

LECTURE TWELVE: MEASUREMENT BOOKS

MEASUREMENT BOOKS:

The payments to contractors and others for the work done or other services rendered are made on the basis of measurements recorded in the Measurement Book. These may have to be produced as evidence in a court of law, if and when required

Writing of Measurement Book

- The measurement book is the basis of all accounts of quantities.
- It should be so written that the transactions are readily traceable.
- These books should be maintained very carefully and accurately.
- All the Measurement Books belonging to a Division, should be numbered serially.

- A register should be maintained showing the serial number of each book, Sub-Division to which it is issued, the date of issue, date of its return to the Divisional Office and date of its record after the required review.
- A similar register should be maintained in the Sub-Divisional Office showing the names of person whom the measurement books are issued.
- The Measurement Books are required to be reviewed by Divisional Accountant under the supervision of Executive Engineer.
- The Assistant Engineers are required to submit the Measurement Books in use in the Sub-Divisions to the Divisional Office, from time to time, so that at least once a year the entries recorded in each of the Books are subjected to a percentage check.
- When an Assistant Engineer or Junior Engineer is transferred he should hand over the Measurement Books issued to him to his successor and these should be shown as received back from him and reissued to the relieving Officer.
- Recording of Measurement
- If the measurements are taken in connection with a running contract, a reference to the last set of measurements, if any, should be recorded.

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- The signature of the contractor or his authorised representative should be obtained in the measurement book for each set of measurements.
- The measurements shall be recorded in ink. No entry shall be erased or overwritten. If a mistake is made, it should be corrected by crossing out the incorrect words or figures and inserting the correction, the correction thus made shall be initialled and dated by officer recording/checking measurements.
- The pages of the MBs should be machine numbered. Entries should be recorded continuously and no blank page left or torn out. Any pages or space left blank inadvertently should be cancelled by diagonal lines, the cancellation being attested and dated.
- When any measurements are cancelled or disallowed these must be endorsed by the dated initials of the Officer ordering the cancellation or by a reference to his orders, initialled by the Officer who made the measurements, the reasons for cancellation being also recorded.
- Measurements should be recorded only by Executive Engineer, Assistant Executive Engineer, Assistant Engineer or Junior Engineer in-charge of the work and to whom the Measurement Book has been issued for this purpose.
- Each set of measurements to be recorded should commence with entries stating:-
 - (i) In the case of bills for works done:
 - (a) Full name of work as given in the agreement/Estimate.
 - (b) Situation of work.
 - (c) Name of contractor.
 - (d) Number and date of agreement.
 - (e) Date of written order to commence work.
 - (f) Date of actual completion of work.
 - (g) Date of recording measurements.
 - (h) Reference to previous measurements.
 - (ii) In the case of bills for supply of materials:

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- (a) Name of supplier.
- (b) Number and date of supply order/agreement.
- (c) Purpose of supply
- (d) Date of written order to commence the supply.
- (e) Date of actual supply; and
- (f) Date of recording measurements.

Measurement Book

Particulars	Details of actual measurements				Contents or area
	No.	L	B	D	

STANDARD MEASUREMENT BOOKS:

These are used for preparing the repairs estimates and contractors' bills for such repairs so as to avoid taking detailed measurement on each occasion. The writing and maintaining procedure is same as the Measurement Book.

The measurement of all works and supplies are recorded in the measurement book and payment of all works and supplies are made on the basis of measurement recorded. All measurement book are numbered serially and a register is maintained in the divisional office showing the serial number of each book, the names of the sub-division or office to whom issued, the date of return and remark. A similar register is maintained in the sub-division office showing the names of the officers.

Preparation of Bill

The bill for payment to the contractor is prepared from the abstract in the measurement book. Before the bill is prepared, the entries in the M.B are scrutinized by A.E with respect to the description of items and quantities of work and calculation of quantities

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are checked by the clerk. The rate shall be entered in the bill or in the abstract of the M.B. After the payment is made, the bill is given voucher number and date entered in the account. The every page of M.B pertaining to the measurement is crossed by diagonal lines in red ink.

The checking of measurement should be made promptly, usually within a period or 1.5% months of completion of the work. During the checking of the measurement, the person who have recorded measurements should be present.

MUSTER ROLL:

Muster roll is printed form on which the attendance of the labourers employed is recorded daily. It is form 21. It consist of two parts. Part I is nominal role and part II is the quantities of work executed on muster roll. Part I of muster roll is used to record the attendance of the labourers daily. The names of the labourer are grouped according to classes as masons, carpenters, mazoors, etc. The details of work done is recorded in subheadwise in the part II of muster roll with reference to the measurement book.

RULES FOR THE PREPARATION OF MUSTER ROLL:

1. One or more muster rolls can be kept for each work but no duplicate should be prepared.
2. Muster roll must be prepared for each period of payment.
3. The details such as attendance or absence of laboures should be recorded in ink in part I of the muster roll.
4. Each payment should be initialled and and dated by the concerned officer.
5. One muster roll may be kept for laboures who are employed on several small works situated in vicinity.
6. The unpaid payments should be deposisted in cash and a note of payment should be entered against the original entry.

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FORM 21. MUSTER ROLL

Cash book voucher no.....

Name of the work.....

Dated.....

PART I

Category of Labour	S. No	Name and address	Father's Name	Dates					Rate Rs. P.	Amt Rs.P.	Payee's Acknowledgement	Dated initial of officer making payment	Remarks
				1	2	3	..	Total					
Daily total													
Initial of person making daily attendance													
Initials of inspecting officer													

Passed _____ for _____ Rs.....(Rupees.....)

Signature.....Rank.....

Grand Total of this Muster Roll _____ Rs. P.

Deducted: Payment not made as per details

Transferred to register of arrears _____

Total amount paid in words Rupees..... _____

Dated.....

Signature.....Rank.....

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Part II

Details of measurement of work done by the labour employed as per this nominal Muster Roll in case in which the work is susceptible to measurement.

Description of work(grouped sub-headwise)	Total Quantity measured	Deduct Quantity as shown in the Last Muster Roll	Balance	Rate of Cost	Remarks

Measurement Taken On.....

Date.....

Signature.....

Measurement Book No.....

Page.....

Rank.....

Date.....

STORES:

The stores are procured by inviting tenders for the supply of the stores or materials on the same principle as for works. The contractor shall have to deposit about 2% of the estimated cost as earnest money with tender and 10% as security money inclusive of the earnest money on acceptance of the tender.

The accounts of stores are based on the fundamental principle that the cost of every article is ultimately debited to the final head of the account concerned or the particular work for which is required. In the case of materials, tool and plants, road metal and other such materials, which are required for a specific work, such a booking is possible immediately at the time of the acquisition.

In the interest of works it is desirable to retain in hands of government the supply of certain classes of materials or to build up a reserve of essential items and not easily available in the market. Thus the stores grow up.

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The Stores are divided into the following classes:

- (i) Stock or general stores;
- (ii) Tools and Plant;
- (iii) Road metal; and
- (iv) Material charged direct to works.

These four classes of stores fall into two categories:

1. Stores debited to final heads-this category includes all the classes of stores except stokes.
2. Stores debited to suspense-this category includes stock only.

Stock:

Reserve Limit of Stock:

The financial limit up to which the stock material can be kept in a division is known as the Reserve Limit of stock which is usually Rs.50,000 and fixed by the government. It increase temporarily if required by a separate sanction of the government.

Distribution Statement:

Stock and tools and plants under the charge of an assistant Engineer are sometimes scattered at various places in the section. In such cases the distribution of materials and article is required to be shown separately for each place. This statement is known as distribution statement of stock.

In order to carryout repairs, maintenance, and construction of small works of urgent nature building materials like cement, steel, timber etc. are needed at any time. Procurement of such materials at short notice from open market may not even be possible. Every division therefore, keeps stock articles ready at hand to be used on works as and when required. Materials from the stock are issued to the works of to the contractors, cost requirable as and when required on an indent on the stock. One asst. Engineer and one section officer remain in charge of stock. A store keeper is employed to main store. All the receipts, issues and accounting is done by him. Stock account is maintained in the sub-division and also separately at the division office. The term account is used to mean quantity account ant value account of materials in the stores. Quantity account is maintained by sub divisional office and value account is kept by the divisional office.

Issue rate: The rate fixed for issue of each article from the store.

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Market rate: Indicates per unit rate of an article of similar description which can be procured at a given time at store godowns from the public market.

Storage charge: These charges form part of the issue rate and are added to it on a percentage basis.

Supervision charge: These are intended to cover the items of expenditures incurred on the stores as do not enter in their book value and are not included in storage charges.

Sub heads of stock:

Small stores: bolts and nuts, screws etc.

Building materials: cement, bricks etc.

Timber: teak, sal wood etc.

Metals: angles, channels etc.

Fuel: soft coke, char-coal.

Painter's stores: red oxide paint, lead paint.

House fittings: tower bolts, handles

Miscellaneous stores: empty drums, hume pipe.

Land kiln: The cost or hire of land and other expenditure connecting department kilns for bricks and lime etc.

Manufacturers: the articles which are manufactured in the departmental workshop are booked under this head.

Storage: rent of store godown, maintenance cost of godown.

ROAD METAL:

Road metal is often collected and stacked by the roadside along the length of the roads. It may be stacked under two heads.

1. For renewal of certain km of Road and
2. For patch repair work in different km of the Road.

TOOLS AND PLANTS:

The tools and plants in use in P.W.D. are two kinds.

1. Ordinary tools and plants such as required for the general use of division. These tools and plants are charged on the main head of account 'Tools and plants'.
2. Special tools and plants required not for general use but for specific and particular works-special tools and plants are charged direct to the work concerned.

Sub-heads are:

1. Scientific instruments and drawing materials 'S'.
2. Plant and Machinery 'P'.
3. Tools 'T'.
4. Navigation plant 'N'.
5. Camp Equipage 'C'.

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6. Live stock 'L'.

7. Office furniture 'O'.

Tools and Plant of a Division are further divided into following kinds:

(a) General or ordinary tools and plant i.e. those required for the general use of the Division.

(b) Special tools and plant i.e. those required not for general use, but for a specific work.