

Public Works (1893) Department.

RAILWAY BRANCH.

G.O., No. 1102 & 1103 R

DATED 19th August

[Despatch Abstract.]

Store Balances.

Enclosed are report of the result of a test examination of the — of the Locomotive Dept. Madras Railway.

—
enclosed copy of Proceedings on report of the result of a test examination of the — of the Locomotive Dept. Madras Railway.

BACK PAPERS.

[illegible]

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Examiner's Report.

2. The amount at debit of suspense in the Audit office ledgers on account of the Locomotive Department on 31st December 1891 was Rs. 10,55,975-15-1.

3. In support of this balance I was furnished with the statement hereto annexed and marked A, amounting to Rs. 10,98,530-15-9, which, it may be observed, is Rupees 42,555-0-8 in excess of the Audit office balances.

Replies of Railway Officers.

2. The amount stated to be at debit of the Locomotive Department in the Company's books on the 31st December 1891 is correct.

3. The amount mentioned by the Examiner (Rs. 10,98,530-15-9) merely represents the ledger balances of all stores priced at valuation, which valuation is intended to be as near as possible the average rate at which they are received. The amount at debit of the locomotive stores and workshop account was Rs. 10,66,103-0-8 or Rs. 10,127-1-7 in excess of the balance in the Company's books. This amount, however, merely represents certain debits and credits which were adjusted during the first half of the following year.

Examiner's further Remarks.

2. No remark called for.

3 (a) My report is correct.

(b) The valuation put on stores in stock was, as previously stated, Rs. 10,98,580.

(c) The figure of Rs. 10,66,103 now quoted by the Railway officers is the balance on the general account current of the Locomotive Department and not the value of its stock in hand which is the point dealt with in my report.

(d) The fact of the account current of the Locomotive Department being only slightly different from the audit books does not affect the question raised.

(c) Rs. 10,66,103 is the balance of all book transactions connected with the receipt and issue of stores and with the outturn of the shops.

(f) Those book transactions are liable to error and the stock valuation is, or should be, used for the purpose of testing the accuracy of the book balance.

(g) I consequently hold to my assertion that the balance in the audit books is Rs. 42,555 less than the valuation placed on stores on hand.

(A) A discrepancy I had not remarked upon is now, however, brought forcibly to notice by the Railway officers, viz., that the locomotive stock valuation lists which exclude unfinished works (amounting roundly to Rs. 60,000) are Rs. 32,427 in excess of the balance in the account current of that department.

4. From a perusal of list A I noticed that the total assets had been unduly reduced by the following items:—

	Rs.	A.	P.
Pendencies ...	21,994	12	9
Credit balance on Indian coal account ...	8,845	4	4
Total ...	30,840	1	1

5. In the course of investigation it further transpired that a balance of about Rs. 60,000 expended on articles in course of manufacture but unfinished on 31st December had not been dealt with as an asset of the Company and included in the list.

4. The reference to the amount of pendencies is slightly misleading; they represent issues from the general stores of materials (mostly newly arrived from England), for which the prices could not be ascertained on account of the non-receipt of landing charges bills, &c.; but although they did not thus form part of the locomotive store accounts they did form part of the general stores balance in the Company's books and are thus in order; the question of reducing outstanding pendencies has already had attention in the Audit office.

5. There is some error in the amount mentioned here; the actual amount (Rupees 31,744-10-8) was duly taken to account in the month of January 1892 in accordance with the custom which has obtained for very many years. Since July of last year, however, the Locomotive Superintendent has separated his stores from his workshop accounts and the amounts expended in each month on articles in course of manufacture are brought to account in the same month's workshops accounts.

4 (a) The statement is not misleading so far as the Locomotive Department is concerned, which is the department dealt with in my report.

(b) The Locomotive Department store has received credit for Rs. 21,994 worth of stock which it has never been charged with and must have therefore fixed prices for them although they may have been only estimated.

(c) Under the circumstances stated by the Railway officers, it should have been a simple matter to have made a transfer to the extent of the estimated value put upon the issues by the Locomotive Department and thereby to have removed the pendency.

(d) It is satisfactory to note that the question raised in this and the engineering report regarding pendencies has had attention, but it might be interesting to know what has actually been done. I would therefore suggest that a report on the question be submitted six months hence.

5 (a) The statement made by the Railway officers regarding the "actual amount" is erroneous.

(b) Rs. 31,744 is the amount expended in the month of December only.

(c) It does not include the value of work done in previous months.

(d) When I asked for details of the accumulated balance they could not be produced; but, as the balances of subsequent periods were found to average Rs. 60,000, I adopted that figure.

(e) The Railway officer's statement in saying that the item of Rs. 31,744 was duly taken to account in January is misleading inasmuch as my report alludes to an omission from the valuation lists made in December and not to items dealt with in the Company's books in the January following.

(f) The separation between stores and workshop accounts referred to by the Company was made at the suggestion of this office, and, although it is a great improvement in system, it does not affect the point now in question.

6. The items referred to in paragraphs 4 and 5 will still further augment the excess of actual stock over the audit ledger balances.

7. The question of pendencies was fully dealt with in paragraph 8 (m) of my report on the Engineering Department and the same necessity exists in the Locomotive as in the Engineering and other departments of establishing a system by which the large balance of pendencies may be reduced to a minimum.

8. The credit balance on the Indian fuel account is fully reported on in para. 11 (h) hereinafter.

9. The statement marked A previously referred to did not contain any details of quantities and prices of stock in hand, and, for the purpose of test audit, it therefore became necessary for me to see the actual detailed stock lists which were promptly produced by the Locomotive Superintendent.

10. From the lists furnished by the Locomotive Superintendent, I extracted a statement showing the quantities and prices of all articles in store exceeding Rs. 2,000 in value and this statement is appended and marked B.

6. See our remarks on paragraphs 3 and 5.

6. My replies to paragraphs 3 and 5 will show that my original statement is correct.

7. See latter part of our remarks on paragraph 4.

7. See also my remarks on same paragraph.

8, 9, & 10. No reply needed.

8, 9, & 10. Call for no remark.

Examiner's Report.

Replies of Railway Officers.

Examiner's further Remarks.

11 (a) Having thus obtained the details of the principal items of stock in hand, I proceeded to compare the prices fixed on the articles with current market rates and to generally test the accuracy of the balances.

(b) I found that the system in force is to maintain quantity ledgers only, but, as in the case of all important articles this system involves the upkeep of separate priced accounts current, I formed the opinion that very little extra labour would be required to keep priced ledgers for all important articles as suggested in my report on the Engineering Department.

(c) With the exceptions of coal and firewood referred to in separate paragraphs, the stocks on hand agreed with the ledger balances and had from time to time been tested by the permanent staff of stock-takers employed in the Audit branch.

11 (a) The expression "current market rates" is not understood.

(b) The system in force is to maintain quantity ledgers only and it is only in the case of timber and fuel (out of some thousands of articles) that separate priced accounts are kept; to keep priced accounts for every article mentioned in the ledgers would more than double the work and would necessitate the entertainment of some six additional clerks. In our opinion the present system is to be preferred in every way, and, as it would be an exceedingly difficult matter to agree upon what should be considered as important articles, it could only end in pricing every article without exception.

We may mention that priced ledgers were kept at Perambur many years ago, but were stopped in 1875 apparently with the approval of the Government officials.

(c) No reply needed.

(b) (i) There should be no difficulty in the Company's Agent or Auditor settling with the Consulting Engineer or Examiner a list of important articles. Priced accounts should certainly be maintained for such items as—
Wood fuel, Wheels,
Coal, Axles,
Timber, Under-frames,
and other stocks which are either highly priced or kept in large quantities.

(ii) The Company's statement may be misinterpreted to mean that priced accounts are now kept for timber and fuel, but such is not the case.

(iii) Periodical priced balance sheets are prepared, but no regular monthly system of priced accounts is maintained.

(c) Calls for no remark.

(d) Firewood account—Rupees
1,04,285-5-0.

(i) The locomotive stock ledger showed an excess quantity of 23,828,560 lb. over the stock lists owing to wood received and not paid for having been excluded from the audit ledgers.

(ii) A system is necessary as on State lines of taking all stock received to debit of stores and of crediting unpaid bills to the store purchase account (the value of the firewood omitted from the accounts was Rs. 51,753).

(iii) The stock taken to account seemed to be as fairly valued as possible on a system of averages, viz., at Rs. 2-3-4, compared with Rs. 2-2-9, the average cost of wood received during the period.

(e) Coke account, Rs. 11,024-10-3. —The value of this stock was under-stated by about Rs. 1,468, the value per ton being taken at Rs. 4-5-6; whereas the actual average cost was about Rs. 27-9-3 per ton. This was due to the issue rate having been somewhat too high.

(d) (i) No reply needed.

(ii) The required change was made in the Company's accounts for the half-year to 31st December 1892 and the value of all stores taken into stock and not paid for is debited to the respective store accounts and adjusted through the stores outstanding account. The Government Examiner was informed of this change in the accounts on the 31st January 1893 one month before his report was written.

(iii) No reply needed.

(d) (i) This point is dealt with in the next paragraph.

(ii) (a) The report was written long before it was printed and dated; hence I omitted to notice that the Company had, owing to my representation, partially agreed to introduce such a system for future transactions although it was not in force during the period under review.

(b) The system adopted by the Company is however still incomplete as a six-monthly list of out-standings is prepared and dealt with in June and December only.

(c) The accounts of each other month including the last month in the financial year are still always incorrect.

(d) The books should be correct all the year round like those of the Great Indian Peninsula, the Bombay-Daroda and Central India and other railways.

(iii) Calls for no remark.

(e) This would be a fair way to adjust the error, but no allusion is made to the prevention of further error by fixing a new price; possibly this has been done.

(N) English coal, Rs. 3,225-10-2.

—The value of this stock was also slightly under-stated in the lists, the price being fixed at Rs. 25-14-6 against a cost price of Rs. 26-11-7; the reduction in price was due to a small surplus stock brought out by stock-taking and to the fact of specially augmented rates having been charged to other departments and in private work bills.

(g) Patent fuel, Rs. 42,353-2-5.

—This stock was also under-valued to the extent of about Rupees 2,388, the price having been fixed at Rs. 21-3-11 against a cost price of Rs. 22-7-1; the reduction in price is due to the same causes as those referred to in paragraph (N) regarding English coal.

(h) Indian coal, Cr. Rupees 8,845-4-4.

(i) The stock lists showed a credit balance of Rs. 8,845-4-4 in amount and a debit balance of 333 tons in quantity.

(ii) Valuing the 333 tons at Rs. 14-12-6 per ton, which was the average actual cost of fuel purchased, the value of Indian coal has been under-stated in the stock lists by Rs. 13,773.

(N), (g), (h) (i) to (iii). Similar adjustments are proposed to be made if found of sufficient importance.

(N), (g), (h) (i) to (iii). This would be a fair way to adjust the errors, but no allusion is made to the prevention of further errors by fixing new prices.

The error of Rs. 13,773 in Indian coal will, it is hoped, be of sufficient importance for early adjustment.

(iii) This under-statement would have been still greater but for the fact that an amount of Rs. 5,182 which was deficient on Trincomalles timber account had been transferred in the previous half-year in reduction of the excess balance on the coal account.

(iv) Such adjustments should not, in my opinion, be made without previous sanction and record at official meeting.

(v) The excess on the stock of coal may be due to a system which obtains of adding 5 per cent. for wastage to the actual issues to drivers.

If this is the case, it may be possible to reduce the percentage, as such excess in stock may lead to speculation.

I cannot find any authority of Government to charge this rate of 5 per cent. for wastage.

(vi) Again 5,454 tons of coal costing Rs. 80,617 received during the half-year have been omitted from the stock lists, owing to the want of system referred to in para. (d) of taking unpaid bills to debit of stock and credit of purchase account.

(iv) This will be attended to in future if such adjustment be again requisite. (iv) It may be noted that Company agree to obtain sanction to stock adjustments in future.

(v) The percentage for wastage has been allowed for very many years, but will be discontinued, but to regularize by sanction and, if necessary, revise the rates.

(vi) See our remarks on paragraph 11 (d) (ii). (vi) See also my note to same paragraph.

Examiner's Report.

Replica of Railway Officers.

Examiner's further Remarks.

(i) Teak Timber, — Rupees
2,68,589-13-10—

(i) The balance on this account was made up as follows:—

	Rs.	P.	D.
Scantling in the mill—			
Bert ..	3,862	7	
Rough at 96 cubic			
feet per ton ..	22,339	0	
Waste at 110 ..			
cubic feet per 1,025 0			
ton ..			
Waste at 53 lbs.			
per cubic foot ..	66	0	
Uncut logs ..	697	4	
Scantlings in the			
shed, best ..	14,337	8	
	Rs.	P.	D.
43,327 7-0-1 = 1,06,119			
992 1-0-0 = 2,373			
54,994 8-0-1 = 71,204			
Uncut logs ..			
Do. ..			
Total ..	2,68,589		

(ii) The price of scantling shown above was double the price of timber in log, resulting in an apparent loss by wastage and cutting of 100 per cent.

(iii) But as the actual wastage of the period worked out to 50 per cent. only, the price of teak scantling would appear to have been much overstated.

(iv) Thus if to the price in log,

(i) (i) The inclusion of 697.4 cubic feet uncut logs in the scantling account at scantling price was an error and will not occur again.

(ii) There is some error here; a loss of 100 per cent. would mean the loss of the entire log.

(iii) & (iv) There is also some error of calculation here; from long experience it has been found that between the log and the scantling as issued to works there is an average loss of about 50 per cent., and it is therefore quite correct to value the scantling at about

(i) (i) Noted. This is an admission of the error alluded to in para. 11 (i) (vi) of my report.

(ii) (a) The cost of the timber in log has been increased by 100 per cent. in converting it to scantling whereas it is usual in the Engineering Department to increase it by 50 per cent. only.

(iii) & (iv) (a) As stated in the previous paragraph, my figures are based on the argument that there has not been a loss of 50 per cent. in quantity but an increase of 50 per cent. in price.

(b) The loss in quantity has been taken at 33 per cent. or thereabouts, which results in an increased cost of

Ra. 2-4-8, 50 per cent. be added for wastage and cutting or Ra. 1-2-4, the price of scantling would be Ra. 3-7-0 per cubic foot instead of Ra. 4-8-1 as shown in the stock lists (even a figure of Ra. 3-7-0 is apparently high as the issues of teak timber from the Engineering stocks during the same period were made at the rate of Ra. 2-5-0 per cubic foot).

double the rate in the log to keep the balance on the right side; for example —

Ten logs paid for as measuring	Rs.
500 cubic feet at Ra. 2 ..	1,000
The whole scantling out from these 10 logs when issued to works is found to measure only 250 cubic feet (a loss of 50 per cent.) and this must be issued at double the log rate Ra. 2 x 2 = Ra. 4 to make up the cost of the ten logs ..	1,000

For 500 cubic feet at Ra. 2 = Ra. 1,000.

166 1/2 " wastage 33 per cent.

333 1/2

333 1/2 cubic feet of scantling cost Ra. 1,000 = Ra. 3 per foot or 50 per cent. in excess of rough logs at Ra. 2.

(c) As pointed out in a subsequent note against the Company's reply to my original para. f (iii), the wastage on timber manufactured during the year 1892 amounted to 40 per cent. which is very near the rate I assumed for 1891.

(d) This should be credited in reduction of the price of the outturn, not to working expenses. Otherwise, in the case of construction of stock, capital will be overcharged for its timber.

(e) I may possibly have under-stated the price of engineering timber, but the teak timber account of that department was in such a confused state that it is not surprising that a mistake should have occurred.

(ii) Even, however, if the price of the engineering scantling be Ra. 3-7-6 as now stated by the Railway officers, the price of locomotive scantling Ra. 4-8-1 is still 30 per cent. in excess of the engineering rate.

(j) Since the issue of my former report, I have analyzed the locomotive teak timber account of the year 1892 and found that the consumption, outturn and waste of the saw mill as brought out by the Company's books were as follows.

There will be of course in hand the outside and waste timber which comes from the log in process of cutting and this will be returned into stock at a valuation and credited to working expenses.

Another error is made in the latter part of (iv) regarding the price at which the Engineers charge their timber; it is true they charge the timber at Ra. 2-5-0 per cubic foot issued, but to arrive at the amount issued, they first add 50 per cent. to the quantity actually used and charge the total at Ra. 2-5-0, so that they really charge their timber at Ra. 3-7-6 per cubic foot.

Their smaller wastage (33 1/2 per cent. against 50 per cent.) is supposed to be caused by their dealing with beams and planks of much larger dimensions than the Locomotive and Carriage department.

	Stock scantling.	Rough.	Logs.	Total.
(i) Consumption—				
Timber in mill at commence-				
ment of year	3,883	22,339	607	26,829
Received during year ..	24,920	..	60,688	86,488
Total Receipts	27,783	22,339	61,235	111,357
Less stock at close of year ..	4,064	8,681	104	13,069
Total consumption ..	23,699	13,658	61,131	98,288

(ii) Outturn—

Issues to works	26,535
Do. to shed stock	32,777

Total outturn ... 59,312

(iii) Wastage = 98,288 — 59,312 = 38,976. A wastage of 38,976 on a consumption of 98,288 is equal to 40 per cent.

(iv) A loss of 40 per cent. in quantity is equivalent to an addition of 66 per cent. to the price instead of 100 as stated by the Company.

(v) A log price of Rs. 2-4-0 per cubic foot increased by 66 per cent. will give scantling at a value of Rs. 3-11-9 per cubic foot instead of Rs. 4-8-1 as shown in the valuation lists.

(v) & (vi) The calculation therefore that the scantling is over-valued is shown to be incorrect and the only error is that of Rs. 1,543 (actually Rs. 1,483-5-9) mentioned in (vi) and our remarks on (v) (i).

(v) The teak scantling account would therefore appear to have been over-valued by at least Rs. 46,260 owing to the excess price on scantling.

(vi) Again, 697 cubic feet of uncut logs in the mill awaiting manufacture have been priced as scantling at Rs. 4-8-1 instead of as uncut logs at Rs. 2-4-8, resulting in a further over-valuation of about Rs. 1,543.

(vii) The teak scantling has therefore apparently been over-valued to the extent of about Rs. 47,800 in all.

(viii) This error is, in my opinion, due to the absence of priced saw mill and scantling accounts.

(ix) Under the procedure in force quantities alone were dealt with and a periodical account current of all receipts, issues and charges was prepared and priced.

(x) The balance brought out by this account was assumed to represent the value of the stock in hand, logs being first valued at cost price and the residue assumed to be the value of the scantling.

(xi) By this system all errors in accounting or pricing were added to the value of scantling. As an instance of how errors have arisen, I may state that in a preceding half-year when the value of the starting balance was Rs. 5-8-0 per cubic foot, the issues to works were made at Rs. 3 per cubic foot and the difference of Rs. 2-8-0 per foot

This is admitted to be an error—*vide* para. (c) (i).

(vii) & (viii) Having shown that of the Rs. 47,800 supposed over-valuation, only Rs. 1,483 is correct, there appears to be little need of further remark.

(vii) & (viii) (a) See my remarks on (vi) which may lead to a reconsideration of the subject.

(ix) to (xi) (b) My remarks on the erroneous system resulting in the grave errors pointed out in paras. (ix), (x) and (xi) have been passed unnoticed.

(c) It is now most unsatisfactory to have to state that during the year which has elapsed since the preparation of the valuation lists under review, other important errors have occurred, and that the price of scantling has, without any apparently reasonable cause, increased from Rs. 4-8-1 to Rs. 6-2-5 per foot as may be seen from the following figures extracted from the locomotive returns for June and December 1892:—

	June half-year, 1892.			December half-year, 1892.		
	Rs.	A.	P.	Rs.	A.	P.
(a) Price of scantling in stock at commencement of period	4	8	1	4	8	1
Price of uncut logs during period	3	0	7	3	0	7
Average price at which scantling has been issued during period	3	4	10	3	4	10
Maximum price at which issued	4	0	0	4	0	0
Price of scantling at close of period as brought out by account current	7	5	8	7	5	8
Percentage—the rate, per foot, of scantling exceeds the rate per foot for uncut logs	361			310		

was therefore thrown upon the value of the balance in hand at the end of the period which thereby became unduly augmented to a value of Rs. 7 per cubic foot.

(e) It is therefore most imperative that the timber account should be put on a satisfactory footing at once.
(f) The present system, which permits the price of scantling to jump from Rs. 4-8-1 per foot to Rs. 6-2-5 in 12 months when the cost of logs purchased has decreased, is scarcely capable of defence.

(g) It will probably be found that the bulk of the error lies in the want of a system of priced work orders in respect of the sawing operations connected with the second cutting of scantling for issue to works.

(h) From my previous note against para. (f) it may be seen that 23,699 cubic feet of best timber passed through the mill during the year 1892.

This timber was valued at Rs. 4-8-1 per foot = 1,06,769
but was issued at an average rate of Rs. 3-4-10 = 78,256

or at a loss of 28,513
(i) If the timber was retawn and a loss of only 10 per cent. arose on the operation, there would have been a further loss of 10,677

resulting in a total loss of 39,190

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(xii) The following priced accounts would appear to be necessary to permit timber transactions being correctly recorded.

(xiii) A saw-mill account taking to debit all logs and scantling sent in for cutting and the cost of the operations and credit; by issue to works or store accounts of each quality; for the actual value of the outturn.

(xiv) Separate scantling accounts of each quality to be debited with saw-mill outturn and credited by actual issues or sales.

(xv) A log store account to be debited with the actual cost of and charges on logs taken into store and credited with the value of the actual issues to saw-mill, works or other heads.

(ix) to (xv) The accounts at Perambur for teak timber are kept in the following manner:—

- (1) A log account.
- (2) A saw mill account.
- (3) A scantling account.

and to these will be added accounts dealing with outside and waste timber as per our remarks on paras. (ii) (iii) and (iv).

(j) Again 13,458 feet of rough scantling, valued at Rs. 4-8-1 per foot, were also recut and issued at the average rate of Rs. 3-4-10, involving a further loss of Rs. 16,192 upon the same basis.

(k) Works would thereby have been undercharged by Rs. 55,382 and the price of stock in hand would, by the Company's system of account, have been unduly inflated to the same extent.

(l) A loss of Rs. 55,382 distributed over a stock of 36,130 feet would have increased the price thereof from Rs. 4-8-1 to Rs. 6-0-7 per foot which is very near the rate now stated by the Company as the value of scantling.

(xii) to (xv) (i) I wish it not to be lost sight of that my chief suggestion in this paragraph is the introduction of priced accounts and work orders for manufacture of timber of each class, which points are not dealt with by the Company's officers although they make a general allusion to the question elsewhere.

(ii) Without priced accounts there will, in my opinion, always be a great liability to error.

(b) (i) The system now in force of reducing the ledger quantities of inferior timber instead of issuing them at reduced prices is, in my opinion, another cause of much of the misunderstanding on the subject of wastage.

(ii) For instance, an actual quantity of 42,892 cubic feet of rough scantling is stated in the accounts as only 22,339 cubic feet.

(iii) Wastage which should be calculated on the gross quantities of timber manufactured is now based on reduced assumed quantities.

(iv) Again under the system now in force, waste which sells at five and a quarter annas per foot is stated in the Company's accounts at a value of Rs. 4-8-1 per cubic foot.

(c) It may be noticed that the Company will introduce accounts dealing with "waste" timber.

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(l) The balances at debit of Locomotive Department shown in the audit ledger and the locomotive balance sheets were at the period under review inclusive of both stores and workshop transactions and it was impossible to ascertain monthly from these records the separate value of stores and of workshop balances. This system has, at my request, been subsequently modified and the locomotive returns made to show the transactions separately.

(m) Stores at up-country depots.—

(i) As in the case of the Engineering Department, a large amount of detailed ledger-keeping is thrown upon Foremen at out-stations which might be avoided by a system of imprets.

(ii) The Foremen now keep unpriced ledgers which are periodically balanced and the result sent to the head office for valuation.

(iii) It is noticed that a considerable stock of springs, axle chains, spare wheels, &c., in the hands of Foremen have not been included in this head office valuation.

(iv) These omissions may roundly be stated at Rs. 14,000 (*vide* statement C).

(v) It is stated in explanation that these items have been charged off to works as soon as they were issued to the Foremen which is irregular.

(vi) A system of imprets would also remedy this as well as save time in accounting as suggested in paragraph 1.

(n) It is satisfactory to note that there is not the same reason to complain of the returned stores system as there was in the case of the Engineering Department, although there are some few items borne on the books without value at Perambur, which, it is estimated, are worth about Rs. 5,000 (*vide* statement D).

12. (i) Until the receipt of recent orders to reduce the pay of the appointment of the Locomotive Accountant, that officer had been under the direct control of the Company's Auditor.

(ii) Since the reduction, he has, however, been placed beyond the jurisdiction of the Auditor.

(iii) This was not a necessary sequence to the Government order to reduce the pay of the appointment, and in my opinion the old system should be reverted to.

(l) See our remarks on para. 5.

(l) See also my remark on same paragraph.

(m) (i) to (vi) The Examiner's proposition is considered a very reasonable one so far as the majority of the stores kept up-country are concerned and it will be brought into effect as far as possible at an early date. The stock of such stores now in charge of Foremen will be re-debited to the Store Account and credited to Working expenses.

(m) (i) to (vi) It may be noted that the suggestions are adopted and the Company should be asked to report the date on which they are brought into effect.

(n) (i) The Company's suggestion is what I should have recommended had I known the stores were not required.

(ii) It is satisfactory to note that the report will have caused even a small reduction in the Company surplus stores.

12. (i) to (v) From 1st January 1889 to early in 1892, the Locomotive Accountant was considered to be an Assistant to the Chief Auditor. The Board in directing his transfer to the Locomotive Department expressed themselves so strongly on the subject that we do not think it within our province to offer an opinion.

12. (i) to (v) Await result of reference to Board—*vide* Agent's No. 490, dated 7th June 1893, forwarding the reply of the Railway officers.

(iv) Although the Board in its No. 867, dated 27th May 1892, suggested the Locomotive Accountant being put under the direct control of the Locomotive Superintendent, the actual sanction by Government was to an Accountant for the Audit office establishment whose pay should be allocated to Locomotive Department as is the usual custom.

(v) The Locomotive Accountant as on State lines, should, in my opinion, hold the same relations to the Locomotive Superintendent and Auditor as an Accountant on the Public Works Department does to his Executive Engineer and Examiner.

13. Before concluding, I would beg to recapitulate the following important points noted in this report and to ask you to take such action thereon as you may consider expedient. In this respect I would further draw special attention to an opinion expressed by the Accountant-General, Public Works Department, in his No. 582 R., dated 18th June 1892, printed as Appendix A on several of the points herein raised:—

(a) The audit ledgers and locomotive balances should at once be made to agree.

13. (a) The Locomotive Stores suspense accounts in the Company's books are now in practical agreement with the balances of the Locomotive Stores and Workshop Accounts.

13. (a) (i) This statement is based on data which I contend is erroneous.

(ii) The books and accounts both of the Audit and Locomotive departments should periodically be adjusted so as to be in exact accord with the lists showing the value of the stock in hand.

(iv) Although the Board in its No. 867, dated 27th May 1892, suggested the Locomotive Accountant being put under the direct control of the Locomotive Superintendent, the actual sanction by Government was to an Accountant for the Audit office establishment whose pay should be allocated to Locomotive Department as is the usual custom.

(v) The Locomotive Accountant as on State lines, should, in my opinion, hold the same relations to the Locomotive Superintendent and Auditor as an Accountant on the Public Works Department does to his Executive Engineer and Examiner.

13. Before concluding, I would beg to recapitulate the following important points noted in this report and to ask you to take such action thereon as you may consider expedient. In this respect I would further draw special attention to an opinion expressed by the Accountant-General, Public Works Department, in his No. 582 R., dated 18th June 1892, printed as Appendix A on several of the points herein raised:—

(a) The audit ledgers and locomotive balances should at once be made to agree.

13. (a) The Locomotive Stores suspense accounts in the Company's books are now in practical agreement with the balances of the Locomotive Stores and Workshop Accounts.

13. (a) (i) This statement is based on data which I contend is erroneous.

(ii) The books and accounts both of the Audit and Locomotive departments should periodically be adjusted so as to be in exact accord with the lists showing the value of the stock in hand.

(iii) The views of the Accountant-General, Public Works Department, should therefore at once be given effect to, viz:—

It should be satisfactorily established that the stock valuation lists are correct, and the excess in value of stores over ledger balances should be adjusted by credit to the head of account overcharged; differences between store valuation lists and audit ledgers should thereafter be adjusted half-yearly (or at such other time as valuation lists may be completed).

(iv) As the valuation lists reported on are now nearly eighteen months old, I would suggest that the first adjustment be made upon the most recent valuation lists in existence and that the several points brought to notice in this report receive due attention when making the adjustment.

(b) A separation has been made between manufacture and store transactions, but the book balances have not been augmented and made to agree with the valuation lists of stores and unfinished works combined.

(c) (i) Noted; but see my remarks regarding a report on action taken.

(ii) Requires consideration of Government. I disagree with Company's views, and the Accountant-General, Public Works Department, considers a numerical system is not one calculated to give correct results.

(iii) See my remarks suggesting a report of the date when brought into effect.

(iv) Noted. A report should be furnished of the date on which this has been done.

(v) Noted.

(b) Already done from July 1892 as stated in our reply to para. 5.

(c) (i) Already having attention.

(ii) Not considered desirable or necessary, extra expense would also be incurred to no good purpose.

(iii) Agreed to as far as possible; see para. 11 (m) (i) to (vi).

(iv) Agreed to; see para. (n).

(v) Agreed to; see 11 (h) (iv).

(b) The manufacture balance should be treated as an asset and added to the audit ledger balances.

(c) As suggested in my report on the Engineering Department—

(i) The system of pendencies should be improved.

(ii) Priced ledgers should be kept for all important articles.

(iii) A system of imprests should be introduced to reduce ledger-keeping at out-stations.

(iv) All stores standing on the books without value should be appraised and taken to account.

(v) All important stock adjustments should be submitted for the approval of the Consulting Engineer to Government.

(d) The following apparent discrepancies should be investigated and explained, and, if necessary, adjusted in the accounts and stock lists; the net reduction in value being met by reducing the total excess of locomotive stock over the audit balances before making the adjustment suggested in paragraph (a):—

	Excess value entered in stock lists.	Short value entered in stock lists.
Coke, para. 11 (c)	Rs. 1,468	Rs. ..
Patent fuel, para. 11 (g)	2,388	13,773
Indian coal, para. 11 (4) (ii)	47,800	..
Teak timber, para. 11 (i) (vii)	13,276	..
Sundry items— <i>vide</i> para. 11 (i)	61,079	17,629
Total	125,941	17,629

(e) To prevent such large items as Rs. 51,753 on firewood and Rs. 80,617 Indian coal being omitted from the stock lists, a system should be introduced of taking to account all articles received into store, whether paid for or not, by means of a purchase account.

(f) The system of charging varying prices for the same article should be abandoned, and supervision, &c., arranged for by the addition of special percentages.

(d) See replies to para. 11 (e), (f), (g), (h) (i) to (iii) and (j).

(d) (i) See also my replies which involve reconsideration of the question.

(ii) An adjustment between book balances and stock lists is necessary even if the disputed items are found to require no alteration in value.

(e) Already attended to; see our reply to para. 11 (d, (ii).

(e) See my note to same para. pointing out necessity for monthly instead of six monthly adjustments.

(f) See remarks on para. 11 (4).

(f) (i) See my remarks on same paragraph pointing out that Locomotive Department may receive credit for actual outlay but not for supervision by the Permanent staff.

(ii) This point has been referred to the Board and its reply may be awaited (*vide* Agent's No. 490, dated 7th June 1893, forwarding the reply of the Railway officers).

(g) The system of accounting for timber should be considered and if thought necessary revised—*vide* para. 11 (i) xii.

(h) The question of the position of the Locomotive Accountant should be considered and finally settled—*vide* para. 12.

(i) The rate allowed for waste on coal should be tested and a rate for future guidance recorded at official meeting.

14. The net financial results of my investigation would appear to be as follows:—

(i) The lists of locomotive expenses balances submitted amounted to ..	Rs. 10,55,631
(ii) These lists omitted the following items, viz.:—	Rs. ..
Unfinished works about ..	60,000
Short value on stores—	..
<i>vide</i> para. 13 (d) ..	17,629
Coal and firewood received but not paid for—	..
<i>vide</i> para. 13 (c) ..	1,92,370
Debits to clear pendencies—	..
<i>vide</i> para. 4 ..	21,984
Stores burnt on the books without value— <i>vide</i> para. 11 (m) (iv) and (e) ..	19,000
Total omissions ..	2,50,993

(iii) And included the following errors:—

Over-valuation owing to excessive prices— <i>vide</i> para. 13 (d)	Rs. 61,079
--	------------

(iv) Resulting in a net omission of ..

Rs. 1,99,914

(v) and a total value of stores and unfinished works in charge of the locomotive of ..

Rs. 12,98,445

instead of Rs. 10,98,531 as shown in the lists submitted for inspection.

(g) See remarks on para. 11 (i) (ix) to (xv).

(g) See also my remarks on same paragraph pointing out the desirability of priced instead of unpriced accounts.

(h) See remarks on para. 12 (i) to (v).

(h) See also my remark on same paragraph to the effect that the question has been referred to the Board and its reply may be awaited.

(i) See remarks on para. 11 (4) (v).

(i) See my remarks on same paragraph pointing out that I had no desire to abolish the system but that I merely wished a revised rate to be properly sanctioned.

14. (i) to (v) It has been shown that many of the items in this paragraph are either incorrect as to amount or have since been arranged and it is not therefore considered necessary to reply further.

14. (i) to (v) (a) The original paragraph in my report is a correct statement of the condition of affairs at the date reported on.

(b) If, as stated by the Company, I have underestimated the value of the teak timber (which is doubtful) the adoption of the Company's valuation will have the effect of reducing the deduction item of Rs. 61,079 and thereby augmenting instead of decreasing the value of the stock omitted from the valuation lists.

Examiner's Report.

(vi) The above figures show that the locomotive stock lists as submitted are nearly Rs. 1,90,000 short of the value of the stock in charge of the Locomotive department and that a very serious error has apparently been made in pricing the stock of teak timber.

(vii) The Audit office books, moreover, understate the value of the Locomotive department assets by Rs. 2,32,469 and omit liabilities for stores purchased to the extent of Rs. 1,32,870.

15. Attention having recently been called to the heavy store balances of the Madras Railway, I would finally point out that the balances complained of in the Government of India letter do not fully state the value of the stock in hands of the Company owing to the system referred to in this report of omitting to take into the stock lists the value of stores purchased on credit and to the system in the Engineering Department of omitting to price certain returned stores.

Replies of Railway Officers.

(vi) & (vii) Our previous remarks prove that the balance as per the Company's books correctly shows the amount paid to debit of the locomotive stores account, while we have already arranged to debit all stores accounts with the value of stores received and not paid for at the end of each half-year.

(15) We do not propose to reply to this paragraph, as the main question of the total amount of capital to be kept locked up in stores is already receiving attention under your direct instructions, while the question of reducing the present stores balances is already partially reported on under your letter of the 22nd February 1893, No. 7457/1415.

(Signed) J. LIGHTFOOT,
Examiner, Railway Accounts,
Madras.

(Signed) A. PILKINGTON,
Ag. Locomotive Superintendent.
(Signed) F. DUNSTERVILLE,
Chief Auditor.

10th July 1893.

(Signed) J. LIGHTFOOT,
Examiner, Railway Accounts, Madras.

10th July 1893.

Examiner's further Remarks.

(vi) and (vii) (a) The first part of this remark is irrelevant.

(b) The point at issue is that the stock lists are considerably in excess of book balances and the two should be made to agree.

(c) It has been explained in para. 11 (d) (ii) that the half-yearly adjustment of store accounts is not a satisfactory one and that the Great Indian Peninsula Railway system should be adopted.

(15) Calls for no reply.

19TH AUGUST 1893, No. 1102 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

Report by the Examiner of Railway Accounts, Madras, on the locomotive store balances of the Madras Railway, dated 28th February 1893, No. 129-A.

Letter from the Agent and Manager, Madras Railway, dated 7th June 1893, No. 490, with enclosure.

A further note by the Examiner of Railway Accounts, Madras, on the same subject, dated 10th July 1893.

ORDER—dated 19th August 1893, No. 1102 R., Public Works.

The whole of the points requiring attention are summarized in paragraph 13 of the Examiner's report and the following orders are issued on each of the various points therein raised, viz.:—

Subject.

Order.

- (a) The audit ledgers and departmental balances should be periodically agreed and adjusted.
- (b) Charges on unfinished works should be entered in valuation lists as assets.
- (c) (i) The system of pendencies should be improved.
- (ii) Priced ledgers should be kept for all important articles.

The views contained in paragraphs 13 (ii), (iii) and (iv) of the Examiner's final note are accepted and it is considered desirable they should be acted on: with the exception that the adjustment may, if preferred, be made annually instead of half-yearly.

The Examiner's views are accepted and the value should be included when making adjustments under the orders issued on (a).

It is noticed that this matter is receiving attention, but the Company should, as suggested by the Examiner, be called upon to submit a report in six months from this date showing what has actually been done in the matter.

The present system appears to be unsatisfactory and it is considered that the following priced records, at least, are necessary:—

- (a) (Register of stores received) agreeing monthly with the store bills, English charges, returned store notes and other debits and liabilities taken to account in the audit ledgers.
- (b) (Register of stores issued) agreeing monthly with the total issues and other credits booked by audit.

Subject..

Order.

(c) Ledger agreeing with (e) and (l) and posted—

(i) in the case of important items (as from time to time agreed between the Examiner and Auditor) to separate ledger accounts;

(ii) in the case of minor articles; to class heads, such as—

(a) leather, goods,

(b) stationery,

(c) forms,

(d) indian rubber goods,

(e) &c., &c., &c.;

(iii) if considered necessary, ledgers showing quantities only to be also maintained in support of the aggregate balances in the class ledger heads specified in (ii) above.

(d) The ledger balances could, from time to time, be tested, as at present, by priced valuation lists and stock taking.

(e) The priced departmental store transactions could, however, be maintained in monthly balance sheets instead of in ledgers, if considered advisable.

(iii) Imprests should be maintained in lieu of ledger-keeping at out-stations.

It is noted that the suggestion of the Examiner is accepted, but the date on which the system has been brought into effect should be intimated by the Company.

(iv) All stores standing on the books without value should be appraised and taken to account.

It is noted that the Examiner's suggestion is accepted, but a report should be submitted by the Company showing when the system has been brought into force.

(v) All important stock adjustments should be submitted for the approval of the Consulting Engineer.

It is noted that the Company agree to this arrangement and it will be sufficient if items exceeding Rs. 500 are recorded at official meeting in detail with the approval of the Consulting Engineer, and items of Rs. 500 and under in lump monthly sums with the approval of the Company's Agent and Manager.

(d) Adjustment of discrepancies.

This point is covered by the orders on (e).

(e) Purchase and sales accounts.

(e) (i) It is considered advisable that purchase and sales accounts should be maintained in the audit ledgers as on the Great Indian Peninsula Railway.

(ii) The purchase account to be credited with all bills and charges on stores received each month and debited with all payment in respect thereof.

(iii) The sales account to be debited with all stores sold and credited with all realizations in respect of such sales.

(f) Abolition of system of charging varying prices.

The result of the reference to the Board of Directors should be awaited, but it is considered that the views expressed in the Examiner's final note are correct.

(g) Revision of method of accounting for timber.

The present state of the teak timber account is considered most unsatisfactory and priced accounts are desirable.

The details may be settled by the Examiner and Company's Auditor and Government advised as soon as an agreement has been effected.

(h) Position of locomotive accountant.

This question can be decided on receipt of the views of the Board.

Subject.

Order.

(i) Wastage on coal.

It is noted that the Company intend to abandon the existing system, but Government will not object to a reasonable allowance on this account, if sanctioned by the Consulting Engineer.

2. The orders issued on the papers now considered may be also acted on in regard to the stores of all departments so far as they may be found applicable.

3. Ordered that a copy of these Proceedings be forwarded for the information of the Government of India.

[Here enter No. 1103 R., dated 19th August 1893.]

(True Extract.)

(Signed) F. R. UPCOTT,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Agent and Manager, Madras Railway,
through the Consulting Engineer for Railways.
Examiner, Guaranteed Railway Accounts.

ENDORSEMENT—dated 19th August, 1893, No. 1103 R., Public Works.

Forwarded.

(By Order.)

Joint Secy. to Govt., P.W.D.,
Railway Branch.

End. A. D. Xavier.
Spare Copies

RAILWAY.

Gob. of {1893} Madras.
PUBLIC WORKS.

Dated August, 1918.

Recd.

Encl.

G.O., 19th Aug. 1893, Nos. 1102,
1103 R.

AUGUST.

Store Balances

Forwarding copy of Proceedings on report of the result of a test examination of the — of the Locomotive department, Madras Railway.

Examiner's Report.

2. The amount at debit of suspense in the Audit office ledgers on account of the Locomotive Department on 31st December 1891 was Rs. 10,55,975-15-1.

3. In support of this balance I was furnished with the statement hereto annexed and marked A, amounting to Rs. 10,98,530-15-9, which, it may be observed, is Rupees 42,555-0-8 in excess of the Audit office balances.

Replies of Railway Officers.

2. The amount stated to be at debit of the Locomotive Department in the Company's books on the 31st December 1891 is correct.

3. The amount mentioned by the Examiner (Rs. 10,98,530-15-9) merely represents the ledger balances of all stores priced at valuation, which valuation is intended to be as near as possible the average rate at which they are received. The amount at debit of the locomotive stores and workshop account was Rs. 10,66,103-0-3 or Rs. 10,127-1-7 in excess of the balance in the Company's books. This amount, however, merely represents certain debits and credits which were adjusted during the first half of the following year.

Examiner's Remarks.

2. No remark called for.

3. (e) My report is correct.

(b) The valuation put on stores in stock was, as previously stated, Rs. 10,98,530.

(c) The figure of Rs. 10,66,103 now quoted by the Railway officers is the balance on the general account current of the Locomotive Department and not the value of its stock in hand which is the point dealt with in my report.

(d) The fact of the account current of the Locomotive Department being only slightly different from the audit books does not affect the question raised.

(e) Rs. 10,66,103 is the balance of all book transactions connected with the receipt and issue of stores and with the outturn of the shops.

(f) These book transactions are liable to error and the stock valuation is or should be used for the purpose of testing the accuracy of the book balance.

(g) I consequently hold to my assertion that the balance in the audit books is Rs. 42,555 less than the valuation placed on stores on hand.

(h) A discrepancy I had not remarked upon is now, however, brought forcibly to notice by the Railway officers, viz., that the locomotive stock valuation lists which exclude unfinished works (amounting roundly to Rs. 60,000) are Rs. 32,427 in excess of the balance in the account current of that department.

Replies of Railway Officers.

4. The reference to the amount of pendencies is slightly misleading; they represent issues from the general stores of materials (mostly newly arrived from England), for which the prices could not be ascertained on account of the non-receipt of landing charges bills, &c.; but although they did not thus form part of the locomotive store accounts they did form part of the general stores balance in the Company's books and are thus in order; the question of reducing outstanding pendencies has already had attention in the Audit office.

4 (a) The statement is not misleading so far as the Locomotive Department is concerned, which is the department dealt with in my report.

(b) The Locomotive Department store has received credit for Rs. 21,994 worth of stock which it has never been charged with and must have therefore fixed prices for them although they may have been only estimated.

(c) Under the circumstances stated by the Railway officers, it should have been a simple matter to have made a transfer to the extent of the estimated value put upon the issues by the Locomotive Department and thereby to have removed the pendency.

(d) It is satisfactory to note that the question raised in this and the engineering report regarding pendencies has had attention, but it might be interesting to know what has actually been done. I would therefore suggest that a report on the question be submitted six months hence.

5 (a) The statement made by the Railway officers regarding the "actual amount" is erroneous. .
(A) P-91744

(b) Rs. 31,744 is the amount expended in the month of December only.

(c) It does not include the value of work done in previous months.

(d) When I asked for details of the accumulated balance they could not be produced; but, as the balances of subsequent periods were found to average Rs. 60,000, I adopted that figure.

(c) The Railway officer's statement in saying that the item of Rs. 31,744 was duly taken to account in January is misleading inasmuch as my report alludes to an omission from the valuation lists made in December and not to items dealt with in the Company's books in the January following.

5. In the course of investigation it further transpired that a balance of about Rs. 60,000 expended on articles in course of manufacture but unfinished on 31st December had not been dealt with as an asset of the Company and included in the list.

5. There is some error in the amount mentioned here; the actual amount (Rupees 31,744-10-8) was duly taken to account in the month of January 1892 in accordance with the custom which has obtained for very many years. Since July of last year, however, the Locomotive Superintendent has separated his stores from his workshop accounts and the amounts expended in each month on articles in course of manufacture are brought to account in the same month's workshop accounts.

1875-76
Lumber
1875-76

2

6. The items referred to in paragraphs 4 and 5 will still further augment the excess of actual stock over the audit ledger balances.

7. The question of pendencies was fully dealt with in paragraph 8 (m) of my report on the Engineering Department and the same necessity exists in the Locomotive as in the Engineering and other departments of establishing a system by which the large balance of pendencies may be reduced to a minimum.

8. The credit balance on the Indian fuel account is fully reported on in para. 11 (A) hereinafter.

9. The statement marked A previously referred to did not contain any details of quantities and prices of stock in hand, and, for the purpose of test audit, it therefore became necessary for me to see the actual detailed stock lists which were promptly produced by the Locomotive Superintendent.

10. From the lists furnished by the Locomotive Superintendent, I extracted a statement showing the

6. See our remarks on paragraphs 3 and 5.

7. See latter part of our remarks on paragraph 4.

8, 9, & 10. No reply needed.

(U) The separation between stores and workshop accounts referred to by the Company was made at the suggestion of this office, and, although it is a great improvement in system, it does not affect the point now in question.

6. My replies to paragraphs 3 and 5 will show that my original statement is correct.

7. See also my remarks on same paragraph.

8, 9, & 10. Call for no remark.

Examiner's Report.

quantities and prices of all articles in store exceeding Rs. 2,000 in value and this statement is appended and marked B.

11 (a) Having thus obtained the details of the principal items of stock in hand, I proceeded to compare the prices fixed on the articles with current market rates and to generally test the accuracy of the balances.

(b) I found that the system in force is to maintain quantity ledgers only, but, as in the case of all important articles this system involves the upkeep of separate priced accounts current, I formed the opinion that very little extra labour would be required to keep priced ledgers for all important articles as suggested in my report on the Engineering Department.

(c) With the exceptions of coal and firewood referred to in separate paragraphs, the stocks on hand agreed with the ledger balances and had from time to time been tested by

Replies of Railway Officers.

11 (a) The expression "current market rates" is not understood.

(b) The system in force is to maintain quantity ledgers only and it is only in the case of timber and fuel (out of some thousands of articles) that separate priced accounts are kept; to keep priced accounts for every article mentioned in the ledgers would more than double the work and would necessitate the entertainment of some six additional clerks. In our opinion the present system is to be preferred in every way, and, as it would be an exceedingly difficult matter to agree upon what should be considered as important articles, it could only end in pricing every article without exception.

We may mention that priced ledgers were kept at Perambdr many years ago, but were stopped in 1875 apparently with the approval of the Government officials.

(c) No reply needed.

11 (a) This means what the stores could be obtained for at date of the stock valuation.

(b) (i) There should be no difficulty in the Company's Agent or Auditor settling with the Consulting Engineer or Examiner a list of important articles. Priced accounts should certainly be maintained for such items as—

Wood fuel,	Wheels,
Coal,	Axles,
Timber,	Under-frames,

and other stocks which are either highly priced or kept in large quantities.

(ii) The Company's statement may be misinterpreted to mean that priced accounts are now kept for timber and fuel, but such is not the case.

(iii) Periodical priced balance sheets are prepared, but no regular monthly system of priced accounts is maintained.

(c) Calls for no remark.

Examiner's Remarks.

Further

the permanent staff of stock-takers employed in the Audit branch.

(d) Firewood account, Rupees 1,04,285-5-0.

(i) The locomotive stock ledger showed an excess quantity of 23,828,560 lb. over the stock lists owing to wood received and not paid for having been excluded from the audit ledgers.

(ii) A system is necessary as on State lines of taking all stock received to debit of stores and of crediting unpaid bills to the store purchase account (the value of the firewood omitted from the accounts was Rs. 51,753).

(iii) The stock taken to account seemed to be as fairly valued as possible on a system of averages, viz., at Rs. 2-3-4, compared with Rs. 2-2-9, the average cost of wood received during the period.

(e) Coke account, Rs. 11,024-10-3. —The value of this stock was

(d) (i) No reply needed.

(ii) The required change was made in the Company's accounts for the half-year to 31st December 1892 and the value of all stores taken into stock and not paid for is debited to the respective store accounts and adjusted through the stores outstanding account. The Government Examiner was informed of this change in the accounts on the 31st January 1893 one month before his report was written.

(iii) No reply needed.

(d) (i) This point is dealt with in the next paragraph.

(ii) (a) The report was written long before it was printed and dated; hence I omitted to notice that the Company had, owing to my representation, partially agreed to introduce such a system for future transactions although it was not in force during the period under review.

(b) The system adopted by the Company is however still incomplete as a six-monthly list of outstandings is prepared and dealt with in June and December only.

(c) The accounts of each other month including the last month in the financial year are still always incorrect.

(d) The books should be correct all the year round like those of the Great Indian Peninsula, the Bombay-Baroda and Central India and other railways.

(iii) Calls for no remark.

(e) This would be a very fair way to adjust the error, but no allusion is made to the prevention of further error

Examiner's Report.

under-stated by about Rs. 1,468, the value per ton being taken at Rs. 24-5-5; whereas the actual average cost was about Rs. 27-9-3 per ton. This was due to the issue rate having been somewhat too high.

(g) *English coal, Rs. 3,225-10-2.*
—The value of this stock was also slightly under-stated in the lists, the price being fixed at Rs. 25-14-6 against a cost price of Rs. 26-11-7; the reduction in price was due to a small surplus stock brought out by stock-taking and to the fact of specially augmented rates having been charged to other departments and in private work bills.

(g) *Patent fuel, Rs. 42,353-2-5.*
—This stock was also under-valued to the extent of about Rupees 2,388, the price having been fixed at Rs. 21-3-11 against a cost price of Rs. 22-7-1; the reduction in price is due to the same causes as those referred to in paragraph (f) regarding English coal.

(h) *Indian coal, Cr. Rupees 8,845-4-4.*—

(i) The stock lists showed a credit balance of Rs. 8,845-4-4 in amount and a debit balance of 333 tons in quantity.

Replies of Railway Officers.

worth speaking of owing to issue rates having been too high, it is proposed to debit the store account with the amount over-charged and credit the same to the expenses of the departments which have been over-charged.

(f), (g), (h) (i) to (iii) Similar adjustments are proposed to be made if found of sufficient importance.

by fixing a new price; possibly this has been done.

(f), (g), (h) (i) to (iii) This would be a fair way to adjust the errors, but no allusion is made to the prevention of further errors by fixing new prices. The error of Rs. 13,773 in Indian coal will, it is hoped, be of sufficient importance for early adjustment.

Examiner's Remarks.

(ii) Valuing the 333 tons at Rs. 14-12-6 per ton, which was the average actual cost of fuel purchased, the value of Indian coal has been under-stated in the stock lists by Rs. 13,773.

(iii) This under-statement would have been still greater but for the fact that an amount of Rs. 5,182 which was deficient on Trincomallee timber account had been transferred in the previous half-year in reduction of the excess balance on the coal account.

(iv) Such adjustments should not, in my opinion, be made without previous sanction and record at official meeting.

(v) The excess on the stock of coal may be due to a system which obtains of adding 5 per cent. for wastage to the actual issues to drivers.

If this is the case, it may be possible to reduce the percentage, as such excess in stock may lead to speculation.

I cannot find any authority of Government to charge this rate of 5 per cent. for wastage.

(vi) Again 5,454 tons of coal costing Rs. 80,617 received during the half-year have been omitted from the stock lists owing to the

(iv) This will be attended to in future if such adjustment be again requisite.

(iv) It may be noted that Company agree to obtain sanction to stock adjustments in future.

(v) The percentage for wastage has been allowed for very many years, but will be discontinued.

(v) I did not propose to discontinue, but to regularise by sanction and, if necessary, revise the rates.

(vi) See our remarks on paragraph 11 (d) (ii).

(vi) See also my note to same paragraph.

Examiner's Report.

want of system referred to in para. (d) of taking unpaid bills to debit of stock and credit of purchase account.

(c) *Teak Timber, Rupees*
2,68,589-13-10.—

(i) The balance on this account was made up as follows:—

Scantling in the mill.—		
Best	2,642 7	
Rough at 98 cubic feet per ton	32,839 6	
Waste at 110 cubic feet per ton	1,025 6	
Waste at 95 lbs. per cubic foot	65 9	
Uncut logs	697 4	
Scantlings in the shed, best	16,837 6	
		Rs.
Uncut logs	43,337 7 @ 4-8-1	1,93,113
Do.	922 3 @ 2-4-8	2,273
	31,961 9 @ 3-0-7	71,204
Total		2,66,589

(ii) The price of scantling shown above was double the price of timber in log, resulting in an apparent loss by wastage and cutting of 100 per cent.

(iii) But as the actual wastage of the period worked out to 50 per cent. only, the price of teak scantling would appear to have been much overstated.

(iv) Thus if to the price in log,

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(i) (i) The inclusion of 697.4 cubic feet uncut logs in the scantling account at scantling price was an error and will not occur again.

(ii) There is some error here; a loss of 100 per cent. would mean the loss of the entire log.

(iii) & (iv) There is also some error of calculation here; from long experience it has been found that between the log and the scantling as issued to works there is an average loss of about 50 per cent., and it is therefore quite correct to value the scantling at about

(i) (i) Noted. This is an admission of the error alluded to in para. 11 (i) (vi) of my report.

(ii) (a) The cost of the timber in log has been increased by 100 per cent. in converting it to scantling whereas it is usual in the Engineering Department to increase it by 50 per cent. only.

(iii) & (iv) (a) As stated in the previous paragraph, my figures are based on the argument that there has not been a loss of 50 per cent. in quantity but an increase of 50 per cent. in price.

(b) The loss in quantity has been taken at 33 per cent. or thereabouts, which results in an increased cost of

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Rs. 2-4-8, 50 per cent. be added for wastage and cutting or Rs. 1-2-4, the price of scantling would be Rs. 3-7-0 per cubic foot instead of Rs. 4-8-1 as shown in the stock lists (even a figure of Rs. 3-7-0 is apparently high as the issues of teak timber from the Engineering stocks during the same period were made at the rate of Rs. 2-5-0 per cubic foot).

double the rate in the log to keep the balance on the right side; for example—

Ten logs paid for as measuring	Rs.
500 cubic feet at Rs. 2 ...	= 1,000
The whole scantling cut from these 10 logs when issued to works is found to measure only 250 cubic feet (a loss of 50 per cent.) and this must be issued at double the log rate Rs. 2 x 2 = Rs. 4 to make up the cost of the ten logs ...	... = 1,000

There will be of course in hand the outside and waste timber which comes from the log in process of cutting and this will be returned into stock at a valuation and credited to working expenses.

Another error is made in the latter part of (iv) regarding the price at which the Engineers charge their timber; it is true they charge the timber at Rs. 2-5-0 per cubic foot issued, but to arrive at the amount issued, they first add 50 per cent. to the quantity actually used and charge the total at Rs. 2-5-0, so that they really charge their timber at Rs. 3-7-6 per cubic foot.

Their smaller wastage (33½ per cent. against 50 per cent.) is supposed to be caused by their dealing with beams and planks of much larger dimensions than the Locomotive and Carriage department.

50 per cent. per foot of scantling over the cost of timber in log, thus:—

For 500 cubic feet at Rs. 2 = Rs. 1,000.
166½ " " wastage 33 per cent.
333½
333½ cubic feet of scantling cost Rs. 1,000 = Rs. 3 per foot or 50 per cent. in excess of rough logs at Rs. 2.

(c) As pointed out in a subsequent note against the Company's reply to my original para. f (iii), the wastage on timber manufactured during the year 1892 amounted to 40 per cent. which is very near the rate I assumed for 1891.

(d) This should be credited in reduction of the price of the outturn, not to working expenses.

Otherwise, in the case of construction of stock, capital will be overcharged for its timber.

(e) I may possibly have under-stated the price of engineering timber, but the teak timber account of that department was in such a confused state that it is not surprising that a mistake should have occurred.

(ii) Kven, however, if the price of the engineering scantling be Rs. 3-7-6 as now stated by the Railway officers, the price of locomotive scantling Rs. 4-8-1 is still 30 per cent. in excess of the engineering rate.

(f) Since the issue of my former report, I have analyzed the locomotive teak timber account of the year 1892 and found that the consumption, outturn and waste of the saw mill as brought out by the Company's books were as follows:—

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Further

—	Best scantling.	Rough.	Log.	Total.
(i) Consumption—	c. ft.	c. ft.	c. ft.	c. ft.
Timber in mill at commes-	9,883	22,339	897	25,999
ment of year	24,920	..	60,636	85,488
Received during year ..				
Total Receipts ..	27,783	22,339	61,336	1,11,357
Less stock at close of year ..	4,084	8,881	104	13,069
Total consumption ..	23,699	13,458	61,131	98,288

(ii) Outturn—
 Issues to works 26,635
 Do. to shed stock 32,777

Total outturn ... 59,312

(iii) Wastage = 98,288 — 59,312 = 38,976. A wastage of 38,976 on a consumption of 98,288 is equal to 40 per cent.

(iv) A loss of 40 per cent. in quantity is equivalent to an addition of 66 per cent. to the price instead of 100 as stated by the Company.

(v) A log price of Rs. 2-4-0 per cubic foot increased by 66 per cent. will give scantling at a value of Rs. 3-11-9 per cubic foot instead of Rs. 4-8-1 as shown in the valuation lists.

(v) & (vi) For the reasons quoted above, I am still of opinion that the timber did not cost the Company the amount at which it is borne on the valuation list and that the error in rate is due to the causes alluded to in paras. (viii), (ix), (x) and (xi) of this section.

(v) The teak scantling account would therefore appear to have been over-valued by at least Rs. 46,260 owing to the excess price on scantling.

(v) & (vi) The calculation therefore that the scantling is over-valued is shown to be incorrect and the only error is that of Rs. 1,543 (actually Rs. 1,483-5-9) mentioned in (vi) and our remarks on (v) (i).

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(vi) Again, 697 cubic feet of uncut logs in the mill awaiting manufacture have been priced as scantling at Rs. 4-8-1 instead of as uncut logs at Rs. 2-4-8, resulting in a further over-valuation of about Rs. 1,543.

(vii) The teak scantling has therefore apparently been over-valued to the extent of about Rs. 47,800 in all.

(viii) This error is, in my opinion, due to the absence of priced saw mill and scantling accounts.

(ix) Under the procedure in force quantities alone were dealt with and a periodical account current of all receipts, issues and charges was prepared and priced.

(x) The balance brought out by this account was assumed to represent the value of the stock in hand, logs being first valued at cost price and the residue assumed to be the value of the scantling.

(xi) By this system all errors in accounting or pricing were added to the value of scantling. As an instance of how errors have arisen, I may state that in a preceding half-year when the value of the starting balance was Rs. 5-8-0 per cubic foot, the issues to works were made at Rs. 3 per cubic foot and the difference of Rs. 2-8-0 per foot

(vii) & (viii) Having shown that of the Rs. 47,800 supposed over-valuation, only Rs. 1,483 is correct, there appears to be little need of further remark.

(vii) & (viii) (a) See my remarks on (vi) which may lead to a reconsideration of the subject.

(ix) to (xi) (b) My remarks on the erroneous system resulting in the grave errors pointed out in paras. (ix), (x) and (xi) have been passed unnoticed.

(c) It is now most unsatisfactory to have to state that during the year which has elapsed since the preparation of the valuation lists under review, other important errors have occurred, and that the price of scantling has, without any apparently reasonable cause, increased from Rs. 4-8-1 to Rs. 6-2-5 per foot as may be seen from the following figures extracted from the locomotive returns for June and December 1892:—

	June half-year, 1892.			December half-year, 1892.		
	Rs.	A.	P.	Rs.	A.	P.
(d) Price of scantling in stock at commencement of period ..	4	8	1	7	8	8
Price of uncut logs during period ..	2	0	7	1	15	9
Average price at which scantling has been issued during period ..	3	4	10	3	4	10
Maximum price at which issued ..	4	0	0	4	0	0
Price of scantling at close of period as brought out by account current ..	7	8	8	8	8	8
Percentage—the rate per foot of scantling exceeds the rate per foot for uncut logs ..	361			310		

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was therefore thrown upon the value of the balance in hand at the end of the period which thereby became unduly augmented to a value of Rs. 7 per cubic foot.

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(further)

(e) It is therefore most imperative that the timber account should be put on a satisfactory footing at once.

(f) The present system, which permits the price of scantling to jump from Rs. 4-8-1 per foot to Rs. 6-2-5 in 12 months when the cost of logs purchased has decreased, is scarcely capable of defence.

(g) It will probably be found that the bulk of the error lies in the want of a system of priced work orders in respect of the sawing operations connected with the second cutting of scantling for issue to works.

(h) From my previous note against para. (f) it may be seen that 23,699 cubic feet of best timber passed through the mill during the year 1892.

This timber was valued at Rs. 4-8-1 per foot Rs.
but was issued at an average rate of Rs. 3-4-10 = 1,06,769
... .. = 78,256

or at a loss of ... 28,513
(i) If the timber was resawn and a loss of only 10 per cent. arose on the operation, there would have been a further loss of 10,677

resulting in a total loss of ... 39,190

(j) Again 13,458 feet of rough scantling, valued at Rs. 4-8-1 per foot, were also recut and issued at the average

M. Armstrong

(xii) The following priced accounts would appear to be necessary to permit timber transactions being correctly recorded.

(xiii) A saw-mill account taking to debit all logs and scantling sent in for cutting and the cost of the operations and credit; by issue to works or store accounts of each quality; for the actual value of the outturn.

(xiv) Separate scantling accounts of each quality to be debited with saw-mill outturn and credited by actual issues or sales.

(xv) A log store account to be debited with the actual cost of and charges on logs taken into store and credited with the value of the actual issues to saw-mill, works or other heads.

(ix) to (xv) The accounts at Perambur for teak timber are kept in the following manner:—

(1) A log account.

(2) A saw mill account.

(3) A scantling account,

and to these will be added accounts dealing with outside and waste timber as per our remarks on paras (i), (iii) and (iv).

of (i)

(j) The following discrepancies were discovered in the value fixed upon other important items, viz.—

(j) These differences in rates will be adjusted, but it may be noted that they have no effect upon the Company's books.

rate of Rs. 3-4-10, involving a further loss of Rs. 16,192 upon the same basis.

(k) Works would thereby have been undercharged by Rs. 55,382 and the price of stock in hand would, by the Company's system of account, have been unduly inflated to the same extent.

(l) A loss of Rs. 55,392 distributed over a stock of 36,130 feet would have increased the price thereof from Rs. 4-8-1 to Rs. 6-0-7 per foot which is very near the rate now stated by the Company as the value of scantling.

(m) to (xv) (a) (i) I wish it not to be lost sight of that my chief suggestion in this paragraph is the introduction of priced accounts and work orders for manufacture of timber of each class, which points are not dealt with by the Company's officers although they make a general allusion to the question elsewhere.

(ii) Without priced accounts there will, in my opinion, always be a great liability to error.

(b) (i) The system now in force of reducing the ledger quantities of inferior timber instead of issuing them at reduced prices is, in my opinion, another cause of much of the misunderstanding on the subject of wastage.

(ii) For instance, an actual quantity of 42,892 cubic feet of rough scantling is stated in the accounts as only 22,339 cubic feet.

(iii) Wastage which should be calculated on the gross quantities of timber manufactured is now based on reduced assumed quantities.

(iv) Again under the system now in force, waste which sells at five and a quarter annas per foot is stated in the Company's accounts at a value of Rs. 4-8-1 per cubic foot.

(c) It may be noticed that the Company will introduce accounts dealing with "waste" timber.

(j) If the railway intend to make their books and stock lists agree, these alterations will increase the book balances, not otherwise.

Spence
M. Anthony

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Name of article.	Quantity.	Rate fixed to date.	Average rate paid for stock during the period.		Difference in value owing to difference in rates.	
			Rate valued in stock listed.	Rate valued in stock listed.	Rate A. P.	Rate B. P.
Steel, crank, steel, A class	1.0	1.00	1.00	1.00	0.00	0.00
Do.	1.0	1.00	1.00	1.00	0.00	0.00
Do. B, B, B, C, and D.	1.0	1.00	1.00	1.00	0.00	0.00
Copper ingots	1.0	1.00	1.00	1.00	0.00	0.00
100 plates of copper and water, 8' 4"	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Cylinders, M, B, and C, 17'	1.0	1.00	1.00	1.00	0.00	0.00
Studs, piston, B, and M, 17'	1.0	1.00	1.00	1.00	0.00	0.00
Camshaft, 17'	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
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17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00	0.00	0.00
17 tons, stones, brown, white	1.0	1.00	1.00	1.00	0.00	0.00
Castings for each, brass	1.0	1.00	1.00	1.00		

(k) The following complicated system of pricing was and is still in force and would appear to require revision, viz. :—

(i) Separate rates of issue are fixed periodically by the Locomotive Superintendent for issues to the Locomotive Department, issues to other departments, issues to Company's servants, and issues to private persons or works.

(ii) Issues to other departments and private persons are priced at considerably higher rates than the rate charged in the Locomotive Department, and, in the event of large transactions, this complicated system must result in a serious derangement of the average prices.

(iii) Again as the increased charges are intended to cover supervision, exchange and charges of a general nature, many of which do not pass through the Stores Account, the system would appear to be absolutely erroneous.

(iv) There should, in my opinion, be one rate of issue only fixed for each article irrespective of the department or work to which it is issued.

(k) (i) to (v) The Acting Locomotive Superintendent proposes to continue the present system of different rates of issue until the return of the Locomotive Superintendent from furlough. The present system has worked very well for many years and there seems little difference between adding a percentage to the rate at which stores are issued and adding a percentage on the value of stores so issued so long as the enhanced rate or percentage be credited to the working expenses of the department.

(k) (i) to (v) (i) The main reason for the Company wishing to retain the existing system is in order that the department may be credited instead of Abstract K, Miscellaneous Earnings.

(ii) Exchange and actual establishment and expenditure specially engaged or incurred on work done for other departments are permitted to be credited to the Locomotive Department under para. 22 of the instructions contained in the Guaranteed Railway Standard form of Revenue Account, but percentages for supervision by the permanent staff must be credited to Abstract K.

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(v) Supervision and similar charges payable by other departments or outsiders should be provided for by addition of special percentages as is the custom on other railways.

(i) The balances at debit of Locomotive Department shown in the audit ledger and the locomotive balance sheets were at the period under review inclusive of both stores and workshop transactions and it was impossible to ascertain monthly from these records the separate value of stores and of workshop balances.

This system has, at my request, been subsequently modified and the locomotive returns made to show the transactions separately.

(m) *Stores at up-country depots.*—

(i) As in the case of the Engineering Department, a large amount of detailed ledger-keeping is thrown upon Foremen at out-stations which might be avoided by a system of imprests.

(ii) The Foremen now keep unpriced ledgers which are periodically balanced and the result sent to the head office for valuation.

(iii) It is noticed that a considerable stock of springs, side chains,

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(iii) There is no particular reason why the rules laid down for all India should be deviated from in the case of one railway.

(i) See our remarks on para. 5.

(i) See also my remark on same paragraph.

(m) (i) to (vi) The Examiner's proposition is considered a very reasonable one so far as the majority of the stores kept up-country are concerned and it will be brought into effect as far as possible at an early date. The stock of such stores now in charge of Foremen will be re-debited to the Store Account and credited to Working expenses.

(m) (i) to (vi) It may be noted that the suggestions are adopted and the Company should be asked to report the date on which they are brought into effect.

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(spare wheels, &c., in the hands of Foremen have not been included in this head office valuation.

(iv) These omissions may roundly be stated at Rs. 14,000 (*vide* statement C).

(v) It is stated in explanation that these items have been charged off to works as soon as they were issued to the Foremen which is irregular.

(vi) A system of imprests would also remedy this as well as save time in accounting as suggested in paragraph 1.

(*) It is satisfactory to note that there is not the same reason to complain of the returned stores system as there was in the case of the Engineering Department, although there are some few items borne on the books without value at Perambur, which, it is estimated, are worth about Rs. 5,000 (*vide* statement D).

12. (i) Until the receipt of recent orders to reduce the pay of the appointment of the Locomotive Accountant, that officer had been under the direct control of the Company's Auditor.

Replies of Railway Officers.

(*) These items are returned Revenue stores and if brought on to the stock lists will have to be debited to Capital and credited to Revenue; it would seem better to dispose of all stores that are not likely to be used and credit the value to Revenue which will be done.

12. (i) to (v) From 1st January 1889 to early in 1892, the Locomotive Accountant was considered to be an Assistant to the Chief Auditor. The Board in directing his transfer to the Locomotive Department expressed themselves so strongly on the subject that we do not think it within our province to offer an opinion.

*Further
Examiner's Remarks.*

(*) (i) The Company's suggestion is what I should have recommended had I known the stores were not required.

(ii) It is satisfactory to note that the report will have caused even a small reduction in the Company surplus stores.

12. (i) to (v) Await result of reference to Board—*vide* Agent's No. 490, dated 7th June 1893, forwarding the reply of the Railway officers.

(ii) Since the reduction, he has, however, been placed beyond the jurisdiction of the Auditor.

(iii) This was not a necessary sequence to the Government order to reduce the pay of the appointment, and in my opinion the old system should be reverted to.

(iv) Although the Board in its No. 867, dated 27th May 1892, suggested the Locomotive Accountant being put under the direct control of the Locomotive Superintendent, the actual sanction by Government was to an Accountant for the Audit office establishment whose pay should be allocated to Locomotive Department as is the usual custom.

(v) The Locomotive Accountant as on State lines, should, in my opinion, hold the same relations to the Locomotive Superintendent and Auditor as an Accountant on the Public Works Department does to his Executive Engineer and Examiner.

13. Before concluding, I would beg to recapitulate the following important points noted in this report and to ask you to take such action thereon as you may consider expedient. In this respect I would further draw special attention to an opinion expressed by the Accountant-General, Public Works Department, in his No. 582 R., dated 18th June

13. (a) The Locomotive Stores suspense accounts in the Company's books are now in practical agreement with the balances of the Locomotive Stores and Workshop Accounts.

13. (a) (i) This statement is based on data which I contend is erroneous.

(ii) The books and accounts both of the Audit and Locomotive departments should periodically be adjusted so as to be in exact accord with the lists showing the value of the stock in hand.

Examiner's Report.

1892, printed as Appendix A on several of the points herein raised :—
(a) The audit ledgers and locomotive balances should at once be made to agree.

Replies of Railway Officers.

Have been made to the Auditor-General.
(a) *See Appendix A.*

(b) The manufacture balance should be treated as an asset and added to the audit ledger balances.

(c) As suggested in my report on the Engineering Department—
(i) The system of pendencies should be improved.
(ii) Priced ledgers should be kept for all important articles.

(b) Already done from July 1892 as stated in our reply to para. 5.

(c) (i) Already having attention.

(ii) Not considered desirable or necessary, extra expense would also be incurred to no good purpose.

Further Examiner's Remarks.

(iii) The views of the Accountant-General, Public Works Department, should therefore at once be given effect to, viz. :—

It should be satisfactorily established that the stock valuation lists are correct, and the excess in value of stores over ledger balances should be adjusted by credit to the head of account overcharged; differences between store valuation lists and audit ledgers should thereafter be adjusted half-yearly (or at such other time as valuation lists may be completed).

(iv) As the valuation lists reported on are now nearly eighteen months old, I would suggest that the first adjustment be made upon the most recent valuation lists in existence and that the several points brought to notice in this report receive due attention when making the adjustment.

(b) A separation has been made between manufacture and store transactions, but the book balances have not been augmented and made to agree with the valuation lists of stores and unfinished works combined.

(c) (i) Noted; but see my remarks regarding a report on action taken.

(ii) Requires consideration of Government. I disagree with Company's views, and the Accountant-General, Public Works Department, considers a numerical system is not one calculated to give correct results.

(iii) A system of imprests should be introduced to reduce ledger-keeping at out-stations.

(iv) All stores standing on the books without value should be appraised and taken to account.

(v) All important stock adjustments should be submitted for the approval of the Consulting Engineer to Government.

(d) The following apparent discrepancies should be investigated and explained, and, if necessary, adjusted in the accounts and stock lists; the net reduction in value being met by reducing the total excess of locomotive stock over the audit balances before making the adjustment suggested in paragraph (a) :—

	Excess value entered in stock lists.	Short value entered in stock lists.
Coke, para. 11 (c)	Rs. 1,468	Rs. 1,468
Patent fuel, para. 11 (g)	Rs. 2,388	Rs. 2,388
Indian coal, para. 11 (4) (B)	Rs. 13,773	Rs. 13,773
Teak timber, para. 11 (c) (vii)	Rs. 47,500	Rs. 47,500
Sundry items—vide para. 11 (c)	Rs. 13,279	Rs. 13,279
Total ..	Rs. 81,079	Rs. 81,079

(e) To prevent such large items as Rs. 51,753 on firewood and Rs. 80,617 Indian coal being omitted from the stock lists, a system should be introduced of taking to account all articles received into store, whether paid for or not, by means of a purchase account.

(iii) Agreed to as far as possible; see para. 11 (m) (i) to (vi).

(iv) Agreed to; see para. (n).

(v) Agreed to; see 11 (h) (iv).

(d) See replies to para. 11 (e), (f), (g), (h) (i) to (iii) and (j).

(iii) See my remarks suggesting a report of the date when brought into effect.

(iv) Noted. A report should be furnished of the date on which this has been done.

(v) Noted.

(d) (i) See also my replies which involve reconsideration of the question.

(ii) An adjustment between book balances and stock lists is necessary even if the disputed items are found to require no alteration.

(e) Already attended to; see our reply to para. 11 (d), (ii).

(e) See my note to same para. pointing out necessity for monthly instead of six monthly accounts.

Accountant

Examiner's Report.

(j) The system of charging varying prices for the same article should be abandoned, and supervision, &c., arranged for by the addition of special percentages.

(g) The system of accounting for timber should be considered and if thought necessary revised—*vide* para. 11 (i) xii.

(h) The question of the position of the Locomotive Accountant should be considered and finally settled—*vide* para. 12.

(i) The rate allowed for waste on coal should be tested and a rate for future guidance recorded at official meeting.

14. The net financial results of my investigation would appear to be as follows:—

(i) The lists of locomotive expenses	Rs.
balances submitted amounted to ..	10,55,531
(ii) These lists omitted the following items, viz.:—	
Unfinished works about ..	60,000
Short value on stores—	
<i>vide</i> para. 13 (d) ..	17,819
Coal and firewood received but not paid for—	
<i>vide</i> para. 13 (e) ..	1,38,370
Debits to clear pendencies—	
<i>vide</i> para. 4 ..	21,994
Stores borne on the books without value— <i>vide</i>	
para. 11 (m) (iv) and (n) ..	19,000
Total omissions ..	2,50,993

Replies of Railway Officers.

(j) See remarks on para. 11 (k).

(g) See remarks on para. 11 (i) (ix) to (xv).

(h) See remarks on para. 12 (i) to (v).

(i) See remarks on para. 11 (h) (v).

14. (i) to (v) It has been shown that many of the items in this paragraph are either incorrect as to amount or have since been arranged and it is not therefore considered necessary to reply further.

Examiner's Remarks.

(f) (i) See my remarks on same paragraph pointing out that Locomotive Department may receive credit for actual outlay but not for supervision by the Permanent staff.

(ii) This point has been referred to the Board and its reply may be awaited (*vide* Agent's No. 490, dated 7th June 1893, forwarding the reply of the Railway officers).

(g) See also my remarks on same paragraph pointing out the desirability of priced instead of unpriced accounts.

(h) See also my remark on same paragraph to the effect that the question has been referred to the Board and its reply may be awaited.

(i) See my remarks on same paragraph pointing out that I had no desire to abolish the system but that I merely wished a revised rate to be properly sanctioned.

14. (i) to (v) (a) The original paragraph in my report is a correct statement of the condition of affairs at the date reported on.

(b) If, as stated by the Company, I have under-estimated the value of the teak timber (which is doubtful) the adoption of the Company's valuation will have the effect of reducing the deduction item of Rs. 61,079 and thereby augmenting instead of decreasing the value of the stock omitted from the valuation lists.

inclosed.

(iii) And included the following errors :-

Over-valuation owing to excessive prices paid
para. 13 (d) 61,079

(iv) Resulting in a net omission of .. 1,00,014

(v) and a total value of stores and unfinished works in charge of the locomotive of .. 12,88,448

instead of Rs. 10,98,531 as shown in the lists submitted for inspection.

(vi) The above figures show that the locomotive stock lists as submitted are nearly Rs. 1,90,000 short of the value of the stock in charge of the Locomotive department and that a very serious error has apparently been made in pricing the stock of oak timber.

(vii) The Audit office books, moreover, understate the value of the Locomotive department assets by Rs. 2,32,469 and omit liabilities for stores purchased to the extent of Rs. 1,32,370.

15. Attention having recently been called to the heavy store balances of the Madras Railway, I would finally point out that the balances complained of in the Government of India letter do not fully state the value of the stock in hands of the Company owing to the system referred to in this report of omitting to take into the stock lists the value of stores purchased on credit and to the system in the Engineering Department of omitting to price certain returned stores.

(Signed) J. LIGHTFOOT,
Examiner, Railway Accounts,
Madras.

(vi) & (vii) Our previous remarks prove that the balance as per the Company's books correctly shows the amount paid to debit of the locomotive stores account, while we have already arranged to debit all stores accounts with the value of stores received and not paid for at the end of each half-year.

(vi) and (vii) (a) The first part of this remark is irrelevant.

(b) The point at issue is that the stock lists are considerably in excess of book balances and the two should be made to agree.

(c) It has been explained in para. 11 (d) (ii) that the half-yearly adjustment of store accounts is not a satisfactory one and that the Great Indian Peninsula Railway system should be adopted.

(15) Calls for no reply.

(16) We do not propose to reply to this paragraph, as the main question of the total amount of capital to be kept locked up in stores is already receiving attention under your direct instructions, while the question of reducing the present stores balances is already partially reported on under your letter of the 22nd February 1893, No. 7457/1416.

(Signed) A. PILKINGTON,
AG. Locomotive Superintendent.

(Signed) F. DUNSTERVILLE,
Chief Auditor.

(Signed) J. LIGHTFOOT,
Examiner, Railway Accounts, Madras.

10th July 1893.

M. Gananabo

22

1102
1103 P

19-Regul July 1893, No. 1102 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

Report by the Examiner of Railway Accounts, Madras, on the locomotive store balances of the Madras Railway, dated 28th February 1893, No. 129-A.

Letter from the Agent and Manager, Madras Railway, dated 5th June 1893, No. A. 17335/376, commenting upon the above report.

A further note by the Examiner of Railway Accounts, Madras, on the same subject, dated 10th July 1893.

ORDER—dated July 1893, No. R., Public Works.

The whole of the points requiring attention are summarized in paragraph 13 of the Examiner's report and the following orders are issued on each of the various points therein raised, viz.:—

Subject.

Order.

- (a) The audit ledgers and departmental balances should be periodically agreed and adjusted.
- (b) Charges on unfinished works should be entered in valuation lists as assets.
- (c) (i) The system of pendencies should be improved.
- (ii) Priced ledgers should be kept for all important articles.
- The views contained in paragraphs (ii), (iii) and (iv) of the Examiner's final note are accepted and should be acted on, with the exception that the adjustment may, if preferred, be made annually instead of half-yearly. The Examiner's views are accepted and the value should be included when making adjustments under the orders issued on (a).
- It is noticed that this matter is receiving attention, but the Company should, as suggested by the Examiner, submit a report in six months from this date showing what has actually been done in the matter.
- The present system is considered unsatisfactory and the Company should submit proposals for an improved system of recording store transactions. It is considered that the following priced records should at least be maintained:—
- (a) (Register of stores received) agreeing monthly with the store bills, English charges, returned store notes and other debits taken to account in the audit ledgers.
- (b) (Register of stores issued) agreeing monthly with the total issues and other credits booked by audit.
- (c) Ledger posted from (a) and (b)—
- (i) in the case of important items (as from time to time agreed between the Examiner and Auditor) to separate ledger accounts;
- (ii) in the case of minor articles, to class heads, such as—
- (a) leather, goods,
- (b) stationery,
- (c) forms,
- (d) Indian rubber goods,
- (e) &c., &c., &c.;
- (iii) if considered necessary, ledgers showing quantities only may also be maintained in support of the aggregate balances in the class ledger heads specified in (ii) above.

19 August 1893, No. 1103 R., PUBLIC WORKS.

Subject.	Order.
(d) The ledger balances should, from time to time, be tested, as at present, by priced valuation lists and stock taking.	(d) The ledger balances should, from time to time, be tested, as at present, by priced valuation lists and stock taking.
(e) The priced departmental store transactions may, however, be maintained in monthly balance sheets instead of in ledgers if considered advisable.	(e) The priced departmental store transactions may, however, be maintained in monthly balance sheets instead of in ledgers if considered advisable.
(iii) Imprests in lieu of ledger-keeping at out-stations.	It is noted that the suggestion of the Examiner is accepted, but the date on which the system has been brought into effect should be intimated by the Company.
(iv) All stores standing on the books without value should be appraised and taken to account.	It is noted that the Examiner's suggestion is accepted, but a report should be submitted by the Company showing when the system has been brought into force.
(v) All important stock adjustments should be submitted for the approval of the Consulting Engineer.	It is noted that the Company agree to this arrangement and it will be sufficient if items exceeding Rs. 500 are recorded at official meeting in detail with the approval of the Consulting Engineer, and items of Rs. 500 and under in lump monthly sums with the approval of the Company's Agent and Manager.
(d) Adjustment of discrepancies.	This point is covered by the orders on (e).
(e) Purchase and sales accounts.	(e) (i) It is considered that purchase and sales accounts should be maintained in the audit ledgers as on the Great Indian Peninsula Railway. (ii) The purchase account should be credited with all bills and charges on stores received each month and debited with all payments in respect thereof. (iii) The sales account should be debited with all stores sold and credited with all realizations in respect of such sales.
(f) Abolition of system of charging varying prices.	The result of the reference to the Board of Directors may be awaited, but it is considered that the views expressed in the Examiner's final note are correct.
(g) Revision of method of accounting for timber.	The present state of the teak timber account is considered most unsatisfactory and priced accounts are considered desirable. The details may be settled by the Examiner and Company's Auditor and Government advised as soon as an agreement has been effected.
(A) Position of locomotive accountant.	This question may be decided on receipt of the views of the Board.
(i) Wastage on coal.	It is noted that the Company intend to abandon the existing system, but Government will not object to a reasonable allowance on this account if sanctioned by the Consulting Engineer.

2. The orders issued on the papers now considered may be also acted on in regard to the stores of all departments so far as they may be found applicable.

(True Extract.)

Joint Secy. to Govt., P.W.D.,
Railway Branch.

3. Ordered that a copy of these Proceedings be forwarded for the information of the Govt. of India.

Endorsement dated 19 August 1893, No 1103 R

Forwarded. *[Signature]*
B. 11/8

To the Agent managing Madras Ry
this 15/8
By Secy. Accounts.

Examiner's Report.

4. From a perusal of list A I noticed that the total assets had been unduly reduced by the following items:—

	Rs.	A.	P.
Pendencies	21,994	12	0
Credit balance on Indian coal account	8,845	4	4
Total	30,840	1	1

5. In the course of investigation it further transpired that a balance of about Rs. 60,000 expended on articles in course of manufacture but unfinished on 31st December had not been dealt with as an asset of the Company and included in the list.

Replies of Railway Officers.

4. The reference to the amount of pendencies is slightly misleading; they represent issues from the general stores of materials (mostly newly arrived from England), for which the prices could not be ascertained on account of the non-receipt of landing charges bills, &c.; but although they did not thus form part of the locomotive store accounts they did form part of the general stores balance in the Company's books and are thus in order; the question of reducing outstanding pendencies has already had attention in the Audit office.

5. There is some error in the amount mentioned here; the actual amount (Rupees 31,744-10-8) was duly taken to account in the month of January 1892 in accordance with the custom which has obtained for very many years. Since July of last year, however, the Locomotive Superintendent has separated his stores from his workshop accounts and the amounts expended in each month on articles in course of manufacture are brought to account in the same month's workshops accounts.

Examiner's further Remarks.

4 (a) The statement is not misleading so far as the Locomotive Department is concerned, which is the department dealt with in my report.

(b) The Locomotive Department store has received credit for Rs. 21,994 worth of stock which it has never been charged with and must have therefore fixed prices for them although they may have been only estimated.

(c) Under the circumstances stated by the Railway officers, it should have been a simple matter to have made a transfer to the extent of the estimated value put upon the issues by the Locomotive Department and thereby to have removed the pendency.

(d) It is satisfactory to note that the question raised in this and the engineering report regarding pendencies has had attention, but it might be interesting to know what has actually been done. I would therefore suggest that a report on the question be submitted six months hence.

5 (a) The statement made by the Railway officers regarding the "actual amount" is erroneous.

(b) Rs. 31,744 is the amount expended in the month of December only.

(c) It does not include the value of work done in previous months.

(d) When I asked for details of the accumulated balance they could not be produced; but, as the balances of subsequent periods were found to average Rs. 60,000, I adopted that figure.

(e) The Railway officer's statement in saying that the item of Rs. 31,744 was duly taken to account in January is misleading inasmuch as my report alludes to an omission from the valuation lists made in December and not to items dealt with in the Company's books in the January following.

(f) The separation between stores and workshop accounts referred to by the Company was made at the suggestion of this office, and, although it is a great improvement in system, it does not affect the point now in question.

6. The items referred to in paragraphs 4 and 5 will still further augment the excess of actual stock over the audit ledger balances.

7. The question of pendencies was fully dealt with in paragraph 8 (m) of my report on the Engineering Department and the same necessity exists in the Locomotive as in the Engineering and other departments of establishing a system by which the large balance of pendencies may be reduced to a minimum.

8. The credit balance on the Indian fuel account is fully reported on in para. 11 (A) hereinafter.

9. The statement marked A previously referred to did not contain any details of quantities and prices of stock in hand, and, for the purpose of test audit, it therefore became necessary for me to see the actual detailed stock lists which were promptly produced by the Locomotive Superintendent.

10. From the lists furnished by the Locomotive Superintendent, I extracted a statement showing the quantities and prices of all articles in store exceeding Rs. 2,000 in value and this statement is appended and marked B.

6. See our remarks on paragraphs 3 and 5.

7. See latter part of our remarks on paragraph 4.

6. My replies to paragraphs 3 and 5 will show that my original statement is correct.

7. See also my remarks on same paragraph.

8, 9, & 10. No reply needed.

8, 9, & 10. Call for no remark.

Examiner's Report.

11 (a) Having thus obtained the details of the principal items of stock in hand, I proceeded to compare the prices fixed on the articles with current market rates and to generally test the accuracy of the balances.

(b) I found that the system in force is to maintain quantity ledgers only, but, as in the case of all important articles this system involves the upkeep of separate priced accounts current, I formed the opinion that very little extra labour would be required to keep priced ledgers for all important articles as suggested in my report on the Engineering Department.

(c) With the exceptions of coal and firewood referred to in separate paragraphs, the stocks on hand agreed with the ledger balances and had from time to time been tested by the permanent staff of stock-takers employed in the Audit branch.

Replies of Railway Officers.

11 (a) The expression "current market rates" is not understood.

(b) The system in force is to maintain quantity ledgers only and it is only in the case of timber and fuel (out of some thousands of articles) that separate priced accounts are kept; to keep priced accounts for every article mentioned in the ledgers would more than double the work and would necessitate the entertainment of some six additional clerks. In our opinion the present system is to be preferred in every way, and, as it would be an exceedingly difficult matter to agree upon what should be considered as important articles, it could only end in pricing every article without exception.

We may mention that priced ledgers were kept at Perambur many years ago, but were stopped in 1875 apparently with the approval of the Government officials.

(c) No reply needed.

Examiner's further Remarks.

11 (a) This means what the stores could be obtained for at date of the stock valuation.

(b) (i) There should be no difficulty in the Company's Agent or Auditor settling with the Consulting Engineer or Examiner a list of important articles. Priced accounts should certainly be maintained for such items as—

Wood fuel,	Wheels,
Coal,	Axles,
Timber,	Under-frames,

and other stocks which are either highly priced or kept in large quantities.

(ii) The Company's statement may be misinterpreted to mean that priced accounts are now kept for timber and fuel, but such is not the case.

(iii) Periodical priced balance sheets are prepared, but no regular monthly system of priced accounts is maintained.

(c) Calls for no remark.

(d) Firewood account, Rupees. 1,04,286-5-0.

(i) The locomotive stock ledger showed an excess quantity of 23,828,660 lb. over the stock lists owing to wood received and not paid for having been excluded from the audit ledgers.

(ii) A system is necessary as on State lines of taking all stock received to debit of stores and of crediting unpaid bills to the store purchase account (the value of the firewood omitted from the accounts was Rs. 51,733).

(ii) The required change was made in the Company's accounts for the half-year to 31st December 1892 and the value of all stores taken into stock and not paid for is debited to the respective store accounts and adjusted through the stores outstanding account. The Government Examiner was informed of this change in the accounts on the 31st January 1893 one month before his report was written.

(iii) The stock taken to account seemed to be as fairly valued as possible on a system of averages, viz., at Rs. 2-3-4, compared with Rs. 2-2-9, the average cost of wood received during the period.

(c) Coke account, Rs. 11,024-10-3. The value of this stock was under-stated by about Rs. 1,468, the value per ton being taken at Rs. 24-5-6; whereas the actual average cost was about Rs. 27-9-3 per ton. This was due to the issue rate having been somewhat too high.

(*) Should the coke account on 30th June 1893 show any under-valuing of balance worth speaking of owing to issue rates having been too high, it is proposed to debit the store account with the amount over-charged and credit the same to the expenses of the departments which have been over-charged.

(d) (i) This point is dealt with in the next paragraph.

(ii) (a) The report was written long before it was printed and dated; hence I omitted to notice that the Company had, owing to my representation, partially agreed to introduce such a system for future transactions although it was not in force during the period under review.

(b) The system adopted by the Company is however still incomplete as a six-monthly list of out-standings is prepared and dealt with in June and December only.

(c) The accounts of each other month including the last month in the financial year are still always incorrect.

(d) The books should be correct all the year round like those of the Great Indian Peninsula, the Bombay-Baroda and Central India and other railways.

(iii) Calls for no remark.

(e) This would be a fair way to adjust the error, but no allusion is made to the prevention of further error by fixing a new price; possibly this has been done.

Examiner's Report.

(*N*) *English coal, Rs. 3,225-10-2.*
—The value of this stock was also slightly under-stated in the lists, the price being fixed at Rs. 25-14-6 against a cost price of Rs. 26-11-7; the reduction in price was due to a small surplus stock brought out by stock-taking and to the fact of specially augmented rates having been charged to other departments and in private work bills.

(*g*) *Patent fuel, Rs. 42,353-2-5.*
—This stock was also under-valued to the extent of about Rupees 2,388, the price having been fixed at Rs. 21-3-11 against a cost price of Rs. 22-7-1; the reduction in price is due to the same causes as those referred to in paragraph (*N*) regarding English coal.

(*h*) *Indian coal, Cr. Rupees 8,845-4-4.*—

(i) The stock lists showed a credit balance of Rs. 8,845-4-4 in amount and a debit balance of 333 tons in quantity.

(ii) Valuing the 333 tons at Rs. 14-12-6 per ton, which was the average actual cost of fuel purchased, the value of Indian coal has been under-stated in the stock lists by Rs. 13,773.

Replies of Railway Officers.

(*N*), (*g*), (*h*) (i) to (iii) Similar adjustments are proposed to be made if found of sufficient importance.

(*N*), (*g*), (*h*) (i) to (iii) This would be a fair way to adjust the errors, but no allusion is made to the prevention of further errors by fixing new prices.

The error of Rs. 13,773 in Indian coal will, it is hoped, be of sufficient importance for early adjustment.

Examiner's further Remarks.

(iii) This under-statement would have been still greater but for the fact that an amount of Rs. 5,182 which was deficient on Trincomallee timber account had been transferred in the previous half-year in reduction of the excess balance on the coal account.

(iv) Such adjustments should not, in my opinion, be made without previous sanction and record at official meeting.

(v) The excess on the stock of coal may be due to a system which obtains of adding 5 per cent. for wastage to the actual issues to drivers.

If this is the case, it may be possible to reduce the percentage, as such excess in stock may lead to speculation.

I cannot find any authority of Government to charge this rate of 5 per cent. for wastage.

(vi) Again 5,454 tons of coal costing Rs. 50,617 received during the half-year have been omitted from the stock lists owing to the want of system referred to in para. (d) of taking unpaid bills to debit of stock and credit of purchase account.

(iv) This will be attended to in future if such adjustment be again requisite.

(iv) It may be noted that Company agree to obtain sanction to stock adjustments in future.

(v) The percentage for wastage has been allowed for very many years, but will be discontinued.

(v) I did not propose to discontinue, but to regularize by sanction and, if necessary, revise the rates.

(vi) See our remarks on paragraph 11 (d) (ii).

(vi) See also my note to same paragraph.

Examiner's Report.

(i) Teak Timber, Rupees
2,68,589-13-10. — ^

(i) The balance on this account was made up as follows:—

Scantling in the mill — C. Ft. IN.

Best .. 3,862 7

Rough at 96 cubic .. 23,839 0

Waste at 110 .. 1,025 0

ton .. 16,317 8

Waste at 42 lbs. .. 68 0

Uncut logs .. 697 4

Scantlings in the .. 16,317 8

shed, best .. 16,317 8

Uncut logs .. 43,317 7 @ 4-8-1 = 1,95,118

Do. .. 992 3 @ 2-4-9 = 2,273

Do. .. 31,961 8 @ 2-6-7 = 71,201

Total .. 2,68,589

(ii) The price of scantling shown above was double the price of timber in log, resulting in an apparent loss by wastage and cutting of 100 per cent.

(iii) But as the actual wastage of the period worked out to 50 per cent. only, the price of teak scantling would appear to have been much overstated.

(iv) Thus if to the price in log,

Replies of Railway Officers.

Examiner's further Remarks.

(i) (i) The inclusion of 697.4 cubic feet uncut logs in the scantling account at scantling price was an error and will not occur again.

(ii) (i) Noted. This is an admission of the error alluded to in para. 11 (i) (vi) of my report.

(ii) There is some error here; a loss of 100 per cent. would mean the loss of the entire log.

(ii) (a) The cost of the timber in log has been increased by 100 per cent. in converting it to scantling whereas it is usual in the Engineering Department to increase it by 50 per cent. only.

(iii) & (iv) There is also some error of calculation here; from long experience it has been found that between the log and the scantling as issued to works there is an average loss of about 50 per cent., and it is therefore quite correct to value the scantling at about

(iii) & (iv) (a) As stated in the previous paragraph, my figures are based on the argument that there has not been a loss of 50 per cent. in quantity but an increase of 50 per cent. in price.

(b) The loss in quantity has been taken at 33 per cent. or thereabouts, which results in an increased cost of

Rs. 2-4-8, 50 per cent. be added for wastage and cutting or Rs. 1-2-4, the price of scantling would be Rs. 3-7-0 per cubic foot instead of Rs. 4-8-1 as shown in the stock lists (even a figure of Rs. 3-7-0 is apparently high as the issues of teak timber from the Engineering stocks during the same period were made at the rate of Rs. 2-5-0 per cubic foot).

double the rate in the log to keep the balance on the right side; for example—

Ten logs paid for as measuring	Rs.
500 cubic feet at Rs. 2	= 1,000
The whole scantling cut from these 10 logs when issued to works is found to measure only 250 cubic feet (a loss of 50 per cent.) and this must be issued at double the log rate Rs. 2 x 2 = Rs. 4 to make up the cost of the ten logs	= 1,000

There will be of course in hand the outside and waste timber which comes from the log in process of cutting and this will be returned into stock at a valuation and credited to working expenses.

Another error is made in the latter part of (iv) regarding the price at which the Engineers charge their timber; it is true they charge the timber at Rs. 2-5-0 per cubic foot issued, but to arrive at the amount issued, they first add 50 per cent. to the quantity actually used and charge the total at Rs. 2-5-0, so that they really charge their timber at Rs. 3-7-6 per cubic foot.

Their smaller wastage (33½ per cent. against 50 per cent.) is supposed to be caused by their dealing with beams and planks of much larger dimensions than the Locomotive and Carriage department.

50 per cent. per foot of scantling over the cost of timber in log, thus:—

For 500 cubic feet at Rs. 2	= Rs. 1,000.
166½	wastage 33 per cent.
333½	
333½ cubic feet of scantling cost Rs. 1,000	= Rs. 3 per foot or 50 per cent. in excess of rough logs at Rs. 2.

(c) As pointed out in a subsequent note against the Company's reply to my original para. f (iii), the wastage on timber manufactured during the year 1892 amounted to 40 per cent. which is very near the rate I assumed for 1891.

(d) This should be credited in reduction of the price of the outturn, not to working expenses. Otherwise, in the case of construction of stock, capital will be overcharged for its timber.

(e) I may possibly have under-stated the price of engineering timber, but the teak timber account of that department was in such a confused state that it is not surprising that a mistake could have occurred.

(ii) Even, however, if the price of the engineering scantling be Rs. 3-6 as now stated by the Railway officers, the price of locomotive scantling Rs. 4-8-1 is still 30 per cent. in excess of the engineering rate.

(f) Since the issue of my former report, I have analyzed the locomotive teak timber account of the year 1892 and found that the consumption, outturn and waste of the saw mill as brought out by the Company's books were as follows:—

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	Best scantling.	Rough.	Logs.	Total.
(i) Consumption— Timber in mill at commence- ment of year	c. ft. 2,883	c. ft. 22,339	c. ft. 697	c. ft. 25,899
Received during year	24,920	..	60,538	86,458
Total Receipts ..	27,783	22,339	61,235	1,11,357
Less stock at close of year ..	4,084	8,881	104	13,069
Total consumption ..	23,699	13,458	61,131	98,288

(ii) Outturn—

Issues to works	..	..	..	26,535
Do. to shed stock	..	..	..	32,777
Total outturn ..	..	..	..	59,312

(iii) Wastage = 98,288 — 59,312 = 38,976. A wastage of 38,976 on a consumption of 98,288 is equal to 40 per cent.

(iv) A loss of 40 per cent. in quantity is equivalent to an addition of 66 per cent. to the price instead of 100 as stated by the Company.

(v) A log price of Rs. 2-4-0 per cubic foot increased by 66 per cent. will give scantling at a value of Rs. 3-11-9 per cubic foot instead of Rs. 4-8-1 as shown in the valuation lists.

(v) The teak scantling account would therefore appear to have been over-valued by at least Rs. 46,260 owing to the excess price on scantling.

(v) & (vi) The calculation therefore that the scantling is over-valued is shown to be incorrect and the only error is that of Rs. 1,543 (actually Rs. 1,483-5-9) mentioned in (vi) and our remarks on (i) (i).

(v) & (vi) For the reasons quoted above, I am still of opinion that the timber did not cost the Company the amount at which it is borne on the valuation list and that the error in rate is due to the causes alluded to in paras. (viii), (ix), (x) and (xi) of this section.

(vi) Again, 697 cubic feet of uncut logs in the mill awaiting manufacture have been priced as scantling at Rs. 4-8-1 instead of as uncut logs at Rs. 2-4-8, resulting in a further over-valuation of about Rs. 1,543.

(vii) The teak scantling has therefore apparently been over-valued to the extent of about Rs. 47,800 in all.

(viii) This error is, in my opinion, due to the absence of priced saw mill and scantling accounts.

(ix) Under the procedure in force quantities alone were dealt with and a periodical account current of all receipts, issues and charges was prepared and priced.

(x) The balance brought out by this account was assumed to represent the value of the stock in hand, logs being first valued at cost price and the residue assumed to be the value of the scantling.

(xi) By this system all errors in accounting or pricing were added to the value of scantling. As an instance of how errors have arisen, I may state that in a preceding half-year when the value of the starting balance was Rs. 5-8-0 per cubic foot, the issues to works were made at Rs. 3 per cubic foot and the difference of Rs. 2-8-0 per foot

(vii) & (viii) Having shown that of the Rs. 47,800 supposed over-valuation, only Rs. 1,483 is correct, there appears to be little need of further remark.

This is admitted to be an error—vide para. (i) (i).

(vii) & (viii) (a) See my remarks on (vi) which may lead to a reconsideration of the subject.

(ix) to (xi) (b) My remarks on the erroneous system resulting in the grave errors pointed out in paras. (ix), (x) and (xi) have been passed unnoticed.
(c) It is now most unsatisfactory to have to state that during the year which has elapsed since the preparation of the valuation lists under review, other important errors have occurred, and that the price of scantling has, without any apparently reasonable cause, increased from Rs. 4-8-1 to Rs. 6-2-5 per foot as may be seen from the following figures extracted from the locomotive returns for June and December 1892:—

	June half. year, 1892.			December half-year 1892.		
(a) Price of scantling in stock at commencement of period ..	Rs.	A.	P.	Rs.	A.	P.
Price of uncut logs during period ..	4	8	1	7	5	8
Average price at which scantling has been issued during period ..	3	0	7	1	15	8
Maximum price at which issued ..	3	4	10	3	4	10
Price of scantling at close of period as brought out by account current ..	4	0	0	4	0	0
Percentage—the rate per foot of scantling exceeds the rate per foot for uncut logs ..	7	6	8	0	3	8
	361			310		

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was therefore thrown upon the value of the balance in hand at the end of the period which thereby became unduly augmented to a value of Rs. 7 per cubic foot.

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(e) It is therefore most imperative that the timber account should be put on a satisfactory footing at once.
(f) The present system, which permits the price of scantling to jump from Rs. 4-8-1 per foot to Rs. 6-2-6 in 12 months when the cost of logs purchased has decreased, is scarcely capable of defence.

(g) It will probably be found that the bulk of the error lies in the want of a system of priced work orders in respect of the sawing operations connected with the second cutting of scantling for issue to works.

(h) From my previous note against para. (f) it may be seen that 23,699 cubic feet of best timber passed through the mill during the year 1892.

This timber was valued at Rs. 4-8-1 per	Rs.
foot	= 1,06,769
but was issued at an average rate of Rs.	= 78,256
3-4-10	<u>28,513</u>

(i) If the timber was resawn and a loss of only 10 per cent. arose on the operation, there would have been a further loss of 10,677

resulting in a total loss of 39,190

(xii) The following priced accounts would appear to be necessary to permit timber transactions being correctly recorded.

(xiii) A saw-mill account taking to debit all logs and scantling sent in for cutting and the cost of the operations and credit; by issue to works or store accounts of each quality; for the actual value of the outturn.

(xiv) Separate scantling accounts of each quality to be debited with saw-mill outturn and credited by actual issues or sales.

(xv) A log store account to be debited with the actual cost of and charges on logs taken into store and credited with the value of the actual issues to saw-mill, works or other heads.

(ix) to (xv) The accounts at Perambur for teak timber are kept in the following manner:—

(1) A log account.

(2) A saw mill account.

(3) A scantling account,

and to these will be added accounts dealing with outside and waste timber as per our remarks on para. (i) (iii) and (iv).

(5) (2)

(j) Again 13,458 feet of rough scantling, valued at Rs. 4-8-1 per foot, were also recut and issued at the average rate of Rs. 3-4-10, involving a further loss of Rs. 16,192 upon the same basis.

(k) Works would thereby have been undercharged by Rs. 55,382 and the price of stock in hand would, by the Company's system of account, have been unduly inflated to the same extent.

(l) A loss of Rs. 55,382 distributed over a stock of 36,130 feet would have increased the price thereof from Rs. 4-8-1 to Rs. 6-0-7 per foot which is very near the rate now stated by the Company as the value of scantling.

(xii) to (xv) (a) (i) I wish it not to be lost sight of that my chief suggestion in this paragraph is the introduction of priced accounts and work orders for manufacture of timber of each class, which points are not dealt with by the Company's officers although they make a general allusion to the question elsewhere.

(ii) Without priced accounts there will, in my opinion, always be a great liability to error.

(b) (i) The system now in force of reducing the ledger quantities of inferior timber instead of issuing them at reduced prices is, in my opinion, another cause of much of the misunderstanding on the subject of wastage.

(ii) For instance, an actual quantity of 42,892 cubic feet of rough scantling is stated in the accounts as only 22,339 cubic feet.

(iii) Wastage which should be calculated on the gross quantities of timber manufactured is now based on reduced assumed quantities.

(iv) Again under the system now in force, waste which sells at five and a quarter annas per foot is stated in the Company's accounts at a value of Rs. 4-8-1 per cubic foot.

(c) It may be noticed that the Company will introduce accounts dealing with "waste" timber.

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(k) The following complicated system of pricing was and is still in force and would appear to require revision, viz.:-

(i) Separate rates of issue are fixed periodically by the Locomotive Superintendent for issues to the Locomotive Department, issues to other departments, issues to Company's servants, and issues to private persons or works.

(ii) Issues to other departments and private persons are priced at considerably higher rates than the rate charged in the Locomotive Department, and, in the event of large transactions, this complicated system must result in a serious derangement of the average prices.

(iii) Again as the increased charges are intended to cover supervision, exchange and charges of a general nature, many of which do not pass through the Stores Account, the system would appear to be absolutely erroneous.

(iv) There should, in my opinion, be one rate of issue only fixed for each article irrespective of the department or work to which it is issued.

(v) Supervision and similar charges payable by other departments or outsiders should be provided for by addition of special percentages as is the custom on other railways.

(k) (i) to (v) The Acting Locomotive Superintendent proposes to continue the present system of different rates of issue until the return of the Locomotive Superintendent from furlough. The present system has worked very well for many years and there seems little difference between adding a percentage to the rate at which stores are issued and adding a percentage on the value of stores so issued so long as the enhanced rate or percentage be credited to the working expenses of the department.

(k) (i) to (v) (i) The main reason for the Company wishing to retain the existing system is in order that the department may be credited instead of Abstract K, Miscellaneous Earnings.

(ii) Exchange and actual establishment and expenditure specially engaged or incurred on work done for other departments are permitted to be credited to the Locomotive Department under para. 22 of the instructions contained in the Guaranteed Railway Standard form of Revenue Account, but percentages for supervision by the permanent staff must be credited to Abstract K.

(iii) There is no particular reason why the rules laid down for all India should be deviated from in the case of one railway.

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(1) The balances at debit of Locomotive Department shown in the audit ledger and the locomotive balance sheets were at the period under review inclusive of both stores and workshop transactions and it was impossible to ascertain monthly from these records the separate value of stores and of workshop balances.

This system has, at my request, been subsequently modified and the locomotive returns made to show the transactions separately.

(n) *Stores at up-country depôts.*—

(i) As in the case of the Engineering Department, a large amount of detailed ledger-keeping is thrown upon Foremen at out-stations which might be avoided by a system of imprests.

(ii) The Foremen now keep unpriced ledgers which are periodically balanced and the result sent to the head office for valuation.

(iii) It is noticed that a considerable stock of springs, side chains, spare wheels, &c., in the hands of Foremen have not been included in this head office valuation.

(iv) These omissions may roundly be stated at Rs. 14,000 (*vide* statement C).

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(1) See our remarks on para. 5.

(1) See also my remark on same paragraph.

(m) (i) to (vi) The Examiner's proposition is considered a very reasonable one so far as the majority of the stores kept up-country are concerned and it will be brought into effect as far as possible at an early date. The stock of such stores now in charge of Foremen will be re-debited to the Store Account and credited to Working expenses.

(m) (i) to (vi) It may be noted that the suggestions are adopted and the Company should be asked to report the date on which they are brought into effect.

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(v) It is stated in explanation that these items have been charged off to works as soon as they were issued to the Foremen which is irregular.

(vi) A system of imprests would also remedy this as well as save time in accounting as suggested in paragraph 1.

(a) It is satisfactory to note that there is not the same reason to complain of the returned stores system as there was in the case of the Engineering Department, although there are some few items borne on the books without value at Perambur, which, it is estimated, are worth about Rs. 5,000 (*vide* statement D).

12. (i) Until the receipt of recent orders to reduce the pay of the appointment of the Locomotive Accountant, that officer had been under the direct control of the Company's Auditor.

(ii) Since the reduction, he has, however, been placed beyond the jurisdiction of the Auditor.

(iii) This was not a necessary sequence to the Government order to reduce the pay of the appointment, and in my opinion the old system should be reverted to.

(n) These items are returned Revenue stores and if brought on to the stock lists will have to be debited to Capital and credited to Revenue; it would seem better to dispose of all stores that are not likely to be used and credit the value to Revenue which will be done.

(s) (i) The Company's suggestion is what I should have recommended had I known the stores were not required.

(ii) It is satisfactory to note that the report will have caused even a small reduction in the Company surplus stores.

12. (i) to (v) From 1st January 1889 to early in 1892, the Locomotive Accountant was considered to be an Assistant to the Chief Auditor. The Board in directing his transfer to the Locomotive Department expressed themselves so strongly on the subject that we do not think it within our province to offer an opinion.

12. (i) to (v) Await result of reference to Board—*vide* Agent's No. 490, dated 7th June 1893, forwarding the reply of the Railway officers.

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(iv) Although the Board in its No. 867, dated 27th May 1892, suggested the Locomotive Accountant being put under the direct control of the Locomotive Superintendent, the actual sanction by Government was to an Accountant for the Audit office established whose pay should be allocated to Locomotive Department as is the usual custom.

(v) The Locomotive Accountant as on State lines, should, in my opinion, hold the same relations to the Locomotive Superintendent and Auditor as an Accountant on the Public Works Department does to his Executive Engineer and Examiner.

13. Before concluding, I would beg to recapitulate the following important points noted in this report and to ask you to take such action thereon as you may consider expedient. In this respect I would further draw special attention to an opinion expressed by the Accountant-General, Public Works Department, in his No. 582 R., dated 18th June 1892, printed as Appendix A on several of the points herein raised :—

(a) The audit ledgers and locomotive balances should at once be made to agree.

Replies of Railway Officers.

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13. (a) The Locomotive Stores suspense accounts in the Company's books are now in practical agreement with the balances of the Locomotive Stores and Workshop Accounts.

13. (a) (i) This statement is based on data which I contend is erroneous.

(ii) The books and accounts both of the Audit and Locomotive departments should periodically be adjusted so as to be in exact accord with the lists showing the value of the stock in hand.

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