Public Works (1899) Department.

G.O., No. 2219 W

DATED 18 August 1899

[Despatch Abstract.]

Inspection Report - Certain remarks and orders on the — on the a/cs of the P.W. Workshops Dvn., submitted by the Exr. P.W. Accounts, recorded -

BACK PAPERS.

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GENERAL.
ACCOUNT.

# Government {1899} of Madras.

## PUBLIC WORKS.

*Reed.* } 1899. *Enclosures*

*Regd.* *Spare copies*

**G.O., No. 2219 W., 18th August 1899.**

**AUGUST.**

**Inspection Report**

Certain remarks and orders on the — on the accounts of the Public Works Workshops division, submitted by the Examiner, Public Works Accounts, recorded.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

**General.**
**Account.**

Read—the following papers:—

Report of an Inspection of the Accounts of the General Superintendent, Public Works Workshops Division, by Mr. E. A. Lee, Examiner of Accounts, on December 1st, 2nd, 3rd and 5th, 1898.

Mr. H. A. Moss, Executive Engineer, 3rd grade, has been in charge of the division since 13th November 1895, except for 18 days in April 1896. Mr. E. L. Taylor, 5th grade, has been the Accountant in charge since 8th April 1896, except for the period 23rd July 1897 to 1st June 1898 when Mr. Wilkins was the Accountant and Mr. Taylor was first on famine duty in Kurnool and afterwards attached to the Examiner's office.

2. This report, in the same way as that on the Stores division, made by myself, attempts to describe the present procedure under which the workshop accounts are made out, with suggestions thereon.

3. *Requisitions—Estimates.*—Requisitions are received in every case on ordinary official letters, and apparently no estimates of probable cost are asked for, nor does the requisition state whether funds have been set aside or made available. The General Superintendent has absolute power, up to any limit, to carry out work for any department of the Public Works Department, the Civil Department and the Military Works. For private work no discretion at all is left to the Superintendent; the sanction of Government is necessary in every case previous to work being put in hand. This is contrary to State Railway practice. Full deposit to cover estimated cost of private work is said to be called for in every case, except where the sanction of Government is received to recover the amount on completion, *e.g.*, stamp dies at present in hand for the Mysore State.

4. *Work Orders.*—These are made out for each requisition in consecutive numbers (going up to 10,000 and then re-commencing). They are in counterfoil and practically consist of duplicate copies of the wording of the requisition, with the mere addition of the initials on each foil of the General Superintendent. The form in use provides for—

| | | |
|---|---|---|
| Estimate Rs.<br>Deposit Rs. | Commenced.<br>Date should be completed. | Remarks. |

But these headings appear in no case to be made use of. When, however, the work is ready for issue the dates of completion, despatch and bill are entered on the form. The foil is then sent with the work, and on return as a receipt reposted to the counterfoil. The work order form should certainly be made complete by posting the remarks as printed on it.

5. *Workshop book.*—On receipt of the "work order" in the shops, the name of the work is entered on a folio or folios of the workshop book; this is a purely local form and is understood to have been only recently introduced. The book provides on one page for an estimate of the work to be done, and on the other side for payments when made. As regards this form it was to be observed—

(1) That the estimates were not signed, nor initialled by the General Superintendent though the calculation of the amount of the units comprising the estimate was traced into a manuscript document made out by the General Foreman in pencil in the particular case looked into.



(2) The entries on the payment side are confined apparently to payments for labour only (*i.e.*, by contract or daily labour), although the form has columns for every kind of outlay.

How this book can be of any substantial use was certainly not evident, as it does not, as posted, even enable the Foreman to see or bring to the early notice of the General Superintendent works of which the estimate is likely to be exceeded, while on the other hand the estimate is not framed in sufficient detail to make possible any proper check by the Superintendent. But, on the other hand, it must be noted that there is only one man (the Foreman's writer) to post this register, and it would be impossible for him to find time to book all outlay.

6. *Work book.*—This is another register maintained for each work in the General Superintendent's office; it is said to record daily all items of expenditure, but the estimated cost of the work is not shown, nor are any details given except under the classes of description of work done. Monthly totals of cost are worked out, and a progressive total of cost to date; if the form were to show sub-heads of estimate and the expenditure were thus classified and totalled, the register would certainly be of much more real use for accounts purposes.

The entries in this register are made from the following documents:—

(*a*) For materials from the indents made on the Stores division (unpriced).

(*b*) For labour (including machine charges, forges, &c., from machine sheets, forge sheets, &c.,) from "Day Labour Time Sheets," which allocate cost to some particular requisitions, or to "General charges," or to plant: and from cash book vouchers (of which the amounts have been checked with the estimate), for contract labour. In the case of machine and forge charges, the unit of time is half-hour for a day of 8 hours. Outlay charged to general charges is divided at the close of each month in proportion to the amount of cost of labour on each job. This work book is evidently the most important record maintained, and it is to be regretted that entries are not made more systematically in consecutive order of actual outlay.

7. *Contract measurement book.*—This is still another form of register, in which the estimated cost and amount paid for each unit of work is recorded under the initials of the General Superintendent. Bills for work done are checked with this book, but as the estimates are merely in the same detail as in the "workshop book" the necessity for the book was not apparent.

8. *Bills for work done.*—These are made out from the work book, and on their completion abstracts are prepared by departments. These abstracts form the schedules for the monthly accounts. Each bill made out against the Public Works Department is accompanied by a transfer advice debit; but for other departments a debit is raised merely on the strength of the bill itself. Bills for private parties are cleared by debits to deposits or miscellaneous advances; the latter being made use of for such work as is permitted by Government to be put in hand previous to any deposit of the estimated cost having been received. The clearance, however, of cost of work done will be noticed later on.

9. *Unadjusted items of work.*—The balance of these at end of October 1898 amounted to no less than Rs. 93,957, of which Rs. 75,332 was for the Public Works Department only. Of this latter sum the principle amounts were:—

| | | Amount. | Requisition. |
|---|---|---|---|
| | | Rs. | No. |
| | | 39,859 | 31 |
| (*a*) | | 5,919 | 1609 |
| (*b*) | | 2,247 | ... |
| (*c*) | | £49 | ... |
| (*d*) | | | |

(*a*) Represented outlay on 28 moveable shutters for the Grand Anicut. It was said that adjustment was being deferred for want of appropriation to meet the outlay, and of sanction to a revised estimate under preparation.

(*b*) *Shutters for Lower Anicut.*—Bill said to be about to issue and not made out previously by oversight.

(*c*) Represents outlay incurred on making 4,000 cast iron rammers for the Public Works Stores for which a bill is issuing in November.

(*d*) Is for iron work for the Penitentiary, Madras, but the amount is under Rs. 1,000 and the work not finished.

There were, in addition, very numerous small items all duly recorded in "The statement of work done," but as these details are not now submitted to audit, the check on prompt adjustment is no longer possible. Many items were said to be purposely kept open on account of the jobs not being completed and to prevent more than one adjustment being necessary. This system Government has approved of, but Volume II, Chapter I, paragraph 171, rules that details of the unadjusted balance should be submitted monthly with the accounts.

10. *Unadjusted items for Public Department.*—These include all work for the Civil and Military Departments, excluding Public Works Department and Military Works; the principal items outstanding were —

(*a*) Rupees 3,621 being expenditure on a steam disinfecting apparatus for plague purposes. The estimate for this work has been exceeded and the store debits are under re-check.

(*b*) Rupees 6,375 is the expenditure to date on staff and material for working by steam the punkas of the General Hospital during the official year.

The latter of these items should certainly be adjusted monthly as the amounts are heavy and, even as a temporary measure, are not a fair charge against the Public Works Department budget.

11. *Unadjusted items for private parties.*—There are very few items under construction for private parties, and the unadjusted amounts are :—

| | | RS. | A. | P. | |
|---|---|---|---|---|---|
| (*a*) | ... ... | 18 | 11 | 4 | Work for Mysore Government. |
| (*b*) | ... ... | 1,952 | 15 | 7 | |
| (*c*) | ... ... | 24 | 6 | 6 | Estimated amount in deposit but cost in excess. |
| (*d*) | ... ... | 79 | 1 | 7 | Fully coverd by deposit. |

The great bulk of the items in the two first classes of unadjusted items were for very trifling amounts, many indeed for only a few annas or even less, *e.g.*, an item of 7 pies for "material other than timber" supplied for repairing one brass lock for Superintendent of Stationery, Madras. The final cost of this work was 12 annas and 7 pies, but the cost of accounting for it must have been very excessive, and I would suggest that for all trifling jobs of this sort estimated to cost one rupee or under a nominal price of Re. 1 should be charged and credited to general charges, and the latter account debited with the actual outlay. This would save a considerable number of entries throughout the workshop and store books and would, moreover, be more in keeping with the basis on which private firms get out their accounts; it would also probably tend to relieve "general charges" somewhat.

12. *General charges.*—These are recorded daily in a register in a manuscript form, separate pages being opened for the following :—

| | | |
|---|---|---|
| Fitting shop. | Steam Hammer. | Carpenter's shop. |
| Forge. | Machine shop. | Instrument shop. |

While outlay is shown separately on material and labour. An abstract of these shop general charges is made in another manuscript register. The sum total of these charges excluding the foundry charges, which are charged to works direct, for October amounted to—

| | RS. | A. | P. |
|---|---|---|---|
| Labour ... ... ... ... ... ... ... ... | 716 | 2 | 1 |
| Materials ... ... ... ... ... ... ... ... | 357 | 12 | 2 |
| Total ... | 1,074 | 14 | 3 |

exclusive of all regular charges on establishment whether permanent or temporary. From this total the sum of the total general charges booked against Machine and Forge shops (Rs. 442–14–1) is deducted and the balance Rs. 632–0–2 is divided up in



proportion on labour cost of all works carried out in shops during the month; this for the month of October amounted to one-fifth or 20 per cent.—a very high rate—but due to work in the shops being somewhat slack during that month. In some months the charges amount to one-eighth only, and it is obvious that if estimates are made out on the one-eighth basis and work done on the actuals of a one-fifth rate, they must inevitably be exceeded. The General Superintendent would prefer that a fixed percentage should be charged, and any gain or loss on this credited or debited to Provincial revenue, the fixed percentage being on the basis of the average of the actuals of the preceding year. I certainly agree with this idea of Mr. Moss, and possibly Government may be willing to agree to it. Meanwhile, it will still be necessary, for purposes of the information of the General Superintendent, that the registers of these charges (slightly modified in the abstract by showing the excluded shop charges separately at the end) should be still maintained as hitherto. As to the general charges on forge and machine, these are divided up separately according to the units recorded against such works only as have been using these shops, and the same principle applies to foundry general charges.

13. *Indirect charges.*—These are fixed by order of Government as 25 per cent. for the Public and other departments, except for the Military Works and State Railways, to which 10 per cent. only is charged. The method of accounting these percentages seems unnecessary accounts work, and credit to Provincial Revenue and other heads of account might, I think, be better only afforded when the amounts are recovered on actual bills, no entry being made for percentage on work done but not billed for. It is not perhaps, on the whole, satisfactory that the actual commercial cost of work (*i.e.*, including establishment, tools and plant, depreciation, &c.) should not be charged to every department, including even the Public Works Department, while again the mass of the heavier work in the shops is for Imperial Capital work, while the establishment is paid for out of Provincial Revenue. I see this point is also touched upon by the Inspecting officer in his report of 15th February 1895, but that the then Examiner was not prepared to press the points raised in face of G.O., No. 3067 W. of 16th November 1891. I do not, however, quite see that the resolution really touches on the point raised by me above. Government workshops can only exist for two main objects —(*a*) public convenience; (*b*) gain, or at any rate no substantial loss to Government. The former is in no way a question of finance or account, but as regards the latter it is clear that, unless the accounts of the shops are worked on a commercial basis, no real information can be available as to what the real gain or loss can be to Provincial Revenues. I can quite understand that in cases where large works are being undertaken at the cost of funds provided from Imperial Revenues, but for the indirect benefit of the Provincial Revenues, the Local Government may prefer to treat such outlay as if it were practically its own; but, on the other hand, so far as *capital* Imperial works are concerned, the principle in force on State Railways might well be made applicable, that is, that in addition to the actual cost of any Imperial capital work costing over Rs. 1,000, the percentages for rent (5 per cent.) and repairs of machinery (2 per cent.) or 7 per cent. should invariably be added. Since writing the above I find that full percentage charges are charged against all Irrigation works, but in the accounts of the division for which work has been done, but it would be still more advisable to afford the credit to Provincial Revenue in the accounts of the division in which the work is actually done.

14. *Saw Mill Account.*—This in these shops does not exist, although there is an efficient saw mill and engine to work it. A contractor is employed, whose rate for each class of scantling required is said to be fixed at something less than the market rate, this being in return for the use of the mill and engine supplied free to him, while he employs, and pays for, all labour and materials including fuel. This system is of course a delightfully simple one from an accounts point of view, but I was not able to satisfy myself as to its being otherwise economical, as there were no local merchants' rates or lists for this class of material available in either the workshop or stores offices. The accepted contract rates for the current year for teak were—

| | RS. | A. | P. | |
|---|---|---|---|---|
| (*a*) for planks ... ... ... ... ... | 2 | 13 | 6 | per cubic foot. |
| (*b*) for scantlings ... ... ... ... ... | 2 | 11 | 6 | „ „ |

These rates are distinctly rough, as the number of saw-cuts required must necessarily influence cost of outturn; thus for scantlings the rates of Richardson & Cruddas (of Bombay) vary according to size from Rs. 3-2-0 to Rs. 4, while for planks their rates vary from Rs. 3 to Rs. 4-12-0 per cubic foot. Moulmein teak in log is presumably much cheaper in Madras than in Bombay, but how far the workshops in Madras obtain a cheaper article in scantling it is impossible practically to ascertain.

15. *Foundry Accounts.*—These are much more involved procedure than might be expected from that in force for timber, as although a contractor, or contractors rather, are employed for doing the work, and are paid on the class and weight of outturn; there are in addition sundry charges (about 200 per cent. more than the contract rate), such as cast iron or brass in the rough, labour, fuel, &c., which have to be duly registered daily to enable the sum total of cost to be arrived at. The only real check exercised by the General Superintendent is in seeing that the percentages of waste each month are kept low, but the actual cost of outturn varies somewhat considerably thus; bringing all work done down to the scale of third-class, which is the principle on which a contractor is paid apparently, the cost of outturn was—

| | | | | | | |
|---|---|---|---|---|---|---|
| In October 1898 | ... | ... | ... | ... | ... | 6·915 pies per lb. |
| „ September 1898 | ... | ... | ... | ... | ... | 6·9 „ |
| „ August „ | ... | ... | ... | ... | ... | 8·7 „ |

On the whole, however, I understand the cost of workshop castings are well below the prices charged for similar work by local firms. I cannot prove this.

Castings are made usually about once a week, and the weighment of each casting turned out in the rough is recorded both in the measurement books and "outturn register." Castings (iron) are mainly classified as second-class, and for these the contract rate is Rs. 30 per ton. The average weight of turn-out is at present some 8,000 lb. a month; the actual cost of the outturn during October, bringing everything down to third-class, was Rs. 80-6-0 per ton, so that at this rate the cost in August was presumably Rs. 101-6-0 per ton, and this rate seems very low even for unfinished work.

There is a balance of material, *i.e.*, iron and fuel, at the end of each month, the value of this being at end of October Rs. 354-12-6. This practically represents the difference in the total of cost of outturn *plus* the balance brought forward from previous month, and the amount charged off to works; the accuracy of the amount, after allowing for wastage, is said to be checked by actual weighment.

The value of this "material at site" is not taken into consideration in light of the suggestion made by the officer inspecting in March 1896, viz., that the reserve limit of such material should be fixed at Rs. 200, nor perhaps did he intend that it should be, as the amount, so far as the foundries are concerned, must obviously vary very much, and depend largely on the dates on which castings can most conveniently be done.

16. *Miscellaneous Advances.*—The entries in this account were brought to notice by the officer inspecting in December 1893, who suggested that, as the account was mainly made up of very small items costing a few rupees or so, in future no work should be undertaken except for the Public Works Department itself, estimated to cost less than Rs. 50. The then Examiner also invited special attention to this matter, but no orders thereon appear to have issued from Government. Personally I cannot understand why this account is burdened with these items of unadjusted or unaccepted transfer items; there seems no clear object in relieving one suspense head (manufacturing suspense account) by debit to another, merely because a bill has been made and sent out, while it is clearly opposed to the ruling contained in paragraph 195 of chapter II, volume II, Public Works Department Code. The total amount outstanding at close of October 1898 was Rs. 873-13-1, and included one item of Rs. 7 billed for against the Commissariat Storekeeper-General in February 1898 still unaccepted, and six items billed for in March 1898, of which however two had been adjusted in November. All items were said to be under correspondence, but whether the cost of the correspondence was worth it seemed doubtful.



17. "*Materials at site*".—The value at end of October according to the manufacturing suspense account was, exclusive of foundry balances as explained above, Rs. 1,013-11-9.

18. *Irregularities in accounting.*—The minor irregularities which came under notice during the course of inspection and test audit are shown below, but it should perhaps be mentioned that the test audit (taken up for month of June 1898) was somewhat specially curtailed in the case of this division as the ordinary procedure of test audit could hardly be made to apply in my own opinion, nor would perhaps the value of such audit have compensated for the time and labour involved in applying it.

*Cash book.*—Certain entries found to have been corrected or interpolated without the initials of General Superintendent.

*Corrections* advised by audit in some cases not carried through all the documents concerned.

*Cheque books.*—In some cases alterations on the backs of counterfoils not initialled. No cheque counterfoils prior to 1896 in record.

*Muster-rolls.*—Made use of for payments to monthly-paid men; this causes slight discrepancies in booking into the work-books, which at the close of the month have to be adjusted by means of "general charges" account.

*Miscellaneous advances.*—11 (eleven) items have been outstanding for more than three months.

*Service-book.*—In two books, viz., those for T. Sivanathen Mudalliar and P. Gajaparathen, the entries on the first page have not been re-attested for more than five years, while there is no date given to the re-attestation of the entries in that of R. V. Coomarasawmy.

*Sales.*—I was given to understand that there was nothing ever sold except cinders during the incumbency of the present General Superintendent, but apparently an auction sale is to be held on December 12th. This I notice is advertised on page 1567 of the *Fort St. George Gazette*, though nothing was told me at the workshops that such a sale was proposed, much less determined upon. It will be interesting to ascertain, on receipt of the shop accounts for December, whether the Superintendent has any sanction for the sale being held, and to check the heads of account to which the proceeds are credited.

*General.*—In my inspection reports on the Store Division accounts, I have already suggested the advisability of amalgamation of the two offices, and I would only here add that, although the Examiner at that time noted on the inspection report of December 1893 his opinion, that the time was not then suitable for reductions or modifications of establishment, owing to there being so many defects both in system and practice in the workshop accounts, this argument can hardly be held to apply now; modifications in system, especially in accounts, will almost inevitably suggest themselves from time to time as experience increases, but so far as I have been able to judge during my short inspection, the accounts are well kept and in accordance with such rules and orders as have been duly sanctioned, and the amalgamation of offices proposed could be introduced, say on 1st January 1899, without any inconvenience or extra clerical work, whatever.

(Signed) E. A. LEE,
Examiner of Accounts, P.W. Dept.

8th December 1898.

No. 1410 A./A.

Forwarded for favour of orders of Government in continuation of this office No. 1405 A./A., dated 7th December 1898. I think it desirable to refrain from any comment on the suggestions and criticisms made in this report until the General Superintendent has furnished such remarks or explanations as he may wish to make respecting them.

(Signed) E. A. DENNYS,
Examiner, Public Works Accounts.

8th December 1898.

From H. A. MOSS, Esq., General Superintendent, Public Works Workshops, to the Superintending Engineer, V Circle, dated 5th June 1899, No. 16 S.E.

[*Inspection Report on Public Works Workshops, December* 1898.]

I have the honour to return herewith your No. 28 P.W.W., dated 5th February 1899, with the printed Inspection Report on the Public Works Workshops received therewith and to make the following remarks on the Inspection Report :—

*Paragraphs* 1 *and* 2.—No remarks.

*Paragraph* 3.—In some cases estimates are called for and when called for are furnished by this office. The question whether funds are set aside or not is not one that concerns the workshops. All such points should be settled by the officer ordering the articles. When the order is received, the workshops carry it out and debit the cost, and it is for the officer who ordered the work to see about funds and allocate the charge to the proper head, etc. In the case of private work a little more discretion may perhaps be given to the General Superintendent, *i.e.*, he may be allowed to undertake work after obtaining the approval in writing of the party ordering the work to the estimate, as well as a full deposit to the amount of the estimated cost of the work, and a certificate that the work cannot be done by a local private firm.

Yes. I think so.
(Intld.) A.W.S.

*Paragraph* 4.—The reasons for the headings not being used is that the same information is posted in the Workshops book which is easier consulted.

*Paragraph* 5.—This book is not part of the office accounts and need not have been examined by the Examiner. The object of the book is to keep on record the estimate of each work and the cost in more detail than is shown in the office work book which however gives enough information for office use. It also affords an immediate check on the correct issue of materials. The only other plan would be to keep a large bundle of estimates with sheets showing expenditure on each for immediate comparison. As the Examiner is probably not acquainted with the practical management of a workshop, he does not see the use of the book, but it serves its purpose.

*Paragraph* 6.—The columns in the work book show expenditure under each head as are required in a Workshop office, and no alteration is necessary. To post the work books in consecutive order of actual outlay would mean a great waste of time, labour and stationery. Say, for instance, a job is posted from daily time sheets, daily material sheets (articles locally purchased and supplied) and indents on stores. All these are not received at the same time for posting as the two latter have first to be posted and priced in the Public Works Stores. The daily time sheets are first posted in consecutive order when the others are received; any materials received on dates already entered are posted in that line and the rest are posted under the old entries, and so on. This is in no way confusing and in a little while the expenditure can be arranged, if necessary. It is, however, pointed out that the expenditure by months is arranged in order. No advantage will be gained by altering this system, which has been found the most suitable after years of experience. It is to be regretted that the Examiner, in finding fault with the method of keeping the book, should not have at the same time pointed out some practical way in which the method might be improved.

*Parayraphs* 5 *and* 6.—The books maintained are for the use of the Superintendent and have nothing to do with accounts, pure and simple. If the Examiner will suggest a better form of book, it will, if found suitable, be adopted.
(Intld.) A.W.S.

*Paragraph* 7.—In the Workshops this contract measurement book takes the place of measurement book of ordinary divisions and has been designed to suit the requirements of this special division. It is also a record of agreements with piece-workers. The book cannot therefore be dispensed with. The force of the remarks about estimates in the book are not evident, as there are no estimates in it.

*Paragraph* 8.—No remarks.



*Paragraphs* 9 *and* 10.—All the outlay has since been adjusted. With regard to adjustment of charges for punkah-pulling at the General Hospital, I see no advantage in changing the present procedure. It would only mean more trouble and office work. We are doing the work for another department of Government and not for a private party. Consequently the loss to Government is *nil* and the transaction is simplified.

*Paragraph* 11.—The outlay has since been adjusted. The suggestion in the latter part of the paragraph is a good one, and will be carried out, if approved.

This is an important principle, will put the shops on a business basis, and allow of bills being made much more rapidly than is possible at present.
(Intld.) A.W.S.

*Paragraph* 12.—Orders of Government are requested as to whether a fixed percentage may be charged, the gain or loss each month being credited or debited to Provincial revenue.

*Paragraph* 13.—No charge seems necessary in my opinion for the reasons given by the Examiner. He enters into questions of finance, which seem to be of no great importance in this connection, and on which probably a great deal could be said for the present practice. There is another reason, however, for which as it is a matter of real importance. I think that the system of centages ought to be altered. At present no bill or estimate that we prepare can give accurately the commercial cost of the work to which it refers and it must always give a false impression of the cost of our work, and affords no basis of comparison as to its true market value. I would suggest therefore that a percentage for establishment, tools and plant, etc., be included in all estimates and bills equally for all departments and that the present arbitrary 25 per cent., etc., be abolished. The percentage I would take for each year from the actual average of the past three years. A true idea could then be obtained from the estimates and bills of the actual commercial value of the works to which they refer.

This also is an important principle and I agree with the Superintendent. One of the things we want to do with these shops is to put them on a thorough commercial basis.
(Intld.) A.W.S.

*Paragraph* 14.—Tenders were called for the supply of timber and the lowest rate was accepted. There, therefore, appeared no necessity to maintain local merchants' rates for timber. The two rates, *i.e.*, for planks and for scantlings, were in use when I joined these Workshops and I have found them work satisfactorily.

If we purchased our logs and cut them up for the general market as to Richardson & Cruddas, a variety of rates such as they have would be a necessity. It is different with our practice and a few average rates are sufficient. The simplest test of the economy of the system is the cost of the finished work, and I do not think in this, our rates can be considered high.

I agree. An endeavour in the future will be made to buy good in bazaar scantlings. This means a saving of about Annas 5 per cubic foot.
(Intld.) A.W.S.

*Paragraph* 15.—The Examiner seems to forget that in the foundry the contractor supplies labour only and not material as well, as is the case with the timber contractors. The accounts are therefore necessarily somewhat more involved.

It is only in wastage that my check is really necessary. My object is to get a good outturn for the expenditure and this is secured by seeing that the wastage is kept low.

Some of the Examiner's remarks about the foundry accounts are not understood. The contractor is not paid on the principle of bringing all work down to the scale of third class. He is paid at fixed rates for each of the three classes of castings as might have been seen from the measurement books and bills. The reduction of castings to third-class rate, which the Examiner was evidently thinking of, is done when distributing the whole cost of casting on the various jobs. It is necessary in doing so, but has no connection with the payment of the contractor.

The cost of castings varies a good deal from month to month according to the class of work in hand and the amount of outturn. The average, however, is usually about the same. The cost is, as far as I have been able to ascertain, as a rule, considerably under that of similar work done by local firms, though this being a purely executive matter need hardly have been referred to in this report.

The outturn was more nearly 40,000 lb. than 8,000. It is not understood how this figure was arrived at.

*Paragraph* 16.—I could not recommend any proposal to limit the value of work done for other departments to Rs. 50, merely because of a small matter in accounts, such action would deprive them of all benefit of the shops and is besides really not necessary.

I do not agree with the Examiner in his opinion, that items billed for and awaiting acceptance should not be removed from the manufacturing suspense accounts to miscellaneous advances. In my opinion it is proper that, as soon as the manufacture is completed, the item should be removed from the manufacturing suspense account. It is convenient also, if not necessary, to have all the unaccepted items collected in an account by themselves. Miscellaneous advances is the only head in our present system of accounts for the purpose, and, if it is not to be used for this purpose, a special heading would have to be opened instead. The special accounts of the workshop require it and I see no objection to our present practice, though it may not be allowable or required in an ordinary division.

A separate head of account might be opened, if thought necessary, but the bills should be removed from manufacturing suspense account.

(Intld.) A.W.S.

*Paragraph* 18—*Cash-book.*—General Superintendent's initials now obtained most of the alterations were in the column "Head of account" and had been initialled by the Accountant.

*Corrections advised by Audit.*—It is not known what corrections are referred to, as all corrections appear to have been carried out.

*Cheque books.*—Alterations now initialled, counterfoils from 1893 are in record; they were overlooked at the time of the inspection.

*Muster Rolls.*—A few of the workmen were engaged on a monthly rate of pay and employed on jobs; they are charged on muster rolls.

*Miscellaneous Advances.*—There are now only four items outstanding. Special steps are being taken to adjust them as soon as possible.

*Service Books.*—Re-attestation not necessary as these men have not been in service for five years. Coomarasawmy's re-attestation was done before my time and the date is not ascertainable. The service book will, however, be re-attested and dated at an early date.

*Sales.*—I think the Examiner must have misunderstood the information given him with regard to sales. Probably he was told that nothing except cinders, saw dust and shavings were sold *without special sanction.* Auctions of scrape iron, unserviceable tools, etc., are held from time to time after sanction of the Superintending Engineer has been obtained for the sale. Sanction was obtained as usual for the sale in December referred to.

*General.*—I see no advantage in the Examiner's proposal to amalgamate the two offices. There are several objections which were explained to him, but which it is hardly worth while bringing up again until a definite proposal for amalgamation is made. I will, however, briefly state that amalgamation would not in any way reduce work. There would be no reduction or saving and it is a convenience to have the offices separate as at present.

Neither do I. I propose to report separately on the question of stores in answer to Chief Engineer's No. 2238 C., dated 2nd May 1899.

(Intld.) A.W.S.

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No. 344 W.

To the Chief Engineer, Public Works Department, with reference to his endorsement No. 665 C., dated 31st January 1899, returned herewith with marginal notes.

15th June 1899.

(Signed) A. W. SMART, Colonel, R.E.,
Suptg. Engineer, V Circle.





Office-note from the Examiner, Public Works Accounts, Madras, to the Secretary to Government, Public Works Department, dated 4th July 1899, No. 844 A/A.

Returned with the following remarks:—

*Paragraph* 3.—As the General Superintendent states that estimates are sent whenever called for, the rule contained in Code II, III, 95—VII (*f*) requiring the preparation of estimates and the acceptance by the person or department ordering the work might be considered as complied with. That an estimate for every work executed in the Workshops should be on record is evident from the orders contained in G.O., No. 2836 W., dated 7th November 1895, wherein this is prescribed for works likely to cost Rs. 20 and above. If this is followed nothing further seems necessary.

The General Superintendent's proposal, which is concurred in by Superintending Engineer, V Circle, to be allowed a little more discretion is of an administrative character and will require special orders of Government. Attention is invited to G.O., No. 1077 W., dated 2nd April 1892.

*Paragraph* 4 *of report.*—As each account book is supposed to be complete in itself, it would be as well if all the prescribed headings were completely filled up.

*Paragraph* 5 *of report.*—If the maintenance of the book will be of any advantage to the General Superintendent, there is no need to interfere with it. He will, of course, be as desirous as I am to reduce work as far as possible.

*Paragraph* 6 *of report.*—I refrain from making any comments or remarks on this. The question of revision of the form will be taken up later on; in the meantime I would leave the present procedure undisturbed.

*Paragraphs* 7, 10 *and* 15 *of report.*—Under the circumstances explained by the General Superintendent no change in the present practice appears called for.

*Paragraph* 11 *of report.*—The suggestions of the Inspecting officer, which are approved by the General Superintendent, would afford some relief in accounting and, if not objectionable on administrative grounds, may be adopted as a tentative measure.

*Paragraph* 12 *of report.*—It is presumed that the proposal is to fix a percentage on *labour* charges as prescribed in Code II, I, 164. This will undoubtedly result in considerable saving of clerical labour.

*Paragraph* 13 *of report.*—The General Superintendent's proposal, which is also advocated by Superintending Engineer, V Circle, to charge actuals instead of 25 per cent. now fixed, would result in extra work and complication in accounting. I would not therefore propose any departure from the present practice.

*Paragraph* 14 *of report.*—There is force in the Inspecting officer's criticism, but as the present arrangement is reported to be economical, it is for Government to consider whether any change is necessary.

*Paragraph* 16 *of report.*—The General Superintendent has apparently misunderstood the remarks of the Inspecting officer. No proposal to limit the value of work done for other departments to Rs. 50 was suggested. For reasons given by the General Superintendent, it would probably be best to allow the unadjusted items to be carried to "Miscellaneous Advances Account."

The other points dealt with in the report do not call for any special remarks.

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Order—No. 2219 W., dated 18th August 1899.

The correspondence recorded above relate to the Examiner's report of inspection of the accounts of the Presidency Public Works Workshops division. The following remarks and orders are recorded in connection therewith:—

*Inspection Report, Paragraph* 3.—The provisions of G.O., No. 2836 W., dated 7th November 1895, directing the preparation of estimates for every work in the Workshops, costing Rs. 20 and above, should be followed. It will be seen from G.O., No. 1077 W., dated 2nd April 1892, that express orders were issued prohibiting the execution of private work in the Workshops without the prior sanction of Government. The grounds on which it is proposed to depart from this rule should be explained.

*Paragraphs* 4 *and* 5.—The forms of accounts discussed in these paragraphs may be maintained for the present in the manner now in force until the revised form of work book promised by the Examiner is submitted.

*Paragraph* 11.—The suggestion of the Inspecting officer that for all trifling jobs estimated to cost Re. 1 or under, a nominal price of Re. 1 be charged and credited to general charges, and that the latter account be debited with the outlay will be adopted.

*Paragraph* 12.—The suggestion made in this paragraph, with which the General Superintendent and the Superintending Engineer, V Circle, concur, that a fixed percentage on cost of labour on the basis of the average of the actuals of the preceding year, should be charged on account of "General charges" and that any gain or loss resulting therefrom should be credited or debited to Provincial Revenue, is approved for immediate adoption. It will, however, still be necessary, as observed by the Inspecting officer, that the registers of these charges should be maintained as hitherto.

*Paragraph* 13.—The change in the system of levying percentage charges on work executed at the Workshops, recommended by the General Superintendent and the Superintending Engineer, may also be adopted, it being important that the shops should be placed on a proper commercial basis. The percentage charged for each year will be the actual average of the past three years. The Examiner will report on the working of the system now sanctioned after a year's trial.

*Paragraph* 14.—The Superintending Engineer's remark that endeavours will be made to buy wood in bazaar scantlings is noted.

*Paragraph* 16.—The existing practice will be allowed to continue.

*Paragraph* 18.—The Government observes that the General Superintendent is setting right the minor irregularities noticed in the Inspecting officer's report.

(True Extract.)

Under Secretary to Government.

To the Superintending Engineer, V Circle.
" Examiner, Public Works Accounts.

Exd. C. M. Thumbusawmy.

[P. W. 43.
1,000—28-2-19.]

Read the following :—

Endorsement of the Examiner, P.W. Accounts, No. 1410 A/A, d/ 8th Decr. 1898.

Endorsement from the S.E. V Circle, No. 344, d/ 15th June, 1899.

From the Examiner, P.W. Accounts, No. 844A/A, d/ 4th July, 1899.

Circulated to

FOR ORDERS

No: 2219 W d/18-8-99

The correspondence recorded above relate to the Examiner's report of inspection of the accounts of the Presy. P.W. Workshops Divn. The following remarks and orders are recorded in connection therewith:-

Inspection report, Para. 3

The provisions of G.O. 2836 W, d/ 7th Novr. '95, directing the preparation of estimates for every work in the Workshops costing Rs. 20 and above, should be followed. It will be seen from G.O. 1077 W, d/ 2nd April, 1892, that express orders were issued prohibiting the execution of private work in the Work-shops without the prior sanction of Govt. The grounds on which it is proposed to depart from this rule should be explained.

Paras 4&5.

The forms of accounts discussed in these Paras. may be maintained for the present in the manner now in force until the revised form of work-book promised by the Examiner is submitted.

Para.

Para. II

The suggestion of the Inspecting Officer that for all trifling jobs estimated to cost Re. I or under, a nominal price of Re. I be charged and credited to general charges, and that the latter ~~amount~~ account be debited with the outlay, will be adopted.

Para. I2.

The suggestion made in this Para, ~~is~~, with which the General Suptdt. and the Suptg. Engineer, V Circle, concur, that a fixed percentage on cost of labour on the basis of the average of the actuals of the preceding year , should be charged on account of 'General Charges' and that any gain or loss resulting therefrom should be credited or debited to Provincial Revenue, is approved for immediate adoption. It will, however, still be necessary , as observed by the Inspecting Officer, that the Registers of these charges should be maintained as hitherto.

Para. I3.

The change in the system of levying percentage charges on work executed at the Work-shops, recommended by the General Suptdt. and the Suptg. Engineer may also be adopted , it being important that the Shops should be placed on a proper commercial basis. The percentage charged for each year will be the actual average of the past 3 years. The Examiner will report on the working of the system now sanctioned after a year's trial.

Para. I4.

The Suptg. Engineer's remark that endeavours will be made to buy wood in bazaar scantlings is noted.

Para. I6.

The existing practice will be allowed to continue.

Para. I8.

The Government observes that the General Suptdt. is setting right the minor irregularities noticed in the Inspecting Officer's report.

8/8 W.O.F.-II

To

The S.E. V Circle.

,, Examiner, P.W. Accounts.

# Public Works (1899) Department.

**CURRENT No.** 5400

***From***

The Examiner P.W. Accounts.
Madras & Coorg

***Order***

No. 844 A/A

***Dated*** 4th July 1899

***Received*** } 5th July 99

***Registered*** }

***Enclosures*** 3.

***Spare copies.***

## SUBJECT.

Inspection Report on P.W. Workshops Division, December 1898 — returning with remarks the explanations and remarks of the General & Superintendent P.W. Workshops on the points noticed in the ——

Note Schedules & Plans retained 8/7/99

OLS350 P.196

1899 / 5400

BACK PAPERS.

| No. | Date. |
|---|---|
| 2776C | 19-6-99 |
| 2224C | 1-5-99 |
| 665C | 31-1-99 |
| 1866W | 29-4-96 |
| 2836W | 7-11-95 |
| 1809W | 1-7-95 |
| 1444W | 16-6-95 |
| 1427W | 8-6-94 |
| 1077W | 2-4-92 |

FURTHER PAPERS.

| No. | Date. |
|---|---|
| | |

# Public Works (1899) Department.

CURRENT No. 134

SUPERINTENDING ENGINEER'S OFFICE
No. 1261
1 - FEB. 1899
V. CIRCLE, P. W. D., MADRAS.

EXAMINER OF P. W. ACCOUNTS
No. 20 JUN 1899
V. CIRCLE, P. W. D.

5400

No. 665C dt 31st Jany 99

From

The Examiner, P. W. Accts. Madras

~~Order~~ Audt.

Referred to the Supty. Engr. V. Circle, in view to the explanations such remarks or explanations as the Genl. Supdt., P. W. Workshops, may wish to make on the points noticed in the Report ~~being obtained~~.

A.R. 30-1-99.

Secretary to Govt., P.W.D.

No. 1410 A/A

Dated 8th Dec/98

Recd. Dated 4th January 1899

Received

Registered 3-2-99

Enclosures

Spare copies 2/1/99

SUBJECT.

Inspection Report of P. W. Workshops — Forwards for orders —

Pur. 1899 No. 28 P.W.

Forwarded to the General Supdt. P. W. Workshops, for compliance.

5/2/99 Col. RE

Supty. Engineer.

Dy. to C. Fifth Circle.

BACK PAPERS.

| No. | Date. |
|---|---|
| | |

FURTHER PAPERS.

| No. | Date. |
|---|---|
| | |

EXAMINER, ACCOUNTS. 20 JUN. 1899 No.

SUPERINTENDING ENGINEER'S OFFICE. No. 1260 1 - FEB. 1899 V. CIRCLE, P. W. D., MADRAS.

EXAMINER, ACCOUNTS. 27 DEC. 1898 No.

*Report of an Inspection of the Accounts of the General Superintendent, Public Works Workshops Division, by Mr. E. A. Lee, Examiner of Accounts, on December 1st, 2nd, 3rd and 5th*, 1898.

Mr. H. A. Moss, Executive Engineer, 3rd grade, has been in charge of the division since 13th November 1895, except for 18 days in April 1896. Mr. E. L. Taylor, 5th grade, has been the Accountant in charge since 8th April 1896, except for the period 23rd July 1897 to 1st June 1898 when Mr. Wilkins was the Accountant and Mr. Taylor was first on famine duty in Kurnool and afterwards attached to the Examiner's office.

2. This report, in the same way as that on the Stores division, made by myself, attempts to describe the present procedure under which the workshop accounts are made out, with suggestions thereon.

3. *Requisitions—Estimates.*—Requisitions are received in every case on ordinary official letters, and apparently no estimates of probable cost are asked for, nor does the requisition state whether funds have been set aside or made available. The General Superintendent has absolute power, up to any limit, to carry out work for any department of the Public Works Department, the Civil Department and the Military Works. For private work no discretion at all is left to the Superintendent; the sanction of Government is necessary in every case previous to work being put in hand. This is contrary to State Railway practice. Full deposit to cover estimated cost of private work is said to be called for in every case, except where the sanction of Government is received to recover the amount on completion, *e.g.*, stamp dies at present in hand for the Mysore State.

4. *Work Orders.*—These are made out for each requisition in consecutive numbers (going up to 10,000 and then re-commencing). They are in counterfoil and practically consist of duplicate copies of the wording of the requisition, with the mere addition of the initials on each foil of the General Superintendent. The form in use provides for—

| | | |
|---|---|---|
| Estimate Rs.<br>Deposit Rs. | Commenced.<br>Date should be completed. | Remarks. |

But these headings appear in no case to be made use of. When, however, the work is ready for issue the dates of completion, despatch and bill are entered on the form. The foil is then sent with the work, and on return as a receipt reposted to the counterfoil. The work order form should certainly be made complete by posting the remarks as printed on it.

5. *Workshop book.*—On receipt of the "work order" in the shops, the name of the work is entered on a folio or folios of the workshop book; this is a purely local form and is understood to have been only recently introduced. The book provides on one page for an estimate of the work to be done, and on the other side for payments when made. As regards this form it was to be observed—

(1) That the estimates were not signed, nor initialled by the General Superintendent though the calculation of the amount of the units comprising the estimate was traced in to a manuscript document made out by the General Foreman in pencil in the particular case looked into.

(2) The entries on the payment side are confined apparently to payments for labour only (*i.e.*, by contract or daily labour), although the form has columns for every kind of outlay.

How this book can be of any substantial use was certainly not evident, as it does not, as posted, even enable the Foreman to see or bring to the early notice of the General Superintendent works of which the estimate is likely to be exceeded, while on the other hand the estimate is not framed in sufficient detail to make possible any proper check by the Superintendent. But, on the other hand, it must be noted that there is only one man (the Foreman's writer) to put this register, and it would be impossible for him to find time to book all outlay.

6. *Work book.*—This is another register maintained for each work in the General Superintendent's office; it is said to record daily all items of expenditure, but the estimated cost of the work is not shown, nor are any details given except under the classes of description of work done. Monthly totals of cost are worked out, and a progressive total of cost to date; if the form were to show sub-heads of estimate and the expenditure were thus classified and totalled, the register would certainly be of much more real use for accounts purposes.

The entries in this register are made from the following documents:—

(*a*) For materials from the indents made on the Stores division (unpriced).

(*b*) For labour (including machine charges, forges, &c., from machine sheets, forge sheets, &c.), from "Day Labour Time Sheets," which allocate cost to some particular requisitions, or to "General charges," or to plant: and from cash book vouchers (of which the amounts have been checked with the estimate), for contract labour. In the case of machine and forge charges, the unit of time is half-hour for a day of 8 hours. Outlay charged to general charges is divided at the close of each month in proportion to the amount of cost of labour on each job. This work book is evidently the most important record maintained, and it is to be regretted that entries are not made more systematically in consecutive order of actual outlay.

7. *Contract measurement book.*—This is still another form of register, in which the estimated cost and amount paid for each unit of work is recorded under the initials of the General Superintendent. Bills for work done are checked with this book, but as the estimates are merely in the same detail as in the "workshop book" the necessity for the book was not apparent.

8. *Bills for work done.*—These are made out from the work book, and on their completion abstracts are prepared by departments. These abstracts form the schedules for the monthly accounts. Each bill made out against the Public Works Department is accompanied by a transfer advice debit; but for other departments a debit is raised merely on the strength of the bill itself. Bills for private parties are cleared by debits to deposits or miscellaneous advances; the latter being made use of for such work as is permitted by Government to be put in hand previous to any deposit of the estimated cost having been received. The clearance, however, of cost of work done will be noticed later on.

9. *Unadjusted items of work.*—The balance of these at end of October 1898 amounted to no less than Rs. 93,957, of which Rs. 75,332 was for the Public Works Department only. Of this latter sum the principle amounts were:—

| | | Amount. | Requisition |
|---|---|---|---|
| | | RS. | NO. |
| (*a*) | ... ... ... ... ... ... ... ... | 39,859 | 31 |
| (*b*) | ... ... ... ... ... ... ... ... | 5,919 | 1609 |
| (*c*) | ... ... ... ... ... ... ... ... | 2,247 | ... |
| (*d*) | ... ... ... ... ... ... ... ... | 949 | ... |

(*a*) Represented outlay on 28 moveable shutters for the Grand Anicut. It was said that adjustment was being deferred for want of appropriation to meet the outlay, and of sanction to a revised estimate under preparation.

(*b*) *Shutters for Lower Anicut.*—Bill said to be about to issue and not made out previously by oversight.

(*c*) Represents outlay incurred on making 4,000 cast iron rammers for the Public Works Stores for which a bill is issuing in November.

(*d*) Is for iron work for the Penitentiary, Madras, but the amount is under Rs. 1,000 and the work not finished.

There were, in addition, very numerous small items all duly recorded in "The statement of work done," but as these details are not now submitted to audit, the check on prompt adjustment is no longer possible. Many items were said to be purposely kept open on account of the jobs not being completed and to prevent more than one adjustment being necessary. This system Government has approved of, but Volume II, Chapter I, paragraph 171, rules that details of the unadjusted balance should be submitted monthly with the accounts.



10. *Unadjusted items for Public Department.*—These include all work for the Civil and Military Departments, excluding Public Works Department and Military Works; the principal items outstanding were —

(*a*) Rupees 3,621 being expenditure on a steam disinfecting apparatus for plague purposes. The estimate for this work has been exceeded and the store debits are under re-check.

(*b*) Rupees 6,375 is the expenditure to date on staff and material for working by steam the punkas of the General Hospital during the official year.

The latter of these items should certainly be adjusted monthly as the amounts are heavy and, even as a temporary measure, are not a fair charge against the Public Works Department budget.

11. *Unadjusted items for private parties.*—There are very few items under construction for private parties, and the unadjusted amounts are:—

| | | RS. | A. | P. | |
|---|---|---|---|---|---|
| (*a*) | ... ... | 18 | 11 | 4 | Work for Mysore Government. |
| (*b*) | ... ... | 1,952 | 15 | 7 | Estimated amount in deposit but cost in excess. |
| (*c*) | ... ... | 24 | 6 | 6 | |
| (*d*) | ... ... | 79 | 1 | 7 | Fully coverd by deposit. |

The great bulk of the items in the two first classes of unadjusted items were for very trifling amounts, many indeed for only a few annas or even less, *e.g.*, an item of 7 pies for "material other than timber" supplied for repairing one brass lock for Superintendent of Stationery, Madras. The final cost of this work was 12 annas and 7 pies, but the cost of accounting for it must have been very excessive, and I would suggest that for all trifling jobs of this sort estimated to cost one rupee or under a nominal price of Re. 1 should be charged and credited to general charges, and the latter account debited with the actual outlay. This would save a considerable number of entries throughout the workshop and store books and would, moreover, be more in keeping with the basis on which private firms get out their accounts; it would also probably tend to relieve "general charges" somewhat.

12. *General charges.*—These are recorded daily in a register in a manuscript form, separate pages being opened for the following:—

| | | |
|---|---|---|
| Fitting shop. | Steam Hammer. | Carpenter's shop. |
| Forge. | Machine shop. | Instrument shop. |

While outlay is shown separately on material and labour. An abstract of these shop general charges is made in another manuscript register. The sum total of these charges excluding the foundry charges, which are charged to works direct, for October amounted to—

| | | RS. | A. | P. |
|---|---|---|---|---|
| Labour | ... ... ... ... ... ... ... ... | 717 | 2 | 1 |
| Materials | ... ... ... ... ... ... ... ... | 357 | 6 | 1 |
| | Total ... | 1,704 | 14 | 3 |

exclusive of all regular charges on establishment whether permanent or temporary. From this total the sum of the total general charges booked against Machine and Forge shops (Rs. 1,074-14-3) is deducted and the balance Rs. 632-0-2 is divided up in proportion on labour cost of all works carried out in shops during the month; this for the month of October amounted to one-fifth or 20 per cent.—a very high rate—but due to work in the shops being somewhat slack during that month. In some months the charges amount to one-eighth only, and it is obvious that if estimates are made out on the one-eighth basis and work done on the actuals of a one-fifth rate, they must inevitably be exceeded. The General Superintendent would prefer that a fixed percentage should be charged, and any gain or loss on this credited or debited to Provincial revenue, the fixed percentage being on the basis of the average of the actuals of the preceding year. I certainly agree with this idea of Mr. Moss, and possibly Government may be willing to agree to it. Meanwhile, it will still be necessary, for purposes of the information of the General Superintendent, that the registers of

these charges (slightly modified in the abstract by showing the excluded shop charges separately at the end) should be still maintained as hitherto. As to the general charges on forge and machine, these are divided up separately according to the units recorded against such works only as have been using these shops, and the same principle applies to foundry general charges.

13. *Indirect charges.*—These are fixed by order of Government as 25 per cent. for the Public and other departments, except for the Military Works and State Railways, to which 10 per cent. only is charged. The method of accounting these percentages seems unnecessary accounts work, and credit to Provincial Revenue and other heads of account might, I think, be better only afforded when the amounts are recovered on actual bills, no entry being made for percentage on work done but not billed for. It is not perhaps, on the whole, satisfactory that the actual commercial cost of work (*i.e.*, including establishment, tools and plant, depreciation, &c.) should not be charged to every department, including even the Public Works Department, while again the mass of the heavier work in the shops is for Imperial Capital work, while the establishment is paid for out of Provincial Revenue. I see this point is also touched upon by the Inspecting officer in his report of 15th February 1895, but that the then Examiner was not prepared to press the points raised in face of G.O., No. 3067 W. of 16th November 1891. I do not, however, quite see that the resolution really touches on the point raised by me above. Government workshops can only exist for two main objects —(*a*) public convenience; (*b*) gain, or at any rate no substantial loss to Government. The former is in no way a question of finance or account, but as regards the latter it is clear that, unless the accounts of the shops are worked on a commercial basis, no real information can be available as to what the real gain or loss can be to Provincial Revenues. I can quite understand that in cases where large works are being undertaken at the cost of funds provided from Imperial Revenues, but for the indirect benefit of the Provincial Revenues, the Local Government may prefer to treat such outlay as if it were practically its own; but, on the other hand, so far as *capital* Imperial works are concerned, the principle in force on State Railways might well be made applicable, that is, that in addition to the actual cost of any Imperial capital work costing over Rs. 1,000, the percentages for rent (5 per cent.) and repairs of machinery (2 per cent.) or 7 per cent. should invariably be added. Since writing the above I find that full percentage charges are charged against all Irrigation works, but in the accounts of the division for which work has been done, but it would be still more advisable to afford the credit to Provincial Revenue in the accounts of the division in which the work is actually done.

14. *Saw Mill Account.*—This in these shops does not exist, although there is an efficient saw mill and engine to work it. A contractor is employed, whose rate for each class of scantling required is said to be fixed at something less than the market rate, this being in return for the use of the mill and engine supplied free to him, while he employs, and pays for, all labour and materials including fuel. This system is of course a delightfully simple one from an accounts point of view, but I was not able to satisfy myself as to its being otherwise economical, as there were no local merchants' rates or lists for this class of material available in either the workshop or stores offices. The accepted contract rates for the current year for teak were—

| | Rs. | A. | P. | |
|---|---|---|---|---|
| (*a*) for planks ... ... ... .. ... | 2 | 13 | 6 | per cubic foot. |
| (*b*) for scantlings ... ... ... ... ... | 2 | 11 | 6 | " " |

These rates are distinctly rough, as the number of saw-cuts required must necessarily influence cost of outturn; thus for scantlings the rates of Richardson & Cruddas (of Bombay) vary according to size from Rs. 3-2-0 to Rs. 4, while for planks their rates vary from Rs. 3 to Rs. 4-12-0 per cubic foot. Moulmein teak in log is presumably much cheaper in Madras than in Bombay, but how far the workshops in Madras obtain a cheaper article in scantling it is impossible practically to ascertain.

15. *Foundry Accounts.*—These are much more involved procedure than might be expected from that in force for timber, as although a contractor, or contractors rather, are employed for doing the work, and are paid on the class and weight of outturn; there are in addition sundry charges (about 200 per cent. more than the contract rate),



such as cast iron or brass in the rough, labour, fuel, &c., which have to be duly registered daily to enable the sum total of cost to be arrived at. The only real check exercised by the General Superintendent is in seeing that the percentages of waste each month are kept low, but the actual cost of outturn varies somewhat considerably thus; bringing all work done down to the scale of third-class, which is the principle on which a contractor is paid apparently, the cost of outturn was—

| | | |
|---|---|---|
| In October 1898 ... ... ... ... ... ... | 6·915 | pies per lb. |
| " September 1898 ... ... ... ... ... ... | 6·9 | " |
| " August " ... ... ... ... ... ... | 8·7 | " |

On the whole, however, I understand the cost of workshop castings are well below the prices charged for similar work by local firms. I cannot prove this.

Castings are made usually about once a week, and the weighment of each casting turned out in the rough is recorded both in the measurement books and "outturn register." Castings (iron) are mainly classified as second-class, and for these the contract rate is Rs. 30 per ton. The average weight of turn-out is at present some 8,000 lb. a month, the actual cost of the outturn during October, bringing everything down to third-class, was Rs. 80–6–0 per ton, so that at this rate the cost in August was presumably Rs. 101–6–0 per ton, and this rate seems very low even for unfinished work.

There is a balance of material, *i.e.*, iron and fuel, at the end of each month, the value of this being at end of October Rs. 354–12–6. This practically represents the difference in the total of cost of outturn *plus* the balance brought forward from previous month, and the amount charged off to works; the accuracy of the amount, after allowing for wastage, is said to be checked by actual weighment.

The value of this "material at site" is not taken into consideration in light of the suggestion made by the officer inspecting in March 1896, viz., that the reserve limit of such material should be fixed at Rs. 200, nor perhaps did he intend that it should be, as the amount, so far as the foundries are concerned, must obviously vary very much, and depend largely on the dates on which castings can most conveniently be done.

16. *Miscellaneous Advances.*—The entries in this account were brought to notice by the officer inspecting in December 1893, who suggested that, as the account was mainly made up of very small items costing a few rupees or so, in future no work should be undertaken except for the Public Works Department itself, estimated to cost less than Rs. 50. The then Examiner also invited special attention to this matter, but no orders thereon appear to have issued from Government. Personally I cannot understand why this account is burdened with these items of unadjusted or unaccepted transfer items; there seems no clear object in relieving one suspense head (manufacturing suspense account) by debit to another, merely because a bill has been made and sent out, while it is clearly opposed to the ruling contained in paragraph 195 of chapter II, volume II, Public Works Department Code. The total amount outstanding at close of October 1898 was Rs. 873–13–1, and included one item of Rs. 7 billed for against the Commissariat Storekeeper-General in February 1898 still unaccepted, and six items billed for in March 1898, of which however two had been adjusted in November. All items were said to be under correspondence, but whether the cost of the correspondence was worth it seemed doubtful.

17. "*Materials at site*".—The value at end of October according to the manufacturing suspense account was, exclusive of foundry balances as explained above, Rs. 1,013–11–9. ~~The attention of Government might, it is suggested, be again invited to the advisability of a definite limit in value being fixed.~~

18. *Irregularities in accounting.*—The minor irregularities which came under notice during the course of inspection and test audit are shown below, but it should perhaps be mentioned that the test audit (taken up for month of June 1898) was somewhat specially curtailed in the case of this division as the ordinary procedure of test audit could hardly be made to apply in my own opinion, nor would perhaps the value of such audit have compensated for the time and labour involved in applying it.

*Cash book.*—Certain entries found to have been corrected or interpolated without the initials of General Superintendent.

*Corrections* advised by audit in some cases not carried through all the documents concerned.

*Cheque books.*—In some cases alterations on the backs of counterfoils not initialled No cheque counterfoils prior to 1896 in record.

*Muster-rolls.*—Made use of for payments to monthly-paid men; this causes slight discrepancies in booking into the work-books, which at the close of the month have to be adjusted by means of "general charges" account.

*Miscellaneous advances.*—11 (eleven) items have been outstanding for more than three months.

*Service-book.*—In two books, viz., those for T. Sivanathen Mudalliar and P. Gajaparathen, the entries on the first page have not been re-attested for more than five years, while there is no date given to the re-attestation of the entries in that of R. V. Coomarasawmy.

*Sales.*—I was given to understand that there was nothing ever sold except cinders during the incumbency of the present General Superintendent, but apparently an auction sale is to be held on December 12th. This I notice is advertised on page 1567 of the *Fort St. George Gazette*, though nothing was told me at the workshops that such a sale was proposed, much less determined upon. It will be interesting to ascertain, on receipt of the shop accounts for December, whether the Superintendent has any sanction for the sale being held, and to check the heads of account to which the proceeds are credited.

*General.*—In my inspection reports on the Store Division accounts, I have already suggested the advisability of amalgamation of the two offices, and I would only here add that, although the Examiner at that time noted on the inspection report of December 1893 his opinion, that the time was not then suitable for reductions or modifications of establishment, owing to there being so many defects both in system and practice in the workshop accounts, this argument can hardly be held to apply now; modifications in system, especially in accounts, will almost inevitably suggest themselves from time to time as experience increases, but so far as I have been able to judge during my short inspection, the accounts are well kept and in accordance with such rules and orders as have been duly sanctioned, and the amalgamation of offices proposed could be introduced, say on 1st January 1899, without any inconvenience or extra clerical work, whatever.

8th December 1898.

(Signed) E. A. LEE,
Examiner of Accounts, P.W. Dept.

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No. 1410 A./A.

Forwarded for favour of orders of Government in continuation of this office No. 1405 A./A., dated 7th December 1898. I think it desirable to refrain from any comment on the suggestions and criticisms made in this report until the General Superintendent has furnished such remarks or explanations as he may wish to make respecting them.

8th December 1898.

E. A. DENNYS,
Examiner, Public Works Accounts.

# Public Works (1899) Department.

5400

CURRENT No. 4790

EXAMINER, P. W. ACCOUNTS. 20 JUN. 1899 11874

From The Superintendent Vellore

No. 2776 CD 19/6/99

Order

No. 3444

To

C

For favour of remarks.

Dated 15.6.99

Received 16.6.99

Registered

Enclosures 2

Spare copies

98

Rec'r.

No. 844 A/A dated 4th July 1899.

To

W.

Returned with the following remarks

Para 3 As the General Superintendent states that estimates are sent whenever called for, the rule contained in Code II.III.95 — VII (f) requiring the preparation of estimates and the acceptance by the person or Department ordering the work might be considered as com-

SUBJECT.

Forwards Inspection Report on P.W. Workshops, December 1898 with his own remarks.

BACK PAPERS.

| No. | Date. |
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FURTHER PA

| No. | Date. |
|---|---|

complied with. That an estimate for - every work executed in the Workshops should be on record is evident from the orders contained in G.O.No.2836 W dated 7th: November 1895 wherein this is prescribed for works likely to cost Rs: 20/- and above. If this is followed nothing further seems necessary.

The General Superintendent's proposal which is concurred in by Superintending Engineer 5th: Circle, to be allowed a -- little more discretion is of an ad-- ministrative character and will require special orders of Government- Attention is invited to G.O.No.1077 W dated 2nd: April 1892.

Para 4 of report- As each account - book is supposed to be complete by -- itself it would be as well if all the prescribed headings were completely -- filled up.

Para 5 of report - If the maintenance of the book will be of any advantage to the General Superintendent -- there is no need to interfere with it. He will of course be as desirous as I am to reduce work as far as possible.

Para 6 of report - I refrain from making any comments or remarks on this. The question of revision of the form - will be taken up later on; in the meantime I would leave the present procedure undisturbed.

Paras 7-10 & 15 of report - Under - the circumstances explained by the -- General Superintendent no change in the present practice appears called for.

Para 11 of report - The suggestions of the Inspecting officer which are -- approved by the General Superintendent would afford some relief in accounting and-if not objectionable on adminis-- trative grounds, may be adopted as a -- tentative measure.

Para 12 of report - It is presumed that the proposal is to fix a percentage on labour charges as prescribed in Code II.I.164 .This will undoubtedly result in considerable saving of clerical labour.

Para 13 of report - The General - Superintendent's proposal-which is also advocated by Superintending Engineer 5th: Circle-to charge actuals instead of 25% now fixed-would result in extra work and complication in accounting. I would not therefore propose any departure from the present practice.

Para 14 of report - There is force in the Inspecting officer's criticism but as the present arrangement is reported - to be economical it is for Government - to consider whether any change is necessary.

Para 16 of report - The General - Superintendent has apparently misunderstood the remarks of the Inspecting -- officer .No proposal to limit the value of work done for other Departments to - Rs: 50/- was suggested . For reasons -- given by the General Superintendent, it would probably be best to allow the un-

unadjusted items to be carried to "Miscellaneous Advances"Account.

The other points dealt with in the report do not call for any special remarks.

K. R

Offg: C.

9/6/99
4.7.99.

P.W. 4:3
5400/99

Copy of letter from H. A. Moss Esquire, General Superintendent, C. W. Workshops to the Suptg: Engineer 5th Circle, No. 16 S.E.5 dated 5 June 1899:—

Inspection Report on P. W. Workshops, December 1898.

Remarks by S.E

I have the honour to return herewith your No. 28 C.W.W. dated 5th February 1899, with the printed Inspection Report on the C. W. Workshops received therewith and to make the following remarks on the Inspection Report:—.

Paras 1 and 2 - No remarks

Para 3. In some cases estimates are called for and when called for are furnished by this office. The question whether funds are set aside or not is not one that concerns the Workshops. All such points should be settled by the officer ordering the article. When the order is received, the Workshops carry it out and debit the cost, and it is for the officer who ordered the work to see about funds and allocate the charge to the proper head &c. In the case of Private work a little more discretion may perhaps be given to the General Superintendent, i.e. he may be allowed to undertake work after obtaining the approval in writing of the party ordering the work to the estimate, as well as a full deposit to the amount of the estimated cost of the work, and a certificate that the work cannot be done by a local private firm.

Yes - I think so

Para

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Para 4.- The reasons for the headings not being used is that the same information is posted in the workshops book which is easier consulted.

Para 5 - This book is not part of the office accounts and need not have been examined by the Examiner. The object of the book is to keep on record the estimate of each work and the cost in more detail than is shown in the office work book which however gives enough information for office use. It also affords an immediate check on the correct issue of materials. The only other plan would be to keep a large bundle of estimates with sheets showing expenditure on each for immediate comparison. As the Examiner is probably not acquainted with the practical management of a Workshop, he does not see the use of the book but it serves its purpose.

Para 6. The columns in the workbook show expenditure under each heads as are required in a Workshop office, and no alteration is necessary. To post the workbooks in consecutive order of actual outlay would mean a great waste of time, labour and stationery. Say for instance a job is posted from daily time sheets, daily material sheets (articles locally purchased and supplied) and indents on Stores. All these are not received at the same time for posting as the two latter have first to be posted and priced in the P.W. Stores. The daily time sheets are first posted in consecutive order when the others are received; any materials received on dates already entered are posted in that line and the rest are posted under the old entries and so on. This is in no way confusing and in a little while the books maintained for the use of the Superintendent and have nothing to do with accounts figure and simple. The Examiner will suggest a better form of book, it will if found suitable be adopted.

Paras 5 and 6. The expenditure can be arranged if necessary. It is however pointed out that the expenditure by months is arranged in order. No advantage will be gained by altering this system, which has been found the most suitable after years of experience. It is to be regretted that the Examiner in finding fault with the method of keeping the book should not have at the same time pointed out some practical way in which the method might be improved.

Para 7. In the Workshops this contract measurement book takes the place of measurement book of ordinary Divisions and has been designed to suit the requirements of this special Division. It is also a record of agreements with Piece workers. The book cannot therefore be dispensed with. The force of the remarks about estimates in the book are not evident as there are no estimates in it.

Para 8. No remarks.

Paras 9 and 10:- All the outlay has since been adjusted. With regard to adjustment of charges for punkah pulling at the General Hospital I see no advantage in changing the present procedure. It would only mean more trouble and office work. We are doing the work for another department of Government

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government and not for a private party. Consequently the loss to Government is nil and the transaction is simplified.

Para 11. The outlay has since been adjusted. The suggestion in the latter part of the para is a good one and will be carried out if approved.

Para 12. Orders of Government are requested as to whether a fixed percentage may be charged, the gain or loss each month being credited or debited to Provincial Revenue.

This is an important principle, will put the shops on a business basis, and allow of bills being made much more rapidly than is possible at present.

Para 13:- No charge seems necessary in my opinion for the reasons given by the Examiner. He enters into questions of finance which seem to be of no great importance in this connection, and on which probably a great deal could be said for the present practice. There is another reason however for which as it is a matter of real importance I think that the system of centages ought to be altered. At present in no bill or estimate that we prepare can give accurately the commercial cost of the work, to which it refers and it must always give a false impression of the cost of our work and affords no basis of comparison as to its true market value. I would suggest therefore that a percentage for establishment tools and plant etc be included in all estimates and bills equally for all departments and that the present arbitrary 25 per cent et be abolished. The percentage I would take for each year from the actual average of the past 3 years. A true idea could then be obtained from the estimates and bills of the actual commercial value of the works to which they refer.

This also is an important principle and I agree with the Superintendent one of the things we want to do with these shops is to put them on a thorough commercial basis.

Para 14. Tenders were called for the supply of timber and the lowest rate was accepted. There therefore appeared no necessity to maintain local merchants rates for timber. The two rate ie for planks and for scantlings were in use when I joined these Workshops and I have found them work satisfactorily.

If we purchased our logs and cut them up for the General market as do Richardson and Cruddas, a variety of rates such as they have would be a necessity. It is different with our practice and a few average rates are sufficient. The simplest test of the economy of the system is the cost of the finished work and I do not think in this our rates can be considered high.

In para. an endeavour will be made to buy wood in bazaar scantlings this means a saving of about 25 per cft

Para 15. The Examiner seems to forget that in the Foundry the contractor supplies labour only and not material as well, as is the case with the timber contractors. The accounts are therefore necessarily somewhat more involved.

It is only in wastage that my check is really necessary. My object is to get a good outturn for the expenditure and this is secured by seeing that the wastage is kept low.

Some of the Examiners remarks about the foundry accounts are not understood. The contractor is not paid on the principle of bringing all work

work down to the scale of third class. He is paid at fixed rates for each of the 3 classes of castings as might have been seen from the measurement books and bills. The reduction of castings to 3rd class rate which the Examiner was evidently thinking of is done when distributing the whole cost of casting on the various jobs. It is necessary in doing so, but has no connection with the payment of the contractor.

The cost of castings varies a good deal from month to month according to the class of work in hand and the amount of outturn. The average however is usually about the same. The cost is as far as I have been able to ascertain as a rule considerably under that of similar work done by local firms though this being a purely executive matter need hardly have been referred to in this report.

The outturn was more nearly 40,000 lbs than 8000. It is not understood how this figure was arrived at.

Para 16. I could not recommend any proposal to limit the value of work done for other departments to £50 merely because of a small matter in accounts. Such action would deprive them of all benefit of the shops and is besides really not necessary.

I do not agree with the Examiner in his opinion, that items billed for and awaiting acceptance should not be removed from the manufacturing suspense accounts to miscellaneous advances. In my opinion it is proper that as soon as the manufacture is completed the item should be removed from the manufacturing suspense account. It is convenient also if not necessary to have all the unaccepted items collected in an account by themselves. Miscellaneous advances is the only head in our present system of accounts for the purpose and if it is not to be used for this purpose a special heading would have to be opened instead. The special accounts of the Workshop require it and I see no objection to our present practice, though it may not be allowable or required in an ordinary Division.

Para 18. Cash Book. General Superintendents initials now obtained. Most of the alterations were in the column "Head of account" and had been initialled by the Accountant.

Corrections advised by audit. It is not known what corrections are referred to as all corrections appear to have been carried out.

Cheque books. Alterations now initialled. Counterfoils from 1893 are in record; they were overlooked at the time of the Inspection.

Muster Rolls. A few of the workmen were engaged on a monthly rate of pay, and employed on jobs; they are charged on muster rolls.

Miscellaneous advances. There are now

now only 4 items outstanding. Special steps are being taken to adjust them as soon as possible.

Service books. Reattestation not necessary as these men have not been in service for 5 years. Koomarasamy's reattestation was done before my time and the date is not ascertainable. The service book will however be reattested and dated at an early date.

Sales:- I think the Examiner must have misunderstood the information given him with regard to sales. Probably he was told that nothing except cinders, saw dust, and shavings were sold without special sanction. Auctions of scrap iron, unserviceable tools etc are held from time to time after the sanction of the Superintending Engineer has been obtained for the sale. Sanction was obtained as usual for the sale in Decembr referred to.

General:- I see no advantage in the Examiners proposal to amalgamate the two offices. There are several objections which were explained to him, but which it is hardly worthwhile bringing up again until a definite proposal for amalgamation is made. I will however briefly state that amalgamation would not in any way reduce work. There would be no reduction or saving and it is a convenience to have the offices separate as at present.

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Exc 1/665-C
EW 31.1.99
with printed copy of Examiner's note

No 3444/15.6.99

To the Chief Engineer, P.W. Department,

with reference to his endorsement No. 665 C. dated 31 January 1899 returned herewith with marginal notes.

Colonel RE.
Supg. Engineer, 5 Circle

neither do I. I propose to report separately on the question of stores in answer to C&S No. 2238 C. dated 2 May 1899.

88

15.6.99

EXAMINER,
P. W. ACCOUNTS.
20 JUN. 1899

GOVERNMENT OF MADRAS.

Public Works Department,

Chepauk, 4th Feby 1899

Dear Mr. Taylor.

Please see the figures marked with red ink under "12 General Charges" in the accompanying Sheet of Mr Lee's Inspection Report of the P.W. workshops which appear to be wrong. Will you kindly have them corrected from

P.W. 42
5460/99

P.W. DEPARTMENT.

READ the following:—

End^t to the Ex^e: P.W. Accts No 1410 A/A dy 8. Dec 98.
End^t from the Secy to Govt Mail No 344 dy 15. June 99
End^t from the Ex^e: P.W. Accounts. —— 844 A/A dy 4. Aug 99.

2819 W

Circulated to

H.E. the Governor

ORDER.

Class C

The correspondence recorded above relate to the Examiner's report of inspection of the Accounts of the Presy. P.W. Works. Dr. The following remarks and orders are recorded in connection therewith:—

Inspection Report para 3. The provisions of Ex^e 2836 W dy 7. Nov. 95 directing the preparation of estimates for every work in the Workshops costing Rs. 20 and above should be followed. It will be seen from Ex^e 1077 W dy 2. April 1892 that express orders were issued prohibiting

[P. W. 4
1,000—14-11-98.]

...e execution of private ...ork in the Workshops without ...e prior sanction of Gover... ...ent. The grounds on which ...t is proposed to depart from ...is rule should be explained.

Paras 4 and 5. The defects pointed out by the Examiner in the maintenance of the Work Orders and of the Workshop book are not explained by the General Superintendent. On the other hand, if does not appear as if there was no need for simplification.

The objject should be to reduce superfluous work without loss of efficiency and this will be impressed on the General Superintendent.

Para 6. The proposals of the Examiner for revising the form of the work book should be submitted in due course.

Para 11. The Suggestion of the Inspecting Officer that for all trifling jobs estimated to cost Re 1 or less, a nominal price of Re 1 be charged and

× I think it may be given only in special & exceptional cases. Vide Go. 10774, 2 Aug 87

The forms of accounts discussed in these paras. may be maintained for the present in the manner now in force until the revised form of work-book promised by the Examiner is submitted.

and credited to General Charges' and that the latter account be debited with the outlay, will be adopted as a tentative measure. Its working will, in consultation with the General Superintendent, be reported on after this System has been in force for a trial of one year.

Para 12. The suggestion made in this para, which is concurred in by the General Supdt and the Supdg Engineer & Conservator, that a fixed percentage on cost of labour on the basis of the average of the actuals of the preceding year, should be charged on account of 'General charges' and that any gain or loss resulting therefrom should be credited or debited to Provincial Revenue

is approved for immediate adoption. It will however still be necessary, as observed by the Inspecting Officer that the Rebates of these charges should be maintained as hitherto.

Para 13. The change in the system of levying percentage charges on work executed at the Workshops, recommended by the General Supdt and the Supdg. Engineer would in the opinion of the Examiner result in extra work and complication in accounts. No orders therefore seem called for.

Para 14. The Supdg. Engineer's remark that endeavours will be made to buy wood

may also be adopted, it being important that the store charges be placed on a proper commercial basis. The percentage charged for each year will be the actual average of the past 3 years. The Examiner will report on the working of the system now sanctioned after a years trial

is noted.

Para 16. The existing practice will be allowed to continue.

Para 18. The Government observes that the General Supdt is setting right the irregularities noted by the Inspecting Officer in the Stores & Workshops. The Genl Supdt & the S.E. which are adverse to the suggestion need any consideration, the matter may be taken up with the Inspection Report on the Stores accounts which has been sent to S.E. Ulwick for remarks.

× Note. No reference is made in the draft of the suggestion of the Inspecting Officer for amalgamating the Stores & the Workshops.

HH 2/8

L H U 4/8/11

C.J.

To the Supdg Engineer Mandalay
Ex P.W. accounts.

Returned
H U 4/8/11