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201. **General**

To attain self-sufficiency for Rolling Stock and other components meant for Indian Railways from within the internal resources of the country, Railway Production Units have been set up at different parts of the country which are functioning as independent units under the control of the Railway Board. These are:

a. **Chittaranjan Locomotive Works at Chittaranjan** for manufacture of various types of electric locomotives.

b. **Diesel Locomotive Works at Varanasi** for manufacture of various types of Diesel Locomotives, Diesel engines, standby Generating sets and their spares.

c. **Integral Coach Factory at Perambur** for manufacturing of coaching stocks of various types and their spares.

d. **Rail Wheel Factory at Yelahanka** for manufacture of various types of wheels, axles and wheel sets.

e. **Rail Coach Factory at Kapurthala** for manufacture of coaching stocks of various types and their spares.

f. **Diesel Modernization Works, Patiala** for midterm rehabilitation and modernization of Diesel Locomotives and manufacture of critical spares.

g. **Rail Wheel Plant, Bela Distt Saran (Bihar)** for manufacture of Wheel.

h. **Modern Coach factory, Lalgang, Raebareli (UP)** for manufacture of coaching stocks of various types and their spares.

In addition to the above Indian Railways are in the process of adding new Production Units and Wheel and Wagon Manufacturing facilities at various locations.

202. **Organization**

All the production units will be headed by General Managers/Chief Administrative Officers who will be assisted by Heads of Departments in Mechanical, Electrical, Accounts, Engineering, Stores and Personnel Departments at appropriate level. Since design and quality are very important, there shall also be Chief Design Engineers. Other broad organizational set up of Work-shops as discussed in Chapter I of this Code will also apply *mutatis-mutandis*, to these production units.

203. The contents of all the other Chapters of this code are also applicable *mutatis mutandis* in Production Units. The contents of this chapter will also apply to workshops in open line engaged in manufacture of rolling stock, only for that activity alone. Some guidelines for these workshops have been laid down in para 335.

204. **Costing in Production Units of Indian Railways**

The basic purpose of costing in Railway production units is to arrive at the Cost of Manufacturing of each item of rolling stock so that decisions on acquisition of rolling stock can be made on a rational and scientific basis. This will be facilitated greatly after the introduction of ERP (Enterprise Resource Planning) systems in all the production units and workshops of IR. In order to enable introduction of ERP, Railway Board, Production units as well as Zonal Railways must have digitized database details of all assets right from the time of proposal for acquisition till their condemnation. Details of every expenditure on manufacturing and maintaining each asset of the mechanical department must be available on the
system. Till ERP is fully introduced in all the railways, cost of manufacture of rolling stock will be worked out as described in the following paragraphs.

**205.** The system of costing will differ depending on the nature of work carried out. The systems to be adopted in Railway Production units are Process Costing System for wheel manufacture, Foundry Accounts and similar activities and Batch Costing System for Rolling stock production. Both the systems are explained in the following paragraphs.

**206. Process Costing System**

This system of costing is used for arriving at unit cost of cast iron melt in Railway Foundry workshops. The relevant direct material and direct labour forming Prime Cost of the process and in addition, indirect materials and labour are also charged to arrive at total Cost of the process. The total cost so arrived at is then divided by good castings to finally arrive at the unit rate of cast iron melt. The rate so arrived at forms the basic raw material Cost while computing the unit rate of Brake blocks manufactured. This may be extended to wheel manufacture and other similar activities.

**207.** The main features of Process Costing System are explained below:

- **A.** The quantum of raw material used with rate is fed as input
- **B.** Indirect materials like Ferro Manganese, Ferro Silicon, Fire bricks, Fire clay, Meltax, River sand etc. used are also to be given as input with Quantity and value to arrive at cost of indirect material.
- **C.** Quantum of Coke utilized with rate also to be given for the month.
- **D.** Direct Labour charges engaged in Casting/ Melting process for the month are to be booked to the work order.
- **E.** Finally the indirect Labour expressed as a percentage of Direct Labour also should be booked to the work order meant for Casting.

The Total of (A+B+C+D+E)/ Good Casting will be unit rate of Cast iron melt.

<table>
<thead>
<tr>
<th>Foundry outturn statement for.....month</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>C I Scrap</td>
<td>Good casting</td>
</tr>
<tr>
<td>Pig iron</td>
<td>Rejections</td>
</tr>
<tr>
<td>Runners</td>
<td>Runners</td>
</tr>
<tr>
<td></td>
<td>Wastage</td>
</tr>
<tr>
<td></td>
<td>Sculling</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
</tr>
</tbody>
</table>

**Note:** The format is for guidance only and can be modified by the Pus/ Workshops depending upon actual inputs and outputs.
## Process cost sheet for .... Month

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>OPENING BALANCE</th>
<th>RECEIPTS</th>
<th>ISSUES</th>
<th>Closing Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>QTY</td>
<td>RATE</td>
<td>AMT</td>
<td>QTY</td>
</tr>
</tbody>
</table>

### A. Direct material
- CI Scrap
- Runners

### B. Indirect Material
- Ferro Manganese
- Ferro Silicon
- Fire Bricks
- Fire clay
- Steel Pipe
- Meltex
- River sand

### C. Coke

### D. Direct Labour

### E. On cost

**Total Cost**

<table>
<thead>
<tr>
<th>Rate/kg</th>
<th>(A+B+C+D+E)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total cost/Good</td>
</tr>
</tbody>
</table>

**Note:** The format is for guidance only and can be modified by the PUs/Workshops depending upon actual inputs and outputs.

---

### 208. Batch Costing System

Railway production units engaged in Rolling Stock manufacture activity will adopt Batch Costing System. The total cost incurred per batch is collected and divided by the number of items of rolling stock manufactured to arrive at the unit cost of items produced in that particular batch. On completion of the batch quantity Completion Report should be drawn within 6 months to arrive at the cost of production of the said batch and forwarded to Railway Board.
209. **Features of Batch Costing System**

a Each batch is assigned one work order number  
b All elements of cost pertaining to that batch are collected and charged to that work order.  
c Total expenditure is then divided by number of rolling stock produced in that batch to arrive at unit cost of rolling stock production.  
d This enables unit cost comparison between two batches viz. current batch & previous batch.

210. **Batch size**

Orders on production unit for manufacture of locomotives, coaches etc., will be placed by the Railway Board. The Production unit should obtain necessary drawings and specification from RDSO / design office for the purpose of manufacture and use bill of materials (BOM) to generate the quantities to be procured by Stores Department. Wherever direct correlation between batch requirement of an item and drawl from store is not possible, the assessment of quantity is done by using a suitable forecasting technique. The total number of locomotives, coaches etc., should be split to convenient batches with due regard to the installed capacity and economy in production. The batch content should be decided by the PHOD of PU’s. The production control should release the orders for manufacture of components, assemblies for different batch quantity of Rolling Stock. However, in cases where circumstances so warrant, orders may be released in split up batch quantities also.

211. **Work Orders**

The expenditure incurred by various Shops and Departments are collected under system of Work Orders as in the case of Workshop. Work Orders are of two kinds:-  
(i) Production Work Orders for collection of cost of works / jobs undertaken in Shops; and  
(ii) Non-Production Work orders for collection of indirect expenses which constitute Overheads.

The work order system on Production Units has been discussed in detail in Chapter VIII of this Code and will apply mutatis mutandis to Production units.

212. **Cost Classification**

The expenditure of a Production Unit is classified as under:-

(a) Direct Labor comprising of  
   (i) cost of labor booked directly to Work Order / Batch Order based on the average hourly rate; and  
   (ii) actual incentive bonus paid Work Order / Batch Order wise.  
(b) Direct Stores; and  
(c) Overheads

213. **Materials**

The materials directly required for the production and consumables are stocked in Stores Depot attached to the Workshops. The receipt, custody and issue
of materials are done by the Stores Department based on the Issue Voucher generated by the Production Control. The raw materials are drawn through Material Requisition by Crediting Stores Suspense and Debiting WMS. All finished components held in Stores Depot under Stores Suspense are drawn by the Shops on Workshop Issue Slips for assembly or final fitment on the coach. The consumable stores for repair and maintenance etc. are drawn on Requisition-cum-Issue Note (Form 1523 or as prescribed in Stores Code or on specific material requisition).

The stores department in PUs deals with procurement of purchase, receipt, custody and the issue of materials, M&P, tools and consumables stores. They also deal with inventory management and disposal of scrap materials. It deals not only with items borne under stores suspense, but also functions as custody stock holder of charged off shop manufactured items pending their drawl by shops.

**Receipt of Materials.** The methodology to be followed for receipt of materials from trade is indicated in store code. Materials when received in the receipt ward are checked with relevant purchase order and after inspection and acceptance by the inspecting officer, a receipt note is granted which shows the allocation as final head or stores suspense. The materials are then passed on to the ward keeper or the concerned department. Imported stores are verified with reference to the “advice of dispatch”. These vouchers are posted as receipts in the numerical and priced ledgers and accounted for by debit to “stores suspense” or the final head as the case may be, by contra credit to purchases. If in any month the receipt note is received before the actual receipt of the material the debit is held temporarily under the “Stores-in-transit” account till the materials are received.

In case of imported stores, the value of materials as ascertained from Invoice Distribution statement together with sea-freight, port and custom charges etc. is debited to stores suspense (or final head of a/c) contra credit to purchases imported to the extent of prime cost and different standing work orders for sea freight, port charges, custom duty etc. The credit understanding work orders for sea-freight etc. are cleared on receipt of debits for these charges.

Materials manufactured in shops are accounted for through material tags and priced at price list rates. The value of the material is debited to stores suspense by contra credit to workshop manufacture suspense account. Material no longer required by shops and offices are returned to stores depot on ‘Advice Note of Returned Stores’ and the value thereof is accounted for as debit to ‘stores suspense’ and credit to shops or departments concerned against specified work orders or final heads of accounts.

Transfer of materials from one U.L. No. to another within the same Depot is made through Book transfer forms. Adjustments necessitated by stock verification are made through Departmental or Accounts stock verification sheets surpluses being shown as debit and deficiencies as credit to stores suspense by contra credit or debit to stock adjustment account as the case may be.

Materials are sometimes supplied to outside firms or Railways for fabrication, reconditioning etc. These are done by placing a fabrication contract on such units. The issue of material for fabrication /reconditiong/repair and receipt of fabricated reconditioned /repaired material is done through suspense issue note and suspense receipt note respectively. Details of this process is available in store code. In these cases usual issue notes are prepared and the value debited to ‘miscellaneous Advances’. Where the materials are received back duly fabricated or reconditioned they are received on usual Receipt Notes which are valued at the original cost of materials plus fabrication charges and accounted for a debit to ‘stores suspense’ by contra credit to ‘Miscellaneous Advances’. The extra credit
balance lying under ‘Miscellaneous Advances’ represents fabrication charges and is cleared on payment or adjustment as the case may be.

**Issue of Materials**: Some of the various issue vouchers through which issue of stores is made and counted for are given below (Details are available under Store order:

a. Material Requisition: Raw materials and semi finished goods required for manufacture in the shops are drawn through material Requisition. This form, duly printed by the Electronic Data Processing Section is released by the progress office and after necessary posting in the numerical and priced ledgers, is accounted for by debit to various work orders concerned and credit to stores suspense.

b. Workshop Issue Slips: All finished components held in stores depot under ‘Stock suspense’ are drawn by the shops on workshop Issue slips for assembly of final fitment etc. This form shows, interalia, complete allocation including the reference to the Batch No. etc. for which materials is required. This form duly printed by the EDP Section, is released by the progress office. These are posted in Numerical and Priced Ledgers and accounted for by debit to various work orders and credit to stores suspense.

c. Issue Notes for consumable stores etc: Consumable stores for repairs and maintenance etc. are drawn on Requisition-cum-issue Notes (Form S. 1523 or as prescribed in Stores Code) which after posting in numerical and priced ledgers, are accounted for as debit to various work orders concerned and contra credit to stores suspense.

d. Issue Notes for Sales: Materials sold to outsiders, railways or employees are transacted through Issue Notes, (Form S-1314 or as prescribed in Stores Code) and accounted for by debit to sales and credit to ‘stores suspense’/W.M.S.

**Integrated System of Stores and Cost Accounting**: The details of this available in store code. In brief Store Accounting has been mechanized in the various production units in a manner whereby on the one hand the Stores Accounts Section is able to obtain tabulations and summaries for the purpose of reconciliation and compilation of monthly Stores Accounts pertaining to transactions for purchase Workshop manufactured materials, returned stores, issue of stores, adjustment of debits and credits against departments etc. It enables the costing section to obtain tabulations and summaries work order-wise in separate series of production and non-production of work orders for compilation of workshop manufacture suspense account. The tabulations obtained for various purposes will be reconciled by the Electronic Data Processing Section with various control figures before they are released.

214. For the material issued from store depot, the value of the stores issued should be debited against the relevant batch orders. The summary of the issues made to the relevant batch orders are to be grouped and indicated in the main sub ledger. Stores overhead at the prevailing percentage are also to be added.

215. **Pairing of Issue Notes and Advice Note of Returned Stores**

Copies of Requisition-cum-Issue Notes (S.1523 or as prescribed in Stores Code) are to be received electronically in Costing Section. Each of these Issue Notes is paired with the corresponding copy received electronically after pricing from the Stores Accounts Section to see that:-
(i) the shop serial number (i.e. Requisition Number) of the Issue Notes for each shop are continuous and that the breaks in such continuity, if any, are satisfactorily explained;

(ii) The Issue Notes are received strictly according to the schedule i.e. by evening of the day following the date of issue;

(iii) The issue notes are correctly prepared according to instructions issued for the purpose; and

(iv) The work order number as quoted and the quantity of stores shown as received tally with the quantity shown as Issued in the copy received from Stores Accounts Section.

Similarly, copies of Advice Notes of Returned Stores (S-1539) received from the Shops are paired with corresponding copies received from the Stores Accounts Section to see in addition that there is no delay in affording credit and that there is no difference in quantities. This procedure has been dealt elaborately in Stores Code.

216. Finished Parts Stores Depot

In Production Units Finished Parts Stores Depot is the depot which stocks final manufactured goods under 'stores in stock'. In some cases, store depot also provides warehousing to the finished goods without taking these into books. These are the custody stores for finished parts. In respect of custody stores only 'Bin cards' and Numerical Ledger Cards are maintained by the ward keepers. The Finished Parts stores maintain the stock of only finished, semi-finished and rough components or assemblies. Cost and Detail Nos. / Part Nos. assigned for individual components and assembly serves as pricelist number.

In respect of Finished Parts Store manufactured in Production Shops, the materials, while delivering to the Stores Department, are to be priced at prevailing estimated rate as provided in the workshop voucher based on para 317 below. These final rates of components are to be worked out for pricing and on completion of the Work Order batch. The final rate of component thus worked out updates the cost of finished stores part. Any difference between the old and new rates, if required is done by debiting to WMS.

217. Component Costing

This is to be done only for item borne in the stores suspense. In respect of the furnished part-stores, an estimate is to be prepared before authorization of the work order. Production work orders for manufacture of components are released by quoting the order and batch numbers and cost and detail numbers/Part Number. Stores and labor required for the work order are to be booked and the estimated cost is to be advised to the stores accounts office to enable pricing of the item at the time of handing over to stores depot. The finished materials sent from shop to stores is initially priced at the estimated cost by debiting stores and crediting the respective work order. On completion of the work order, the difference between the estimate and actuals has to be advised and necessary adjustment is to be carried out in the books.

218. Assembly Costing

The manufacture of Rolling Stock should be conveniently split up into a few divisions called groups, each group being composed of several assemblies. Each assembly is composed of several components each of which is indicated by Cost
and Detail members/Part Numbers, which facilitate ascertaining of costs of assemblies and components from same labour and material booking documents with the help of machines. Production work orders for manufacture of components etc. are released by quoting the order and batch numbers and cost and detail numbers/Part Number. All Production documents viz. Material Requisitions, Job Cards, Squad Cards, Workshop issue slips, Material Tags etc. shall bear the order and batch numbers and cost and detail numbers/Part number. The labour and material charges booked through these documents are punched with all necessary particulars including order and batch nos. and C & D Nos. Batch-wise tabulations of labour and material charges and direct man-hours are then taken out in the "Electronic Data Processing Centre". Charges/Credits booked through out turn statements, miscellaneous adjustment memo, Material tags, Advice of Returned Stores are also tabulated batch wise separately. These charges/ credits shall be posted in the Workshop General Register under different elements of cost from month to month and progressive totals cost. These charges so collected under a batch constitute progressive cost of manufacture of the batch. The punched cards are sorted out by batches and groups and also by batches and assemblies and tabulations—group-wise and assembly-wise made out. Since the charges are tabulated by batches, groups and assemblies from same punched cards the totals of labour, material, overheads and man-hours by assemblies should agree with the total of the relevant batch. This reconciliation should be ensured by the "Electronic Data Processing Centre" before releasing the various tabulations to Costing Section.

219. Collection of Cost Under Groups and Assemblies

The charges/credits appearing in the tabulations by groups and assemblies should be posted in the cost sheets for the groups and assemblies under different elements of cost and direct man-hours from month to month, each monthly figure being reconciled with corresponding figure available by batches in the Workshop General Register. On receipt of the completion certificate for a batch, the totals of each group and assembly to end of the last month of booking of charges should be struck under different elements of cost and direct man-hours.

220. Overheads

Besides direct expenditure on labour and materials incurred on a job, there are certain expenditures which cannot be directly charged to jobs but included in the cost of production on certain equitable basic. These indirect expenditures are termed in production units as overheads. The overheads in a production unit are classified on commercial pattern into four categories to ensure proper control and equitable distribution of indirect expenses on cost of production. These are as under:

   a. Factory overhead
   b. Administrative overhead
   c. Township overhead
   d. Stores overhead

Separate standing work orders are issued for collection of overhead expenditure in respect of each of the above classification. For facility of collection, analysis and control of overheads falling under the above categories, separate expense numbers are allotted. The vouchers containing a charge to overhead expenses should bear the appropriate allocation as under:

S.W.O. No. Overhead Expense No. Shop/Department.
Factory Overheads

This should generally comprise of:
   a. All indirect expense of production shops.
   b. All indirect expenses of production-cum-service shops.
   c. Expenses of Apprentices attached to main shops
   d. Expenses of Dy.CME (W)/Work Manager’s office including planning and progress, preplanning, estimating etc. offices.
   e. Expenses of time keeping organization.
   f. Expenses of works canteens including meal sheds.
   g. Depreciation of Building, Plant and Machinery of shops and Departments mentioned above.
   h. Electric charges consumed by departments and shops mentioned above.
   i. Credit for return of materials, interest and profit earned for works done for outsiders etc.

Administrative Overheads

These include:
   a. Expenses of General Managers office and other general administrative offices.
   b. Electric charges, as consumed by various offices included in (a) above.
   c. Credits on account of return of materials, diet charges etc.

Township Overheads

These comprise of:
   a. Expenses of civil engineering depts.
   b. Expenses of water works, sanitation, horticulture etc.
   c. Electricity consumed by the above departments and township.
   d. Depreciation of Buildings, Plant and Equipments etc. of above Departments and Township.
   e. Credit for recovery of house rent, electricity and water charges from staff and outsiders and return of materials etc. by the Departments mentioned above.

Stores Overheads

These comprise of:
   a. Cost of stores department in headquarter or elsewhere.
   b. Depreciation of buildings and equipments of the various stores offices/Deptts.
   c. Inland handling and freight charges not allocated to stores directly.
   d. Clearance from Stock Adjustment Account.
   e. Cost of pattern supplied by the Administration to suppliers as per agreement.
   f. Cost of replacement and rectification of defective and deficient materials supplied by the stores departments and not recoverable from Firms.
   g. Credit for return of materials allocable to stores Depts. And for incidental, freight and departmental charges realised on sales.

Chief Mechanical Engineer of every Production unit will arrange to issue in consultation with associated finance fresh work orders for Overheads required for their units and the same should be reviewed once in 5 years.
### Allocation and Apportionment of Overheads

Administrative and Township Overheads are levied on direct wages of Production Jobs including incentive bonus and overtime payment. The percentages of Factory Overhead are worked out separately shop-wise, while the Administrative and Township Overheads are worked out as a percentage for the entire Workshop. A single percentage rate should be worked out for Stores Overhead for levy on Direct Stores. Chief Mechanical Engineer and Controller of Stores of every Production unit will arrange to work out these percentage rates in consultation with associated finance based on the actual expenses of the previous year and budgeting. The overhead percentages should be revised after revised estimates are submitted. In the case of work done for Government departments other than Indian railways, Railway PSUs, other PSUs, Private parties and export, profit shall be charged over the total estimate cost as a percentage, as per the extant instructions of Railway Board. In order to be competitive in international markets, the General Manager of a zonal Railway/Production Unit/Chief Administrative Officer of Production unit shall with the concurrence of FA & CAO have the power to reduce the quantum of fixed overheads and profit for exports, in accordance with special instructions in vogue.

<table>
<thead>
<tr>
<th>Nature of Work</th>
<th>Direct Labor (1)</th>
<th>Direct Material (2)</th>
<th>FOH (3)</th>
<th>AOH (4)</th>
<th>TOH (5)</th>
<th>SOH (6)</th>
<th>EXCISEDUTY(7) @ applicable rate on Cl.1 to 6</th>
<th>PROFIT (8)</th>
<th>Proforma Charges &amp; Special packing (9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital / RSP/DRF</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
<td>NIL</td>
<td>NIL</td>
</tr>
<tr>
<td>For other Indian Railways</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
<td>NIL</td>
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<tr>
<td>Railway Public Sector Under takings &amp; Govt. Department s</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Percentages of (1+2+3+4+5+6)</td>
<td>Actuals</td>
<td></td>
</tr>
<tr>
<td>Private parties &amp; other Public sector Under takings</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes*</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Percentages of (1+2+3+4+5+6)</td>
<td>Actuals</td>
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<tr>
<td>Exports</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes*</td>
<td>Yes*</td>
<td>Yes</td>
<td>Yes*</td>
<td>Yes*</td>
<td>Percentages of (1+2+3+4+5+6)*</td>
<td>Actuals</td>
</tr>
</tbody>
</table>

* For exports, fixed components of these overheads and profit can be reduced by GM with the concurrence of FA & CAO.
Proforma Charges.—Proforma charges mentioned in above table comprise of:

(i) Dividend.—Dividend charges payable to General revenue for a year at the applicable rate should be calculated on Capital-at-charge to end of the previous year plus half of the (anticipated) capital outlay for the year and should be distributed over the number of locomotives coaches etc. to be produced during the year and shown proforma on the cost report.

(ii) Special Contribution to Provident Fund or Gratuity.—The liability for these charges should be calculated at 1/24 of the total salary and wages for the year less the estimated amount of payment on this account during the year and distributed over the total number of locomotives, coaches etc. to be produced during the year and shown proforma on the cost of report.

(iii) Share of Cost of Railway Board and Audit (Railways).—The share of cost on this account as advised by the Railway Board every year is also distributed over the total number of locomotives, coaches—etc to be produced during the year and shown performa on the cost report.

**Working out Percentages for Overheads:** The overhead percentages for a financial year are worked out on the basis of indirect expenditure provided through the original Budget estimates of labour, material and other expenses are first analysed by the various Departments. While expenses provided for the departments other than shops are wholly indirect, the provision made for shops comprise both direct and indirect, charges. The breakup of the indirect expenses under various shops is furnished by the Production office on the basis of past actuals, latest trends and anticipated changes. Item-wise provisions of indirect expenses are then tabulated in a statement wherein expenses of the departments falling under different overheads are grouped. The percentage of expenses of service shops and departments etc. to the beneficiary departments will then be worked out on the total indirect expenses of shops and departments available in the statement mentioned above. The aggregates of indirect expenses after including results of apportionment as mentioned above will represent the Factory overheads for different production shops, Administrative and Township overheads for the workshop as a whole. These are related to the corresponding estimated 'direct labour' or 'direct stores', as the case may be and percentage, rates worked out on the following formulas:-

\[
\text{Factory overhead \%} = \frac{\text{Total FOH for the shop}}{\text{Total direct labour of the shop}} \times 100
\]

\[
\text{Administrative overhead} = \frac{\text{Total AOH}}{\text{Total direct labour of the entire factory/Workshop}} \times 100
\]

\[
\text{Township Overhead \%} = \frac{\text{Total TOH}}{\text{Total direct labour on the entire factory/workshop}} \times 100
\]

\[
\text{Stores Overhead \%} = \frac{\text{Total SOH}}{\text{Total direct stores}} \times 100
\]
222. Quarterly Review

A review of efficiency of overhead percentages should be made quarterly by Production Engineer/Dy.CME (Production) jointly with workshop Accounts Officer with reference to total actual expenditure incurred vis-à-vis that recovered at the overhead percentages. The outcome of this review in the form of management summary should be brought to the knowledge of Chief Workshop Engineer for the management review and over head cost control exercise. A comparison of these actual overheads with recoveries made through estimated percentages will reflect over/under charges for the month under different overheads. If these are found unduly large, the percentages are revised without waiting for the August Review, Revised Estimates or Final modification.

223. The Under / Over charges at the end of the year should be less than 5% so as to make Overhead budget realistic and the same must be cleared before the end of the Financial Year.

224. Job Costing

Details of job costing have been discussed in Paras 706 to 714 of this code.

225. Workshop General Register

The detailed compilation of Workshop General Register has been discussed in Chapter-8. All the data should be captured batch-wise, shop-wise, month-wise and tabulated in the labour sub ledger based on which the labour schedule should be generated. The Workshop General Register should be posted with the details in the labor sub ledger and details of stores drawn against different batch order in the main sub ledger. The workshop general register should reflect the monthly booking of stores and labor including the overheads batch-order wise, shop wise and month wise up to the month of accountal. The credits shall be posted in the WGR under different elements of cost from month to month and progressive total cost. The credit to the WGR are transferred from the out turn statement based on the transfer railway transactions/the amount deposited by the outside bodies against deposit works.

226. Completion Certificate

After delivery of the locomotives, coaches and Wagons to the allottee railways and after all vouchers have been properly transacted in respect of different batch orders completion certificate should be issued by the progress office. The completion report has to be sent to Accounts Department for further preparation of cost reports. The completion report should also contain the details of the dispatch particulars of all the rolling stock authorized against batch orders. This should be issued within a month from the date of dispatch or the last coach/locomotive/wagon so that the target laid down in Para 308 for drawal of Completion Report is achieved. A Completion Certificate should also be issued by the Stores Department stating that all vouchers pertaining to the batch have been passed on to the Accounts Office.

227. Drawal Books

A record is maintained by the Shop Progress persons for all items that go into a rolling stock. This book shows the vouchers no. or dates on which materials are drawn to enable the Progress persons to keep a watch that all items are
transacted for the correct quantities required for a batch. The Section Officer (A/cs) of the Costing Section should test check the entries in these books to ensure that they are properly maintained to serve the purpose for which these are intended.

228. On receipt of completion certificate from the progress office, the costing section should obtain a certificate from stores accounts section and time keeping to the effect that all the Material and Labour of the batch have already been included in the accounts Thereafter cost of the batch is compiled by summarizing the costs of groups and assemblies under different elements of costs as booked in the workshop General Register to end of the month in which Completion Certificate is received.

229. Batch Cost Report

The cost report should be drawn by the costing section of FA & CAO based on the actual booking made in the WGR batch wise. The comparison of the man hours booked with the previous batch order of the similar product and comparison of the materials booked in the current batch order with previous batch order. In case of new type of rolling stock the comparison may be made with the estimated cost. The quantum of stores variation item wise should be indicated in the Material Analysis Statement. CME’s office should analyse the reasons for variations in respect of the booking of Labor and Stores and furnish the remarks based on which the batch cost report will be compiled. The format of the Batch Cost Report is as below.

M.229

<table>
<thead>
<tr>
<th>S.No.</th>
<th>DETAILS</th>
<th>BATCH NUMBER- BATCH SIZE</th>
<th>PER UNIT (COST/BATCH SIZE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Direct Labour+Incentive Bonus+ OT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R.S.P. Ref.No. & Quantity
Month of Commencement :
No.of Units included in this Batch :
Month of Outturn of last unit in this batch:
Date of last unit delivered :
No.of Units produced so far inclusive of this batch :
Date of Completion Certificate:
Completion Report Due before
Number of rejections in inspection in this batch
Extra cost incurred due to rejections

(In Units of Rs.)
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Allowance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. <strong>Direct Stores</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>OVERHEADS:</strong></td>
<td></td>
</tr>
<tr>
<td>3. <strong>Factory Overheads</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. <strong>Administrative Overhead</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. <strong>Stores overhead</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. <strong>Township Overhead</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Overheads</strong></td>
<td>$(3+4+5+6)$</td>
</tr>
<tr>
<td>7. <strong>Total Manufacturing Cost</strong></td>
<td>$(1+2+3+4+5+6)$</td>
<td></td>
</tr>
<tr>
<td>8. <strong>Excise duty on the above on (7)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. <strong>Cost of items supplied by Board</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. <strong>Total Cost</strong></td>
<td>$(7+8+9)$</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Proforma Charges</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Dividend</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Share of Cost of Rly. Board, Audit etc.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Govt. contribution under new pension scheme</strong></td>
<td></td>
</tr>
<tr>
<td>11. <strong>Total Proforma Charges</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. <strong>Total Cost including Proforma Charges</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Approximate amount of depreciation included in the Overhead</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Man hours Spent</strong></td>
<td></td>
</tr>
<tr>
<td>Amount adjustable to Railway Board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount adjusted to Rly.Board for the Estimate Cost for this batch ---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual Cost of this batch-- -- -- ----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference being Debit/Credit adjustable to Rly Board (for being transferred to Allottee Rlys). ------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**230. Transfer of Final Cost to Railway Board**

Proforma charges comprising of dividend and share of cost of Railway Board & Audit (Railways) and special contribution to PF or Gratuity should also be indicated while finalizing the cost report. The details regarding the credit transferred to the batch order based on the transfer price should also be indicated in the cost report. The difference between the actuals and transfer price as per finalized cost should be indicated in the cost report and the same should be transferred to Railway Board as further charges against RSP in which the rolling stock has to be taken up for manufacture.

**231. Cost Report to GM**

The costing section under FA & CAO should prepare an analysis of direct man hours, direct stores utilized viz-a-viz the previous actuals. This note and the draft batch cost report should then be put up to G.M for approval. The draft cost reports before being put up to G.M for approval should be sent to Principal Heads of all the concerned departments. The very purpose of this report is to examine the cause for vide variation between the current batch and the previous batch of production and this will aid management to identify the area where control of expenditure is possible.

**232 Managerial Statements**

The following is an illustrative list of Managerial statements that should be prepared on the computer system for every Production unit.

**Day end reports**

- a. Percentage of absenteeism
- b. Total Gate Attendance Hours Vis-a-vis Job Card Hours
- c. Number of Rolling Stock manufactured
- d. Idle time booked with reasons, shop wise
- e. Reconciliation of Time Taken with Gate Attendance and reasons for variations.
- f. Urgent requirement of materials (Both stock & non stock)

**Weekly reports**

- a. Outturn of Rolling stock Type wise
- b. Labor hours spent on each type of Rolling Stock turned out during that week
- c. % of outturn achieved compared with the Target
- d. Over Time booked if any to meet the target
e. Reason for slow or staggered working (if any) on account of want of material or otherwise.
f. Position of Material availability to ensure smooth functioning in the ensuing week.

Monthly reports
a. Outturn of Rolling stock type-wise compared with the Target
b. Unit Cost of Manufacture of Rolling stock type-wise compared with previous month’s actual.
c. Analysis of Direct and Indirect man hours.
d. Incentive bonus data

Quarterly Report
a. Overhead expenditure.

Based on the above list, GM of every Production unit should decide in consultation with FA & CAO, and other executive Heads of Departments, the formats of statements needed for Managerial control according to their local needs. These should be discussed in the meeting of GM with Principal HODs. There should be a constant endeavor to reduce costs without compromising the quality.

233. Development Suspense

The difference between the sale price and the actual cost of production/works undertaken in respect of outside parties including exports, representing profit/loss on the transaction should be credited/debited to Development suspense account by the production units. The balance under Development suspense shall be non-lapsable and can be carried forward after an Annual Review made by G.M and FA&CAO. Out of the profit accruing from sales to non-railway customers and exports charged to the Development Suspense, General Managers are authorized with the personal concurrence of FA&CAO to facilitate undertaking works for non railway customers (NRC).

234. Transfer Price

The transfer price for each product manufactured by Production units should be fixed duly taking into account the actual cost of the product of the previous year as per the cost report duly providing for escalation in respect of direct labor, stores etc. The transfer price should be the base for transfer of debit through Railway Board to other Railways for the rolling stock supplied. The transfer prices are the provisionally predetermined prices which are advised by the production units to Railway Board for approval in various budgetary reviews. However, the same should confirm to Government accounting Standards. In respect of manufacture of a new type of rolling stock, the transfer price should be fixed based on the estimate duly taking into account the current labor rate, current direct stores and prevailing overhead percentages. The credit for the rolling stock dispatched should be realized based on the transfer price. The difference between the estimated transfer price and the actual cost would be known on finalization of the cost report. This difference debit/credit is to be adjusted against specific RSP and the same should be transferred to Consignee Railways through Railway Board. Necessary provision of funds for making the above adjustments are also to be made in the RSP budget by the production units. The Transfer price should be revised only once a year at the time of Revised Estimate (RE).
235. Guidelines for Rolling stock manufacture by repair workshop

Some of the repair workshops are engaged in manufacture of Rolling stock for other Railways (supply to Railway Board) and also Railway and other PSUs. The following guidelines are laid down.

a. In general all provisions contained in this chapter from Para 306 to 334 except 333 are applicable to production shops of Repair workshops engaged in the activity of rolling stock production.

b. However, the levy of Shop and general on cost for the production shops may be charged as a percentage of Direct labour as per the present practice in repair workshops.

c. The amount of depreciation and repairs and maintenance to Plant & Machinery, buildings of shops involved in production activities should be charged to Factory overheads while arriving at the predetermined rate for Labour on Cost and Stores on Cost respectively of production shops.

d. While booking the expenditure of feeder shops for the production activity, all basic elements of cost (material, labour and on costs) along with applicable percentage of proforma oncost on the total labour cost of feeder shops must be levied.