

**Aufgabe QR-9.5: Vorratsbewertung (Valuation of Inventory)**

(This task refers to cost formulas as discussed on page 234ff.)

MIGEUM Ltd. is an umbrella production firm. The umbrella consists of a stick and fabric. During last accounting period 20X8 MIGEUM Ltd. produced 1,120 umbrellas. There is no opening value for inventories to be considered. But there is closing stock of raw materials and finished goods. (You have to compute the amounts).

For this task no VAT is to be considered.

In 20X8 MIGEUM Ltd. received 2 deliveries for sticks: (1) 1,000 sticks for 4.80 EUR/p and later (2) 320 sticks for 5.60 EUR/p. Additionally, MIGEUM Ltd. got in 20X8 12 deliveries for fabric. (1) ... (6) 100 fabrics for 1.20 EUR/p each and (7) ... (12) 120 fabrics for 1.10 EUR/p each. All transactions are on cash.

Besides materials, decide whether or not to consider the expenses below for calculation and valuation of inventories of finished goods. At the end of 20X8 there are 200 umbrellas in the inventory of finished goods account.

- (a) Material expenses along FIFO method
- (b) Developing expenses 30,000.00 EUR for 5,000 umbrellas estimated
- (c) Building expenses (rent, energy, ...) for the umbrella production plant 6,000.00 EUR/year
- (d) Variable shipping and marketing cost 10,000.00 EUR/year
- (e) Miscellaneous manufacturing overheads 676.00 EUR/year.

How much is cost of conversion (= cost of manufacturing) for an umbrella (unit costs) if you consider full production amount as one order only and how much is closing stock of raw materials (Show 2 figures, one for sticks the other one for fabrics.). It is recommended to show the inventory and work in progress account for this task.

**Lösung: (Solution)**

See exhibit 11 for the accounts.

The first bookkeeping entries are related to the purchase of materials. For reasons of simplification there are 2 inventory accounts in use, one for sticks a further one for fabrics.

(1) Purchase of sticks ( $1,000 \cdot 4.80 = 4,800.00$  EUR)

<b>DR RM-stick inventory .....</b>	<b>4,800.00 EUR</b>
<b>CR Cash .....</b>	<b>4,800.00 EUR</b>

(2) 2<sup>nd</sup> purchase of sticks ( $320 \cdot 5.60 = 1,792.00 \text{ EUR}$ )

<b>DR RM-stick inventory</b> .....	<b>1,792.00 EUR</b>
<b>CR Cash</b> .....	<b>1,792.00 EUR</b>

(3) ... (8) Purchases of fabrics ( $100 \cdot 1.20 = 120.00 \text{ EUR}$ )

<b>DR RM-fabric inventory</b> .....	<b>120.00 EUR</b>
<b>CR Cash</b> .....	<b>120.00 EUR</b>

(9) ... (14) Purchase of fabrics ( $120 \cdot 1.10 = 132.00 \text{ EUR}$ )

<b>DR RM-fabric inventory</b> .....	<b>132.00 EUR</b>
<b>CR Cash</b> .....	<b>132.00 EUR</b>

(15) For production the FIFO cost formula is to be considered. The total amount of sticks used is 1,120 p. The RM inventories are booked to the work in progress (WIP) account. The amount is  $(1,000 \cdot 4.80 + 120 \cdot 5.60 = 5,472.00 \text{ EUR})$

<b>DR WIP</b> .....	<b>5,472.00 EUR</b>
<b>CR RM-sticks inventory</b> .....	<b>5,472.00 EUR</b>

After balancing off the RM-sticks inventory account the balancing figure is 1,120.00 EUR. That result is the same as:  $200 \cdot 5.60 = 1,120.00 \text{ EUR}$ .

(16) For production 1,120 fabrics are used up. The amount to be transferred to the WIP account is  $600 \cdot 1.20 + 520 \cdot 1.10 = 1,292.00 \text{ EUR}$ .

<b>DR WIP</b> .....	<b>1,292.00 EUR</b>
<b>CR RM-fabric inventory</b> .....	<b>1,292.00 EUR</b>

Similar to the RM-sticks account the balancing figure is  $200 \cdot 1.10 = 220.00 \text{ EUR}$ .

Pls., consider that for valuation of closing stock and computation of unit costs all manufacturing overheads are to be considered. They contain (a) materials, (b) developing expenses, and (c) building expenses for the plant. Marketing and distribution is not related to production.

(17) Developing expenses (b) require adoption of accrual principle. Assuming development expenses occurred in 20X8 there is the bookkeeping entry below required (Consider this bookkeeping entries are not required for solution of this task.):

<b>DR Developing expenses</b> .....	<b>30,000.00 EUR</b>
<b>CR Cash</b> .....	<b>30,000.00 EUR</b>

(18) For 1,120 umbrellas developing expenses amount to  $1,120 \cdot (30,000.00 / 5,000) = 6,720.00$  EUR.

<b>DR WIP</b> .....	<b>6,720.00 EUR</b>
<b>CR Developing expenses</b> .....	<b>6,720.00 EUR</b>

(19) Building expenses are related to production. They are transferred to the WIP account.

<b>DR Building expenses</b> .....	<b>6,000.00 EUR</b>
<b>CR Cash</b> .....	<b>6,000.00 EUR</b>

(20) Transfer

<b>DR WIP</b> .....	<b>6,000.00 EUR</b>
<b>CR Building expenses</b> .....	<b>6,000.00 EUR</b>

(21) Miscellaneous manufacturing cost counts as cost of production. They are transferred to the WIP account.

<b>DR Miscellaneous MOH</b> .....	<b>676.00 EUR</b>
<b>CR Cash</b> .....	<b>676.00 EUR</b>

(22) Transfer

<b>DR WIP</b> .....	<b>676.00 EUR</b>
<b>CR Miscellaneous MOH</b> .....	<b>676.00 EUR</b>

(FG-WIP) After production of umbrellas the goods are transferred to the FG inventory account. There is no closing stock of WIP.

<b>DR FG inventory</b> .....	<b>20,160.00 EUR</b>
<b>CR WIP</b> .....	<b>20,160.00 EUR</b>

(COS-FG) As known there are 200 umbrellas on stock at the end of accounting period there are  $(1,120 - 200) \cdot 20,160 / 1,120 = 16,560.00$  EUR cost of sales. For that reason the last bookkeeping entries are:

<b>DR Cost of sales</b> .....	<b>16,560.00 EUR</b>
<b>CR FG inventory</b> .....	<b>16,560.00 EUR</b>

The balancing figure of the FG inventory account indicates closing stock. It is 3,600.00 EUR.

Unit cost are  $20,160 / 1,120 = 18.00$  EUR/p. So long as you consider total production amount as one job order you do not have any bookkeeping records to apply FIFO. Unit cost is average cost accordingly.

RM-fabric				WIP				Cash			
D			C	D			C	D			C
(3)	120,00	(16)	1.292,00	(15)	5.472,00			(1)	4.800,00		
(4)	120,00			(16)	1.292,00			(2)	1.792,00		
(5)	120,00			(18)	6.720,00			(3)	120,00		
(6)	120,00			(20)	6.000,00			(4)	120,00		
(7)	120,00			(22)	676,00	FG	20.160,00	(5)	120,00		
(8)	120,00				20.160,00		20.160,00	(6)	120,00		
(9)	132,00							(7)	120,00		
(10)	132,00							(8)	120,00		
(11)	132,00							(9)	132,00		
(12)	132,00							(10)	132,00		
(13)	132,00							(11)	132,00		
(14)	132,00	c/d	220,00					(12)	132,00		
	1.512,00		1.512,00					(13)	132,00		
b/d	220,00							(14)	132,00		
								(17)	30.000,00		
								(19)	6.000,00		
								(21)	676,00		
								c/d	44.780,00		
									44.780,00		44.780,00
								b/d		44.780,00	

  

RM-stick				Development				Building exp.			
D			C	D			C	D			C
(1)	4.800,00	(15)	5.472,00	(17)	30.000,00	(18)	6.720,00	(19)	6.000,00	(20)	6.000,00
(2)	1.792,00	c/d	1.120,00			c/d	23.280,00				
	6.592,00		6.592,00		30.000,00		30.000,00				
b/d	1.120,00			b/d	23.280,00						

  

Miscellaneous				FG Inv				COS			
D			C	D			C	D			C
(21)	676,00	(22)	676,00	WIP	20.160,00	COS	16.560,00	FG	16.560,00	P&L-8	16.560,00
						c/d	3.600,00				
					20.160,00		20.160,00				
				b/d	3.600,00						

## Exhibit 1: Accounts

Hint: It is not required for this task to draw up accounts but it helps to understand the solution.