started. 400 units were allocated to job A and 300 units to Job B. The cost of the raw material is R1,00 per unit.

General ledger

<u>MATERIAL CONTROL</u>		<u>WIP/PRODUCTION ACCOUNT</u>	
Purchases	1500	Issue to Job A	400
		Issue to Job B	300
		Material J/A	400
		Material J/B	300

Cost or sub-ledger

	<u>JOB A</u>	<u>JOB B</u>
Material	400	300
		Material

A similar method is used for the labour and overhead content.



CALCULATION OF PRODUCT UNIT COST, VALUE OF CLOSING STOCK AND FINISHED GOODS

EXAMPLE 1:

Asmal CC uses a job costing system. The following is available regarding June 19.9, the first month of trading:

1.	Material purchases	R
		42 600
2.	Material was requested as follows:	
	Direct material	
	Job 1	16 950
	Job2	17 360
	Indirect material	4 360
3.	The following is a summary of the pay sheet:	
	Direct material	
	Job 1 (249 hours)	12 450
	Job 2 (273 hours)	13 650
	Indirect labour	2 800

4. Overheads are allocated on the basis of direct labour hours. The budgeted manufacturing overheads amount to R27 000 per month and the estimated normal capacity is 600 labour hours per month.
5. Job 1 (300 units) was completed during the month and 200 units were sold at 30 June for R130,00 per unit.
6. The following additional expenses were debited to the overheads control account:

Electricity and water	R
Depreciation - equipment	3 130
Factory rental	8 200
	8 000

REQUIRED

- a) Calculate the total cost of Job 1 and the cost of work in process (incomplete work) on Job 2 at 30 June 19.9.
- b) Calculate the profit/(loss) on the sale of 200 units of Job 1.

SOLUTION

a)			
		Job 1	Job 2
		R	R
Direct material		16 950	17 360
Direct labour		12 450	13 650
Overheads		<u>11 205</u>	<u>12 285</u>
Cost of Job 1		40 605	
Cost of work in process Job 2			<u>43 295</u>

Explanatory notes:

- 1 Overheads are allocated on the basis of direct labour hours. The budgeted manufacturing overheads amount to R27 000 per month and the estimated normal capacity is 600 labour hours per month. During June 249 labour hours were spent on Job 1.

The overhead allocation is: $\frac{\text{R27 000}}{600 \text{ hours}} = \text{R45 per hour}$

($\frac{\text{R27 000}}{600 \text{ hours}}$) x 249 hours = R11 205) or R45 per hour x 249 labour hours

- 2 During June 273 labour hours were spent on Job 2.

($\frac{\text{R27 000}}{600 \text{ hours}}$) x 273 hours = R12 285) or R45 per hour x 273 labour hours

b) Job 1: R
 Sales (200 units x R130) 26 000
 Less: Cost of units sold 27 070

($\frac{\text{R40 605}}{1} \times \frac{200 \text{ units}}{300 \text{ units}}$)

Net loss on the sale of 200 units

(1 070)



SPOILT UNITS AND THE RECORDING OF SUCH UNITS IN A JOB COSTING SYSTEM

In any manufacturing process it happens from time to time that goods manufactured do not meet the required quality standards. Such products are known as spoilt products. If the spoilt products are so defective that it is impossible to deliver them to the client, management classifies them as **wasted units**. It is sometimes possible to **reprocess** spoilt products so that they comply with the client's specifications and can be sold as approved products.

Wastage/losses falls into two categories, namely: normal (unavoidable) wastage and abnormal (avoidable) wastage.

Note the way in which scrap or waste material is handled. If it can be sold the actual overheads are reduced by the proceeds derived from the sale of the scrap.

The manner in which the additional costs associated with the reprocessing are recorded and disclosed is influenced by the reprocessing costs, which may be either process or job related.

EXAMPLE 2:

1. Elco Manufacturing Company manufactures machinery according to client specifications. On 1 May 19.9 the incomplete work consisted of one job, Job 5. The recorded costs on this incomplete job were R13 000.

The following information is available with regard to May 19.9:

- Material amounting to R7 500 was in stock at the beginning of the month. Additional material to the amount of R38 200 was purchased. A single control account is used for both direct and indirect material.
- Material was issued as follows:

	R
Job 5	15 800
Job 6	13 400
Job 7	9 100
Indirect material consumed	2 100
- Labour related costs:

Job 5	16 000
Job 6	12 000
Job 7	9 000
Indirect labour and supervision	5 500
- Other manufacturing overheads on May 19.9:

Depreciation on machinery and equipment	6 000
Water and electricity	3 000
Sundry overheads	1 900

(Overheads are allocated to jobs on the basis of direct labour costs).

- Jobs 5 and 7 were completed during the month and invoiced out to the clients concerned at R65 600 and R27 200 respectively.

**REQUIRED**

- a) Draft a cost and income statement for May 19.9 showing the situation regarding each job and the stock levels of each at the end of the month.
- b) Assume that a system of applied overheads is used and that there was an amount of R2 000 in underapplied overheads at the end of May 19.9. Draft a journal entry showing how these underapplied overheads would normally be dealt with in the company's books at the end of the period.

SOLUTION

ELCO MANUFACTURING COMPANY

INCOME STATEMENT FOR MAY 19.9

	Job 5 R	Job 6 R	Job 7 R	Total R
Incomplete work: 1 May 19.9	13 000	13 400	9 100	13 000
Direct material consumed	15 800			38 300
Opening stock				7 500
Plus Purchases				38 200
Less: Indirect material				45 700
				2 100
Less: Closing stock				43 600
				5 300
Direct labour	16 000	12 000	9 000	37 000
Allocation of overheads	8 000	6 000	4 500	18 500
Indirect material				2 100
Indirect labour				5 500
Depreciation				6 000
Water and electricity				3 000
Sundry overheads				1 900
Less: Closing stock of incomplete work	52 800	31 400	22 600	106 800
Cost of sales	52 800	-	22 600	75 400
Sales	65 600	-	27 200	92 800
Gross profit	12 800	-	4 600	17 400

Explanatory notes:

- 1 Overheads are allocated on the basis of direct labour hours. Total direct labour costs are:

$$\begin{aligned} \text{R16 000} + \text{R12 000} + \text{R9 000} &= \text{R37 000} \text{ and total overheads are} \\ \text{R 2 100} + \text{R 5 500} + \text{R6 000} + \text{R 3 000} + \text{R1 900} &= \text{R18 500.} \end{aligned}$$

Overheads applied

$$\begin{array}{r} \text{Job 5} \quad \frac{\text{R16 000}}{\text{R37 000}} \times \frac{\text{R18 500}}{1} \\ \hline = \text{R8 000} \end{array}$$

- b) Journal entry

Cost of sales	Debit	2 000	Credit	2 000
Overheads				

**EXAMPLE 3:**

BMX CC uses a job costing system. The normal capacity is 5 000 labour hours per month and the budgeted manufacturing overheads are R175 000 per month. Overheads are allocated on the basis of labour hours.

On 1 July 19.9 an order was received (Job 103) to manufacture 250 bicycles. The costing section carried out the following calculation of the estimated direct cost of completing this job:

Material per bicycle	R131,50
Labour per bicycle	7,5 hours @ R15 per hour.

The following relevant actual information is available for July 19.9:

1. All the material for Job 103 was issued @ R140,00 per bicycle, but only 200 bicycles were manufactured and completed.
2. In the course of the month 5 600 labour hours were worked at R16,00 per hour. A total of 1600 hours were worked on Job 103 in order to complete the 200 bicycles.
3. Manufacturing overheads for the month amounted to R192 000,00.

REQUIRED:

- a) Calculate the estimated total cost for Job 103 at 1 July 19.9.
- b) Calculate the total cost for Job 103 at 31 July 19.9.
- c) Calculate the total over or underapplied manufacturing overheads.

**SOLUTION:****BMX CC**

a) Estimated total cost for Job 103 at 1 July 19.9.

Material:	(250 units x R131,50)	R
		32 875
Labour:	(250 units x 7,5 hours x R15)	
		28 125
Overheads:	(R175 000 / 5 000 hours x 250 units / 7.5 hours)	
	(5 000 hours x 1 x 1)	
		<u>65 625</u>
		<u>126 625</u>

b) Total cost for Job 103 at 31 July 19.9

Material	(250 units x R140)	R
Labour	(1 600 hours x R16)	35 000
Overheads applied	(1 600 hours x R35)	25 600
		<u>56 000</u>
		<u>116 600</u>

c) Total overheads over or underapplied:

$$\begin{aligned}
 &\text{Actual overheads - overheads applied} \\
 &= \text{R}192\,000 - [5\,600 \text{ hours} \times \text{R}35] \\
 &= \text{R}192\,000 - \text{R}196\,000 \\
 &= \text{R } 4\,000 \text{ over applied}
 \end{aligned}$$



RESTATEMENT OF LEARNING OBJECTIVES

You should now

- Understand the concept of job costing
- Be able to record material, labour and overhead costs in a job costing environment
- Be able to calculate the manufacturing costs in total and per unit
- Be able to calculate profits and losses per job
- Be able to calculate overheads over or under applied