Component: Assets / Inventory (IAS 2) and Expenses (IAS 2)

Short title: Overhead allocation at abnormal capacity

Issue

With economic growth occurring in many regions, many metals producing companies find themselves operating at abnormally high production levels. This leads to two questions:

1. do fixed overhead costs included in inventory continue to be based on normal capacity and is the fixed cost per unit adjusted for reaching these levels of production above normal production?
2. if not, how should fixed overhead be allocated to production?

Solution

IAS 2.13 states that the allocation of fixed production overheads to the costs of conversion is based on the normal capacity of the production facilities. IAS 2.13 further states that normal capacity is the production expected to be achieved on average over a number of periods or seasons under normal circumstances. The actual level of production may be used if it approximates normal capacity.

In periods of abnormally high production, the amount of fixed overhead allocated to each unit of production is decreased so that inventories are not measured above cost [IAS 2.13].

For an illustrative example please refer to the Appendix 1B "Overhead allocation at abnormal capacity".

Please note that the examples reflect only one method of systematic allocation and do not represent the only method by which overhead costs may be allocated.

Appendix 1B "Overhead allocation at abnormal capacity"

In periods of abnormally high production, actual production exceeds normal capacity, whilst fixed overhead costs are unchanged. No guidance is given in IAS 2 as to what is meant by abnormally high production. However, in such a scenario, the risk exists that inventories are carried at an amount greater than the cost of production if fixed overheads are allocated based on normal capacity. The use of normal capacity may mean that the total amount of fixed overhead allocated to inventories in the period exceeds the total amount of fixed overheads incurred in the period. Therefore, the amount of fixed overhead allocated to each unit of production is reduced so that inventories are not measured above cost [IAS 2.13].

The following example demonstrates how to allocate overhead cost to inventory when operating at below normal capacity and is also used in Appendix 1A, for consistency.

a) Fixed production overheads are 3,000, made up of the following:

Factory manager's wage	1,500
Other fixed production overheads	1,500

Variable production overhead costs are 2.50/unit and total 2,750, made up of the following:

Indirect labour	1,650
Indirect materials, supplies	1,100

b) Direct costs are 11,000

c) Overhead recovery rate = Fixed production overhead / Direct costs

= 3,000/11,000

= 27.3%

The overhead recovery rate indicates the rate at which overhead is recovered in relation to direct production cost. In this example, the overhead recovery rate is 27.3%, implying that for each cost unit of direct production incurred, an additional 0.273 cost units of production overhead are incurred and recovered when operating at above normal capacity.

d) Normal capacity = 1,000 units

Theoretical capacity = 1,200 units

Actual capacity utilized = 1,100 units (110% of normal capacity)

Normal capacity is 83% of theoretical capacity. Although normal capacity is below theoretically available capacity, in practice, normal capacity is the true "full" capacity level – the theoretical level is ignored when allocating fixed production overheads. The typical plant is designed under specific conditions which technologically enable it to produce at a theoretical production level or capacity. In practice, however, the actual plant capabilities envisage a normal production capacity, which effectively represents the full or maximum capacity and is generally below the theoretical capacity level.

e) Fixed production overhead recognised as part of cost of inventory is:

= Direct costs x overhead recovery rate x normal capacity utilization rate

= 11,000 x 27.3% x 100%

= 3,000

Although the actual capacity utilized was 110%, the utilization rate used in the calculation could not exceed 100% as this would result in the total amount of fixed overhead allocated to inventories exceeding the total amount of fixed overheads incurred in the period (i.e., 3,000 x 110% = 3,300). The actual cost incurred was 3,000 and therefore no more than this could be allocated to inventories.

Therefore, the fixed overhead cost per unit is:

= Fixed production overhead recognised as inventory/
actual units produced

= 3,000/1,100

= 2.7

As indicated above, the amount of fixed overhead allocated to each unit of production is decreased so that inventories are not measured above cost [IAS 2.13]. Consequently, the cost per unit is 2.7, which is lower than it is when operating at normal capacity. Variable production overheads are fully allocated to the cost of inventory (i.e., 2,750/1,100 = 2.50/unit).