

Chapter - 3: Process Costing - 3

Example - 4:

Statement of Equivalent Production

Particulars	Units	Material		Labour		Overheads	
		%	Units	%	Units	%	Units
Finished Units (Completed)	5,000	100	5,000	100	5,000	100	5,000
Incompleted Units	1,000	70	700	50	500	50	500
TOTAL	6,000	--	5,700	--	5,500	--	5,500

Statement of Cost Per Unit

Particulats	Total Exp.	÷	Equi. Prod.	=	Cost P.U.
(1) Material	28,500	÷	5,700	=	5
(2) Labour	22,000	÷	5,500	=	4
(3) Overheads	16,500	÷	5,500	=	3
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Statement of Evaluation

Particulars			Amount
	Units ×	Cost P.U.	
(1) Finished Goods (Completed Units):			
Material	5,000	5	25,000
Labour	5,000	4	20,000
Overheads	5,000	3	15,000
Value of Finished Goods			60,000
(2) Work-in-progress (Incompleted Units):			
Material	700	5	3,500
Labour	500	4	2,000
Overheads	500	3	1,500
Value of Closing Stock			7,000

Example - 5:

Statement of Equivalent Production

Particulars	Units	Material		Labour		Overheads	
		%	Units	%	Units	%	Units
Finished Units (Completed)	3,000	100	3,000	100	3,000	100	3,000
Incompleted Units	500	100	500	60	300	50	250
TOTAL	3,500	--	3,500	--	3,300	--	3,250

Statement of Cost Per Unit

Particulats	Total Exp.	÷	Equi. Prod.	=	Cost P.U.
(1) Material	24,500	÷	3,500	=	7
(2) Labour	13,200	÷	3,300	=	4
(3) Overheads	9,750	÷	3,250	=	3
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Statement of Evaluation

Particulars	Units × Cost P.U.		Amount
(1) Finished Goods (Completed Units):			
Material	3,000	7	21,000
Labour	3,000	4	12,000
Overheads	3,000	3	9,000
Value of Finished Goods			42,000
(2) Work-in-progress (Incompleted Units):			
Material	500	7	3,500
Labour	300	4	1,200
Overheads	250	3	750
Value of Closing Stock			5,450

Dr.

Process Account

Cr.

Particulars	Units	Amt.	Particulars	Units	Amt.
To Material	3,500	24,500			
To Wages		13,200			
To Overheads		9,750			
			By Finished Goods	3,000	42,000
			By Closing Stock	500	5,450
	3,500	47,450		3,500	47,450

Example - 6:

Statement of Equivalent Production

Particulars	Units	Material		Labour		Overheads	
		%	Units	%	Units	%	Units
Finished Units (Completed)	12,800	100	12,800	100	12,800	100	12,800
Units Scrapped (Normal loss) (10% of Input)	2,000	NIL	--	NIL	--	NIL	--
Abnormal Wastage (2200-2000)	200	100	200	100	200	100	200
Incompleted Units	5,000	80	4,000	50	2,500	40	2,000
TOTAL	20,000	--	17,000	--	15,500	--	15,000

Statement of Cost Per Unit

Particulats	Total Exp.	÷	Equi. Prod.	=	Cost P.U.
(1) Material (Cost of Input + Material - Scrap) (74,800 + 32,000 - 4,800)	102,000	÷	17,000	=	6
(2) Labour	62,000	÷	15,500	=	4
(3) Overheads	30,000	÷	15,000	=	2
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Statement of Evaluation

Particulars			Amount
	Units ×	Cost P.U.	
(1) Finished Goods (Completed Units):			
Material	12,800	6	76,800
Labour	12,800	4	51,200
Overheads	12,800	2	25,600
			153,600
			(Value of Transferred Units)
(2) Normal Wastage (Scrap Value ₹ 2.4) 10% of Input	2,000	2.4	4800
			4800
			(Scrap Value of Normal Loss)
(3) Abnormal Wastage			
Material	200	6	1,200
Labour	200	4	800
Overheads	200	2	400
			2,400
			(Value of Abnormal Loss)
(4) Work-in-progress (Incompleted Units):			
Material	4,000	6	24,000
Labour	2,500	4	10,000
Overheads	2,000	2	4,000
			38,000
			(Value of Closing Stock)

Dr.		Process Account				Cr.	
Particulars	Units	Amt.	Particulars	Units	Amt.		
To Material (Input)	20,000	74,800					
To Material		32,000	By Normal Loss	2,000	4,800		
To Wages		62,000	(Scrap value ₹ 2.4)				
To Overheads		30,000	By Abnormal Loss	200	2,400		
			By Finished Goods	12,800	153,600		
			By Closing Stock	5,000	38,000		
	20,000	198,800		20,000	198,800		

Example - 9:

Statement of Equivalent Production

Particulars	Units	Material		Labour		Overheads	
		%	Units	%	Units	%	Units
Opening Stock	3,000	20	600	40	1,200	40	1,200
Finished Units (Completed) (24,000 - 3,000 opening)	21,000	100	21,000	100	21,000	100	21,000
Units Scrapped (Normal loss)	1,600	NIL	--	NIL	--	NIL	--
Incompleted Units	2,400	90	2,160	80	1,920	80	1,920
TOTAL	28,000	--	23,760	--	24,120	--	24,120

Statement of Cost Per Unit

Particulats	Total Exp.	÷	Equi. Prod.	=	Cost P.U.
(1) Material (Cost of Input + Material - Scrap) (24,160 - 400)	23,760	÷	23,760	=	1
(2) Labour	12,060	÷	24,120	=	0.5
(3) Overheads	18,090	÷	24,120	=	0.75
					2.25

Statement of Evaluation

Particulars	Units × Cost P.U.		Amount
(1) Opening Stock (Work-in-progress)			
Cost price of Opening stock			4,650
Material	600	1	600
Labour	1,200	0.5	600
Overheads	1,200	0.75	900
			6,750

(2) Finished Goods (Completed Units):			
Material	21,000	1	21,000
Labour	21,000	0.5	10,500
Overheads	21,000	0.75	15,750
			47,250
			54,000
(3) Normal Wastage			
	1,600		400
			400
(4) Closing Work-in-progress (Incompleted Units):			
Material	2,160	1	2,160
Labour	1,920	0.5	960
Overheads	1,920	0.75	1,440
			4,560

Dr.		Process II A/c		Cr.	
Particulars	Units	Amt.	Particulars	Units	Amt.
To Opening stock	3,000	4,650			
To Process I A/c	25,000	24,160	By Normal Loss	1,600	400
To Labour		12,060			
To Overheads		18,090	By Process III A/c	24,000	54,000
			By Closing Stock	2,400	4,560
	28,000	58,960		28,000	58,960

Example - 10:

Statement of Equivalent Production

Particulars	Units	Material-1		Material-2		Labour		Overheads	
		%	Units	%	Units	%	Units	%	Units
Opening Stock	800	0	--	30	240	40	320	40	320
Finished Goods (Completed) (4,600 - 800 opg. Stock)	3,800	100	3,800	100	3,800	100	3,800	100	3,800
Normal Wastage (W.N.)	500	NIL	--	NIL	--	NIL	--	NIL	--
Abnormal Gain	-100	100	-100	100	-100	100	-100	100	-100
Closing Stock (Incompleted)	900	100	900	60	540	40	360	40	360
TOTAL	5,900	--	4,600	--	4,480	--	4,380	--	4,380

W.N.: First we find out Normal Production

Opening Stock	800
Add: Additional Units introduced	5,100
	<u>5,900</u>
Less: Closing Stock	900
Normal Production	5,000

Here, Normal wastage is 10% of normal production.

So, Normal wastage is 500 units. (5,000 × 10%)

Scrapped units are 400. So normal wastage is more than it.

So, Abnormal gain is 100 units (500 - 400 units)

Statement of Cost Per Unit

Particulats	Total Exp.	÷	Equi. Prod.	=	Cost P.U.
(1) Material - 1 (Cost of Input - Scrap value) (10,200 - 1,000)	9,200	÷	4,600	=	2
(2) Material - 2	4,480	÷	4,480	=	1
(3) Labour	13,140	÷	4,380	=	3
(4) Overheads	17,520	÷	4,380	=	4
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Statement of Evaluation

Particulars	Units ×	Cost P.U.	Amount
(1) Opening Stock (Work-in-progress)			
Cost price of Opening stock			5,520
Material-1	0	2	0
Material-2	240	1	240
Labour	320	3	960
Overheads	320	4	1280
			8,000
(2) Finished Goods (Completed Units):			
Material-1	3,800	2	7600
Material-2	3,800	1	3,800
Labour	3,800	3	11,400
Overheads	3,800	4	15,200
Value of Finished Goods			38,000
Total Value of Units Transferred (Opening Stock + Finished goods)			46,000
(3) Normal Wastage (Scrap value ₹ 2)			
500	2		1,000
Value of Normal Loss			1000

(4) Abnormal Gain:				
	Material-1	100	2	200
	Material-2	100	1	100
	Labour	100	3	300
	Overheads	100	4	400
		Value of Abnormal Gain		1,000
(4) Closing Work-in-progress (Incompleted Units):				
	Material-1	900	2	1800
	Material-2	540	1	540
	Labour	360	3	1,080
	Overheads	360	4	1,440
		Value of Closing Stock		4,860

Dr.		Process II A/c		Cr.	
Particulars	Units	Amt.	Particulars	Units	Amt.
To Opening stock	800	5,520			
To Process I A/c	5,100	10,200	By Normal Loss	500	1,000
To Material		4,480	(Scrap Value ₹ 2)		
To Labour		13,140			
To Overheads		17,520			
To Abnormal Gain	100	1,000	By Process III A/c	4,600	46,000
			By Closing Stock	900	4,860
	6,000	51,860		6,000	51,860

Dr.		Abnormal Gain A/c		Cr.	
Particulars	Units	Amt.	Particulars	Units	Amt.
			By Process II A/c	100	1,000
To Shortfall in Sale of wastage (Scrap Value ₹ 2)	100	200			
To P & L A/c	--	800			
	100	1,000		100	1,000

Example - 12: FIFO Method:

Statement of Equivalent Production

Particulars	Units	Material-1		Material-2		Labour		Overheads	
		%	Units	%	Units	%	Units	%	Units
Opening Stock	600	--	--	20	120	40	240	40	240
Finished Units (Completed) (8,800 - 600 Opening)	8,200	100	8,200	100	8,200	100	8,200	100	8,200
Units Scrapped (Normal loss)	1,000	NIL	--	NIL	--	NIL	--	NIL	--
Abnormal loss	200	100	200	100	200	70	140	70	140
Closing W-I-P	1,600	100	1,600	70	1,120	60	960	60	960
TOTAL	11,600	--	10,000	--	9,640	--	9,540	--	9,540

W.N.: First we find out Normal Production

Opening Stock	600
Add: Additional Units introduced	11,000
	<u>11,600</u>
Less: Closing Stock	1,600
Normal Production	10,000

Here, Normal wastage is 10% of normal production.

So, Normal wastage is 1,000 units. (10,000 × 10%)

Scrapped units are 1,200. So normal wastage is less than it.

So, Abnormal loss is 200 units (1,200 - 1,000 units normal wastage)

Statement of Cost Per Unit

Particulats	Total Exp.	÷	Equi. Prod.	=	Cost P.U.
(1) Material-1 (Cost of Input - Scrap) (44,000 - 4,000)	40,000	÷	10,000	=	4
(2) Additional Material - 2	19,280	÷	9,640	=	2
(2) Labour	57,240	÷	9,540	=	6
(3) Overheads	76,320	÷	9,540	=	8
	<u>192,840</u>				20

Statement of Evaluation

Particulars	Units × Cost P.U.		Amount
(1) Opening Stock (Work-in-progress)			
Cost price of Opening stock			8,400
Material-1	0	4	0
Material-2	120	2	240
Labour	240	6	1,440
Overheads	240	8	1,920
			12,000
(2) Finished Goods (Completed Units):			
Material-1	8,200	4	32,800
Material-2	8,200	2	16,400

Labour	8,200	6	49,200
Overheads	8,200	8	65,600
		Value of Finished Goods	164,000
		Total Value of Units Transferred (Opening Stock + Finished goods)	176,000
(3) Normal Wastage (Scrap value ₹ 4)			
	1,000	4	4,000
		Value of Normal Loss	4000
(4) Abnormal Loss:			
Material-1	200	4	800
Material-2	200	2	400
Labour	140	6	840
Overheads	140	8	1,120
		Value of Abnormal Loss	3,160
(4) Closing Work-in-progress (Incompleted Units):			
Material-1	1,600	4	6,400
Material-2	1,120	2	2,240
Labour	960	6	5,760
Overheads	960	8	7,680
		Value of Closing Stock	22,080

Dr.		Process III A/c		Cr.	
Particulars	Units	Amt.	Particulars	Units	Amt.
To Opening stock	600	8,400			
To Process II A/c	11,000	44,000	By Normal Loss	1,000	4,000
To Material		19,280	(Scrap Value ₹ 4)		
To Labour		57,240			
To Overheads		76,320	By Abnormal Loss	200	3,160
			By Process IV A/c	8,800	176,000
			By Closing Stock	1,600	22,080
	11,600	205,240		11,600	205,240

Dr.		Abnormal Loss A/c		Cr.	
Particulars	Units	Amt.	Particulars	Units	Amt.
To Process III A/c	200	3,160			
			By Sale on Scrap (Scrap Value ₹ 4)	200	800
			By P & L A/c (Loss)	--	2,360
	200	3,160		200	3,160

Example - 16: Average Cost Method:

Statement of Equivalent Production

Particulars	Units	Material		Labour		Overheads	
		%	Units	%	Units	%	Units
Finished Units (Completed)	45,000	100	45,000	100	45,000	100	45,000
Closing W-I-P	30,000	100	30,000	60	18,000	50	15,000
TOTAL	75,000	--	75,000	--	63,000	--	60,000

Statement of Cost Per Unit

Particulats	Total Exp.	÷	Equi. Prod.	=	Cost P.U.
(1) Material (Opening 120,000 + 405,000)	525,000	÷	75,000	=	7
(2) Labour (Opening 75,000 + 240,000)	315,000	÷	63,000	=	5
(3) Overheads (Opening 45,000 + 135,000)	180,000	÷	60,000	=	3
	1,020,000				15

Statement of Evaluation

Particulars	Units × Cost P.U.		Amount
(1) Finished Goods (Completed Units):			
Material	45,000	7	315,000
Labour	45,000	5	225,000
Overheads	45,000	3	135,000
		Value of Finished Goods	675,000
(2) Work-in-progress (Incompleted Units):			
Material	30,000	7	210,000
Labour	18,000	5	90,000
Overheads	15,000	3	45,000
		Value of Closing Stock	345,000

Dr.

Process Account

Cr.

Particulars	Units	Amt.	Particulars	Units	Amt.
To Opening Stock	15,000	240,000			
To Material	60,000	405,000			
To Wages		240,000			
To Overheads		135,000			
			By Finished Goods	45,000	675,000
			By Closing Stock	30,000	345,000
	75,000	1,020,000		75,000	1,020,000