

**SERIES OF WEBINTS ON
COST ACCOUNTING STANDARDS**

Presentation on

CAS 2

CAPACITY DETERMINATION

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CAS 2 CAPACITY DETERMINATION

Need for Capacity Determination

The capacity details are required to:

- i. Identify capacities of each of deployed facilities and through the process assess bottlenecks;
- ii. Evaluating potential for future expansion, understanding the scope and effort towards de-bottlenecking and balancing of surplus capacities;
- iii. Internal management for planning, scheduling of production and monitoring during implementation of the planned program.

CAS 2 CAPACITY DETERMINATION

Objective

The objective of this standard is to bring uniformity and consistency in the principles and methods of determination of capacity with reasonable accuracy.

Scope

This standard shall be applied to the cost statements, including those requiring attestation, which require determination of capacity for assignment of overheads.

CAS 2 CAPACITY DETERMINATION

Important Definitions

*Abnormal Idle Capacity: Abnormal idle capacity is the **difference between normal capacity and actual capacity utilization** where the actual capacity is lower than the normal capacity.*

*Actual capacity utilization: Actual capacity utilization is the **volume of production achieved or service provided** in a specified period, expressed **as a percentage of installed capacity**.*

Volume may be measured in terms of units produced or services provided or equivalent machine or man hours, as applicable. Actual capacity utilization is usually expressed as a percentage of installed capacity.

*Cost Object: An activity, contract, cost centre, customer, process, product, project, service or any other object for **which costs are ascertained**.*

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Important Definitions

*Installed capacity: Installed capacity is the **maximum capacity of producing goods or providing services**, according to the manufacturer's specifications or determined through an expert study.*

*Normal Capacity: Normal capacity is the **production achieved or achievable on an average over a number of periods or seasons under normal circumstances** taking into account the loss of capacity resulting from planned maintenance.*

*Normal Idle Capacity: Normal idle capacity is the **difference between installed capacity and normal capacity**.*

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Determination of Capacity

Capacity shall be determined in terms of units of production or services or equivalent machine or man hours.

Capacity generally implies the maximum result (e.g. output) that can be achieved by the best possible use of the available facilities and resources. Determination of capacity in terms of units of production or volume of services provided or equivalent machine or man hours depends on the type of industry, manufacturing process, and other similar factors. These are:

- i) Output quantity
- ii) Available machine or man hours:
- iii) Joint products and by-product

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Determination of Capacity

Installed capacity is usually determined based on:

- I. Technical specifications of facility.*
- II. Technical evaluation.*
- III. Capacities of individual or interrelated production or operation Centers.*
- IV. Operational constraints or capacity of critical machines or equipment.*
- V. Number of shifts or machine hours or man hours.*

Generally installed capacity is based on the specifications of machine or equipment given by the suppliers. It is the rated capacity of a plant installed, that is, the maximum possible productive capability of the plant as rated by the manufacturers or erector of the plant. It refers to the output that can be achieved if production is carried out at a maximum speed without interruptions. It is the potential output that could be achieved with installed capacity if it is fully used.

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Determination of Capacity

If the capacities of different operations in the production process are not balanced, the “bottleneck operation” which has the minimum capacity among all the operations, determines the capacity of the complete production process. For Example: There are four operations – A,B,C and D. Capacities of A, B, and C is 15000 units each and capacity of D is 12000 units, then the capacity of the production process will be 12000 units.

In case technical specifications of facility are not available, the estimates by technical experts on capacity under ideal conditions shall be considered for determination of installed capacity.

The installed capacity is the production capacity of the machineries installed in the unit for a period or the year under report. The installed capacity is to be determined with reference to a single working shift or double or triple shift working as per technical specifications.

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Determination of Capacity

Reassessment of Installed Capacity:

*Installed capacity shall be reassessed **in case of any change due to addition, deletion, modification** or for any other reason from the date of such change.*

In case any modifications are made in some machinery or balancing equipment are added subsequently and this results in enhanced installed capacity, the installed capacity shall be reassessed. Similarly, if a machine is discarded or disposed off, the installed capacity shall be reassessed accordingly. Addition or deletion shall be effective from the date of such change.

In case the installed capacity is reassessed as per directions of the Government or Regulator, the installed capacity shall be in accordance with the said directives.

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Determination of Capacity

Normal Capacity

*Normal capacity is determined **after suitable adjustments to the Installed Capacity**. The adjustments may be of the following nature:*

- 1) Time lost due to scheduled preventive or planned maintenance*
- 2) Number of shifts or machine hours or man hours.*
- 3) Holidays, normal shut down days, normal idle time,*
- 4) Normal time lost in batch change over*

The **installed capacity of a spinning mill** is expressed in terms of number of spindles on single shift basis. If it works on three shift basis, its installed capacity is to be calculated accordingly. The output of yarn depends upon the count of yarn produced. The output of yarn is to be converted to a standard count usually of 20s, 40s and expressed in grams per spindle per shift. Similarly for weaving installed capacity is expressed in terms of loom shift. The production per loom shift will depend on the type of loom, type of cloth that is grey cloth or processed cloth.

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Determination of Capacity

Normal Capacity

In case of a **diesel engine**, the capacity of the product will vary as per Horse power/Number of cylinders and so on.

Capacity of a Hospital is to be determined based on the Number of Available Beds in the Hospital for In-Patients (IP) multiplied by 365 days. Capacity Utilisation is to be calculated on the basis of Number of Bed Days occupied. However, in case of different procedures / departments, Capacity is to be determined separately on the basis of available equipment & facilities.

Capacity of an Education Institution is to be determined based on the Number of Seats available in each Section / Class / Course.

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Determination of Capacity

In case of **aeronautic service industry**, where aircrafts of different capacities are landing and taking off depending upon the type of aircraft of different capacities, cargo handled of different bag sizes, and weight, it is to be based on certain technical considerations such as number of passengers or volume of cargo handled per annum and so on.

Capacity of an Airport is to be determined based on the Capacity of Passengers that can be handled by the Airport during peak hours. The Capacity of Airport should be determined based on the capacity to handle peak load passengers by the Terminal covering Seating, Car Parking and other facilities based on the guidelines of International Civil Aviation Federation.

The Capacity of the Port is to be calculated for different materials covering Number of Berths, Barge Jetties, Anchorages and Handling Equipment. Generally, Capacity of a Port should be declared in Tonnage for different Materials.

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Presentation

Cost Statements shall present Installed capacity, normal capacity and actual production of goods or services provided, in absolute terms.

Details of installed capacity, normal capacity and actual production of goods and services provided is to be indicated in absolute quantity. If installed capacity is enhanced or discarded during the period under report, the same is to be indicated. If the unit of measurement is other than actual production, such as per shift and so on, installed capacity, and normal capacity shall be indicated in terms of goods produced or services provided to have a meaningful comparison of actual production of goods or services provided in absolute terms.

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Presentation

Actual Capacity utilization shall be presented as a percentage of installed capacity.

Actual production of goods or services provided is to be considered and expressed as a percentage of installed capacity. Production due to leasing arrangement, off loading or sub-contracting should be adjusted for actual capacity utilisation.

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Disclosure

The cost statements shall disclose the following:

- a) Basis for arriving at different types of capacity.*
- b) Changes in the installed capacity or normal capacity with reason thereof.*
- c) Capacity enhanced through outsourcing.*
- d) Capacity outsourced to others.*
- e) Details of actual production of goods or services provided.
 - 1. Self-Manufactured goods or services provided through in-house facility*
 - 2. Goods Produced or services provided through outsourcing**
- f) Reasons for low capacity utilization.*
- g) Abnormal cost due to under-utilization of capacity.*

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Disclosure

Disclosure is to be made for the basis adopted for arriving at installed capacity and normal capacity. Details shall be furnished for shift working that is single shift or multiple shifts. In case there is change in the installed and normal capacity either due to increase or reduction in capacity during the period under report, the same shall be disclosed indicating the revised capacity. Details of capacity enhanced through leasing arrangements, or outsourced to others, if any, are to be indicated separately. In case there is low capacity utilization either due to lower demand or breakdown and so on, details are to be furnished with reasons.

If due to underutilization of capacity, there is abnormal cost, the same shall be disclosed with reason thereof. Abnormal idle capacity is the difference between normal capacity and actual capacity utilization where the actual capacity is lower than the normal capacity.

Disclosure of information for capacity in the body of cost statement will depend on its nature and materiality. If information for capacity affects cost of production or operation materially and can be identified with a cost object, the same is to be disclosed in the cost statement or by way of a footnote.

CAS 2 CAPACITY DETERMINATION

Disclosure

Disclosures shall be made only where material, significant and quantifiable.

Disclosures shall be made in the body of the Cost Statement or as a foot note or as a separate schedule.

Disclosure of information for capacity in the body of cost statement will depend on its nature and materiality. If information for capacity affects cost of production or operation materially and can be identified with a cost object, the same is to be disclosed in the cost statement or by way of a footnote.

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Relevant Issues

There are certain industries where there is no continuous production line and such companies manufacture custom built products. In such cases, it is not feasible to ascertain the normal capacity loss due the customization of the production activity. Is a note with this regard on loss in normal capacity due to lockdown in Part B1 of the Annexure to Cost audit report Okay?

In case there is no continuous production line in the company and it manufacture custom built products or products with different specifications in terms of size, type, variety etc., then there is a need to determine equivalence among them and the normal capacity should be established in terms of equivalent units.

If it is not possible to determine equivalent units, a note in this regard on loss of Normal Capacity due to Lockdown will be sufficient.

THANKS !!