

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Work DEPARTMENT

G.O. No.	1340-11	(Ry)	Press
B.P. No.			Mis.
Dated	30-5-	1876.	

Not to be folded or roughly handled

Read the following papers :—

No. 499. From Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 4th April 1876, No. 170.

DURING April 1875 an indent for 25 miles of rails for renewals of the existing road was received in this office for submission to Government from the Agent of the Madras Railway. In explanation of the necessity for the material, the Chief Engineer wrote as follows :—

"The present stock of iron rails on hand for this purpose is sufficient for 9½ miles. It is true our renewals last year amounted to only 2 miles of rails, but the road from Madras to Aroot (65 miles) has had a life of nineteen years, and although I see no great reason to fear a sudden collapse of the rails on their section, still renewals will increase rapidly, and it is well to be prepared for this. I therefore think it desirable to increase the stock by the amount herewith indented for."

2. I have now the honor to submit for consideration further correspondence*

* Letter to Agent No. 445, 20th April 1875. which has passed with regard to the
" from " " 215, 29th Feb. 1876. necessity of obtaining supplies of material
" " " " 300, 28th Mar. " from England for renewals. It will be
seen that, in addition to the 25 miles of rails, it is proposed to indent for 60,000 cast iron pot-sleepers, and for 20,000 wrought iron tie-bars.

3. With regard to the rails Mr. Robinson explains that, owing to the great wear and tear to which those in the sidings at large stations are exposed, not more than 34 miles out of 62½ can be relied on for renewals; and that these can be utilized only in small quantities, from there being so few worn rails available to replace them. Looking to all the circumstances, it is probable that a smaller supply than that indented for would be sufficient for immediate requirements; but present prices seem to offer a favorable opportunity for placing contracts in the market, and the indent is therefore recommended for sanction.

4. With regard to the sleepers and tie-bars, it will be seen that a large proportion of the number indented for (one-half in the case of the sleepers, and three-fourths in the case of tie-bars) are shown to be required in order to complete the sanctioned renewals between Muddikerry and Palghaut. The renewal of that section

with iron sleepers was urged by the Chief Engineer, and sanctioned by the Government of India, upon the express ground
Vide Procs. of Govt, 3rd Feb. 1873, No. 343.
24th March 1873, No. 912.

that the large stock lying idle would be utilized, and at the same time a large balance left for ordinary renewals. In the Agent's letter No. 300, explanation is given of the manner in which the stock which was in hand when Mr. Anderson wrote has been expended; and, under the circumstances, I am of opinion that the indents now submitted may be sanctioned.

*Proceedings of the Madras Government, Public Works Department,
30th May 1876.*

station yards, and there are still 7,623 sleepers to be replaced. I shall include them in my estimate of stock required, which is as follows:—

Renewals for two years	10,000
Required to complete from Muddikerry to Palghaut...	28,748
Replacing wooden sleepers in station yards	15,246
For new sidings	5,000
„ temporary roads	6,000
To meet unforeseen requirements (5 miles)	16,000
	80,994
Less stock in hand	21,646
	59,348
Say ...	60,000

<i>Tie-bars.</i> —Our stock of tie-bars on the 31st of December was ...	20,673
The average renewals are 2,500 per year, for two years ...	5,000
Required to complete from Muddikerry to Palghaut ...	14,374
For station yards	7,623
For new sidings	2,500
„ temporary roads	3,000
To meet unforeseen requirements	8,000
	40,497
Less stock in hand	20,653
	19,844
Say ...	20,000

I herewith forward indents for the material in the above estimates. Of smaller material there is a large stock in hand.

From R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Madras, 28th March 1876, No. 300.

With reference to your letter of the 24th instant, No. 307, I have the honor to enclose you a copy of the Acting Chief Engineer's letter of the 27th instant, No. 249, upon the subject of this Company's stock of iron bowl-sleepers.

From W. R. ROBINSON, Esq., Acting Chief Engineer, to R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, dated Madras, 27th March 1876, No. 249.

Your endorsement on Consulting Engineer's letter No. 307 of the 24th instant.

2. I have first to point out that Mr. Anderson's letter referred to by the Consulting Engineer was written in 1872.

3. Our stock of pot-sleepers at the end of that year was 167,816. If from this number we deduct the 74,148 sleepers then required to complete the laying between Avenahy and Muddikerry, we have left at the time Mr. Anderson wrote 93,668 pots, or 25½ miles (seven pots to the rail) available for renewals and for laying the 17 miles between Muddikerry and Palghaut. Since then the actual consumption has been as follows:—

Renewals	18,815
New sidings	3,662
Laid between Muddikerry and Palghaut	36,824

*Proceedings of the Madras Government, Public Works Department,
30th May 1876.*

Cheyaar bridge	1,882
Doubling line between Salt Cotaar and new Central Station ...	5,546
Do. do. Perambore and Veyserpaudy Junction ...	4,074
Broken pots in stock	1,249
	72,052

leaving a balance in hand of 21,646 as shown in my letter, No. 151, dated 19th ultimo.

No. 499-A. From Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 15th May 1876, No. 240.

In reply to memorandum, No. 724, dated the 25th ultimo, I have the honor to

lay before Government a letter* from the Agent of the Madras Railway Company, with enclosure from the Chief Engineer, conveying the opinion of those officers upon the two suggestions contained in the memorandum in question, namely, that steel rail should be obtained from England instead of the iron ones indented for; and that the pot-sleepers required should be cast in India out of the Company's old metal, instead of being procured from England.

2. I agree with the Railway Officers that the question between iron and steel rails is one that hinges altogether upon their comparative cost. If Mr. Robinson is correct in stating that the cost of steel rails is rapidly approximating to that of iron, it would probably be a wise economy to purchase the better material; but this is a matter that can be decided only upon the spot, and it may be referred with safety to the Company's Consulting Engineer in London.

3. As regards the pot-sleepers,* I am of opinion that for the present it would be wise to procure them from England. The construction of an iron foundry at Perambore is now in progress; and when it is in working order, possibly by the end of next year, it is not improbable that it will pay the Company to use up their old metal in casting pot-sleepers; but for the present I am satisfied that they are right in proposing to get them from England.

4. Mr. Robinson draws attention to the smallness of the stock of rails and pot-sleepers, and urges that immediate advantage should be taken of the present favorable state of the market to effect the necessary purchases. He adds that neither rails nor sleepers will probably be delivered in India a day before they are required. Looking to the inconvenience which may possibly result from delay in supplementing the existing stock of material, I am of opinion that it would be well to anticipate to a certain extent the sanction of the Government of India, and to authorize the Agent to obtain at once, through his Directors, a portion of the material indented for, say, 10 miles of rails, 20,000 cast iron pot-sleepers, and 10,000 wrought iron tie-bars; leaving the Directors to decide, in communication with their Consulting Engineer, whether the rails are to be of steel or iron.

*Proceedings of the Madras Government, Public Works Department,
30th May 1876.*

From R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Madras, 13th May 1876, No. 512.

With reference to your letter, No. 462, of the 2nd instant, I have the honor to enclose you a copy of the letter* which the Acting Chief Engineer has addressed to me as to the suggestions which His Grace the Governor in Council has been so good as to make regarding the indent for permanent-way materials.

* No. 355, dated 12th May 1876.

2. The question of whether it would not be well to obtain steel instead of iron rails is one which depends so entirely upon the comparative prices of the two at the time the purchase is made that I think it will be best left for the decision of the Board, who will doubtless be guided in the matter by the advice of Sir John Hawkshaw.

3. I agree with Mr. Robinson in thinking that it will be better to obtain the iron sleepers from England than to have the castings made in India. There is no foundry in Madras at which the work could be satisfactorily done, and the cost of carriage from any other part of India, added to the high charge made for castings in this country, would probably make the cost of sleepers manufactured here higher than that of those imported from England.

4. I beg to draw your special attention to the last paragraph of Mr. Robinson's letter.

From W. R. ROBINSON, Esq., Acting Chief Engineer, to R. B. ELWIN, Esq., Agent and Manager, Madras Railway Company, dated Madras, 12th May 1876, No. 355.

Your endorsement on Consulting Engineer's letter, No. 462, dated 2nd instant. As the rails indented for are required for renewals iron will be preferable to steel unless it should be decided to substitute steel for iron rails over the whole railway, but with our light traffic I doubt if the time has yet arrived for taking this step. The life of an iron rail on the Madras Railway is certainly more than 20 years, and the comparative cost of iron and steel rails as they stand in our stock books is Rupees 20,571-12-0 for a mile of steel, and Rupees 12,471-4-0 for a mile of iron rails, showing a difference of Rupees 8,200-8-0 in favor of iron. This sum at compound interest for 20 years would come to Rupees 13,557, an amount more than sufficient to pay for a mile of iron rails. The cost of steel rails is, however, rapidly approximating to that of iron. I see our last purchase was made at the rate of £11 per ton, so that the time may be very near when even with our light traffic it would pay to substitute steel for iron. The question is so important that I think it should be referred to the Company's Consulting Engineer, Sir John Hawkshaw.

2. With reference to pot-sleepers, I feel certain that at the present price of iron we can procure them cheaper at home than in this country, where I much doubt our being able to get the number required cast within a reasonable time or for a reasonable rate.

3. We are now getting a very fair price for our scrap iron, viz., Rupees 35 per ton; but when our foundry at Perambore is completed, it can be utilized as proposed.

4. In conclusion I would urge that, as our stock of pot-sleepers and rails is very low, immediate advantage should be taken of the present favorable state of the market to effect the necessary purchases. I fear that neither the rails nor sleepers will be delivered in India as early before they are required.

No. 500.

ORDER THEREON, 30th May 1876, No. 1,341.

RAILWAY, No. 49.

Under the circumstances explained in this correspondence, the indents submitted for 25 miles of rails 70,000 cast iron pot-sleepers and 20,000 wrought iron tie-bars—will be forwarded for the sanction

*Proceedings of the Madras Government, Public Works Department,
30th May 1876.*

of the Government of India. There seems no necessity for anticipating the sanction of that Government which will doubtless be communicated within a reasonable time.

2. It is stated that the question as to whether steel or iron rails should be procured resolves itself into a mere matter of cost. In the opinion of His Grace the Governor in Council, it is highly desirable that existing iron rails should on the main line and especially on the steeper gradients whenever renewals are required be replaced by steel rails; and as the present seems a fitting opportunity, owing to the comparatively low prices of the home markets, to lay in a stock of steel rails, the Agent and Manager of the Company will be requested to bring the subject before his Board of Directors in connection with the present indents.

3. The question of utilizing old metal in the casting of pot-sleepers in the country should not be lost sight of.

(Here enter No. 1,341, dated 30th May 1876.)

(True Extract.)

Colonel,

Offg. Under Secy. to Govt., P.W.D.

To the Consulting Engineer for Railways.

Exd. E. C. Shunker.

Spare Copies

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 30th May 1876.

No. 501.

No. 1,341.

FROM

MAJOR-GENERAL G. W. WALKER, R.E.,
*Secretary to the Government of Madras,
Public Works Department,*

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
Public Works Department.

RAILWAY, No. 50.

SIR,—I am directed to forward herewith indents which have been submitted by the authorities of the Madras Railway.

- (1.)—For wrought iron rails for renewal of 25 miles of railway at an approximate cost of Rupees 3,11,781, and
- (2.)—For 60,000 cast iron pot-sleepers and 20,000 wrought iron tie-bars at an approximate cost of Rupees 1,62,500.

2. It is explained in the accompanying correspondence that, owing to the great wear and tear to which the rails in sidings are exposed, a large proportion of existing stock is unsuitable for renewals on the main line. And that although a smaller quantity than that now indented for may suffice for immediate requirements, present market quotations seem to offer a favorable opportunity for replenishing the stock on hand. The Consulting Engineer accordingly recommends that sanction be accorded to the 25 miles of rail indented for. It will be seen from the Proceedings of Government that the Agent has been requested to submit for the consideration of his Board the question whether, looking to the present prices of steel and iron rails, it would not be more advantageous to procure steel instead of iron.

3. A large number of the sleepers and tie-bars are required for renewals between Muddikerry and Palghaut, sanction to which was communicated in letter from the Government of India, No. 401 G.R., dated 7th March 1873. The stock then in hand has since been utilized, as explained by the Company's Officers, and the additional quantity now indented for has become necessary.

I have the honor to be,

Sir,

Your most obedient servant,

Colonel,

*Offg. Under Secy. to Govt., P.W.D.,
for Secretary to Government.*

Exd. E. C. Shunker.
Spare Copies

Railway Departt.

Cons. Engrs. Office

Madras 20 April 1875

To

N^o 445.

From C1 -

From 221

From 221

Sir,

The Agent and Manager
Madras Railway Co

Adverting to my letter
of yesterday N^o 438, and to
your N^o 372 of the 9th instant.
I have the honour to observe
that the necessity for indenting
on England for 25 miles of
rails to meet renewals on the
existing line is not quite clear.
In the Chief Engineer's letter
dated 30th March 1874, submit-
ting a report for the second
half of 1873. Mr. Goring pointed
out that the length of rails
available for renewals was as
follows:-

* Indent N^o 148.

follows:

In stock	15 miles
In sidings and lay-byes	62 $\frac{1}{4}$ miles
	<u>77 $\frac{1}{4}$ miles</u>

2. It appears from your letter that the present stock is 9 $\frac{1}{3}$ miles, and as only one mile of rails had been removed from sidings up to the end of last year, the probable supply from this source at present may be taken at 60 miles, making a total of 69 $\frac{1}{3}$ miles or sufficient to relay the whole of the line as far as Arcot. A portion of the quantity in stock will be required for new sidings, $\frac{1}{4}$ in, and renewals

76
renewals in other sections of the line will also have to be made from sidings, but as the Chief Engineer does not consider there is any danger of a sudden collapse of the rails on the 1st Division, I am of opinion that it will be well to postpone the indent for the present. I shall be glad to learn whether on reconsideration you concur with me in this. The Engineering stores balance is very large and should not be increased without the absolute necessity for so doing being carefully considered.

I have, &c.
(Signed) J. H. M. Shaw Stewart
Cons. Eng. for Railways
(True copy)
Mantworth Howell
Cons. Eng. for Railways

500 12

No. 300

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 28th March 1876.

From

Robert B. Elwin, Esq^r.

Agent and Manager of the M.R. Co.

To

Lieut. Colonel J. H. M. Shaw Stewart, R.E.

Consulting Engineer for Railways.

Sir,

With reference to your letter of the 24th instant No. 307, I have the honour to enclose you a copy of the Acting Chief Engineer's letter of the 27th instant No. 249, upon the subject of this Company's stock of iron bowl sleepers.

I have the honour to be,

Sir,

Your most obedient servant,

Robert B. Elwin

Agent and Manager.

Don't 248th / 96.

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No. 249.

Madras Railway Company
Chief Engineer's Office
Madras, 27 March 1876.

The Agent and Manager,
Barrack,

Your endorsement on Consulting
Engineer's letter No. 307 of the 24th instant.

I have first to point out that
Mr. Anderson's letter referred to by the
Consulting Engineer was written in 1872.

Our stock of pot Sleepers at
the end of that year was 167,846. If from
this number we deduct the 74,148 Sleepers
then required to complete the laying between
Aranshy and Muddikerry we have left
at the time Mr. Anderson wrote 93,698
pots or 25 $\frac{1}{3}$ miles (7 pots to the rail) avail-
able for renewals and for laying the 17 miles
between Muddikerry and Palghat. Since
then the actual consumption has been as
follows:—

Renewals	18,815
New Sidings	3,662
Laid between Muddikerry and Palghat	36,824
Repair Bridge	1,882
Doubling line between Salt Cotaur & New Central station	5,546
Doubling line between Perambore and Vayserpandy Junction	4,074
Broken pots in stock	1,249
	<u>72,052</u>

No. 2482/78
6/78

MADRAS RAILWAY
From
The Agent and Manager,

To

The Consulting Engineer

for Railways.

Dated 29th March 1876
Recd. 29th March
No. 249.

Respecting a Draft
of the Draft of the
letter upon the subject
of the Company's stock
of iron and steel.

leaving a balance in hand of 21,646 as
shown in my letter N^o. 151 dated 19th
Ultimo.

Yours faithfully
/ Sigs W. R. Robinson
Acting Chief Engineer

/ True Copy
/ W. R. Robinson
Agent and Manager

N^o. 2482/95

C. N^o. 2482.

Memorandum
at N^o. 724

Letter from the C. Engr
for Railways N^o. 178
dated 4th April 1876

Regarding his letter
No. 250, the Engr desires
to obtain the opinion of the
C. E. for Railways whether it
would not be better to obtain
steel rails instead of wrought
iron. Also whether there is
no possibility of getting the
first class cast in India
in small lots, the old
metal in the possession
of the company of which there
is doubtless a considerable
quantity, being utilized.
Frequent deliveries in the
country of small lots even
at prices at which the

11/2/76

11/2/76

11/2/76

the sheep could be pro-
-cured from home would
it is supposed, be more
economical.

W. H. H. Martin
Supt to Govt P.W.D

only 25th April 1876

Railway Department.

CONSULTING ENGINEER'S OFFICE.

No.

Madras 4th April 1876.

From

LIEUT. COLONEL J. H. M. SHAW STEWART, R.E.,

Consulting Engineer for Railways,

To

COLONEL G. W. WALKER, R.E.,

Secretary to Government,

Public Works Department,

Fort Saint George.

SIR,

During April 1875 an indent for 25 miles of rails for renewal of the existing road was received in this office for submission to Government from the Agent of the Madras Railway. In explanation of the necessity for the material the Chief Engineer wrote as follows:-

"The present stock of
"iron rails on hand for this
purpose."

wing
own
time

"purpose is sufficient for 9 1/3
"miles. It is true our renewals
"last year amounted to only 2
"miles of rails, but the road
"from Madras to Arcot (65 miles)
"has had a life of 19 years,
"and although I see no great
"reason to fear a sudden collapse
"of the rails on their section,
"still renewals will increase
"rapidly, and it is well to
"be prepared for this. I
"therefore think it desirable
"to increase the stock by the
"amount herewith indented for."

2.

. I have now the
honour

* Letter to Agent No 445 - 20 April 1875.
" from " No 215 - 29 Feb'y 1876
" " " No 300 - 28 March "

honour to submit for consideration
further correspondence which has
passed with regard to the necessity
of obtaining supplies of material
from England for renewals. It will
be seen that, in addition to the 25
miles of rails, it is proposed to in-
dent for 60,000 cast iron fish sleepers,
and for 20,000 wrought iron tie bars.
With regard to the
rails Mr. Robinson explains that,
owing to the great wear and tears to
which those in the sidings at large
stations are exposed, not more than
34 miles out of 62 1/4 can be relied
on for renewals; and that these
can

can be utilised only in small quantities, from there being so few worn rails available to replace them.

Looking to all the circumstances, it is probable that a smaller supply than that indented for would be sufficient for immediate requirements; but present prices seem to offer a favourable opportunity for placing contracts in the market, and the indent is therefore recommended for sanction.

4. With regard to the sleepers and tie-bars it will be seen that a large proportion of the number

number indented for - (one half in the case of the sleepers, and three fourths in the case of tie-bars,) are shown to be required in order to complete the sanctioned renewals between Muddikery and Palghat.

The renewal of that section with iron sleepers was urged by the Chief Engineer, ^{and} sanctioned by the Government of India, upon the express ground that the large stock lying idle would be utilised, and at the same time a large balance left for ordinary renewals. In the Agents' ^{letter} No 300, explanation is given of the manner in which the

Vide No off
3 Feb: 73
No 343
24 Feb: 73
912.

the stock which was in hand
when Mr. Anderson wrote has been
expended; and under the circum-
stances I am of opinion that the
indents now submitted may be
expedient.

I have the honor to be
Dear Sir
Yours Most obedt Servt
Matthew L. Hol. R.
Genl. Inquiries for Railways
and the name of the
person to be
in charge of the
work.

8024th April/74 No 1053 & 1054
 - 15th June/74 - 1573
 - 22nd July - 1973
 - 10th Sept - 2580 & 2581
 - 15th April/75 - 1049
 - 9th Sept/75 - 2582 & 2583
 - 6th Nov - 3171

For 25 miles of road
 per Permanent of the
 existing part of the
 road

8021st March/72 No 808 & 809
 - 23rd April - 1042
 - 20th Sept - 2229 & 2230
 - 7th Nov - 2619
 - 3rd Feb/73 - 343 & 344
 - 24th March - 912
 - 17th June - 1587 & 1588
 - 16th Aug - 2026
 - 6th Nov - 2714 & 2715

No 449

Recd. 26/8/76 M.A. 27/8/76
 Recd. 22/8/76 M.A. 26/8/76
 Recd. 17.5.76 M.A. 22/5/76
 Recd. 19.4.76 - M.A. 25.4.76
 Despatch 12-4-76

From
 The Consulting Engineer,
 for Railways,
 To
 The Secretary to Government,
 P. W. Department,
 Fort St. George,
 Dated 12th May 1876
 Recd. 1876
 No. 170
 C.E. Memo 724 of 25/4/76

No. 512

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE.

Madras, 13th May 1876.

From

R. D. Elwin Esq.
 Agent and Manager. M. R. Co.

To

Mr. J. H. & Son, Steamers, &c.

Consulting Engineer for Railways.

Sir,

With reference to your letter of the 3rd instant, I have the honour to enclose you a copy of the letter which the Acting Chief Engineer has addressed to me as to the suggestions which His Grace the Governor in Council has been so good as to make regarding the tenders for Permanent Way materials.

2. The question of whether it would not be well to obtain steel instead of iron rails is one which depends so entirely upon the comparative prices of the two at the time the purchase is made, that I think it will be best left for the decision of the Board who will doubtless be guided in the matter by the advice of Sir John Hawkshaw.

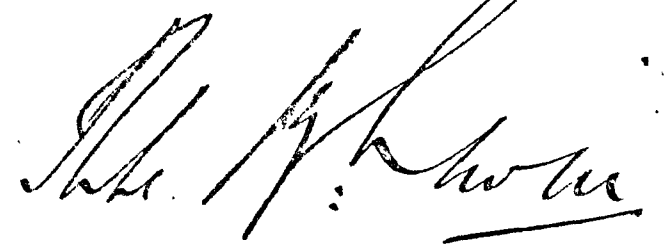
3. I agree with Mr. Robinson in thinking that it will be better to obtain the iron sleepers from England than to have the castings made in India. There is no

17 18
foundry in Madras at which the work
could be satisfactorily done, and the cost
of carriage from any other part of India,
added to the high charges made for cartings
in this country, would probably make the cost
of sleepers manufactured here higher than
that of those imported from England.

4. I beg to draw your special attention
to the last paragraph of Mr. Robinson's letter.

I have the honour to be,
Sir,

Your most obedient servant



Agent & Collector.

No. 1355, D. ... the Madras Railway Company,
 Chief Engineer's Office
 Madras 12th May 1876

The Agents and other Messrs, ...
 Dear Sirs,

Your endorsement of the 2nd inst.
 regarding letter 26462 dated 23rd inst.
 is in the main, in accordance with the request
 for renewal of rails will be preferable, to steel
 unless it should be decided by substituted steel
 for iron rails over the whole railway line with
 our light traffic. I doubt if this time has yet
 arrived for taking this step. The life of iron
 rail on the Madras Railway is certainly
 more than 20 years, and the comparative cost
 of iron and steel rails as they stand in our
 stock books is Rs. 20671.12.0 for a mile of steel,
 and Rs. 12471.4.0 for a mile of iron rails, leaving
 a difference of Rs. 8200.8.0 in favour of iron.
 This sum at compound interest for 20 years would
 come to Rs. 13557, an amount more than sufficient
 to pay for a mile of iron rails. The cost of steel
 rails is however rapidly approximating to that
 of iron. I see our last purchase was made at the
 rate of £ 11.0.0 per ton, so that the time may be
 very near when even with our light traffic it would
 pay to substitute steel for iron. The question is so
 important that I think it should be referred to
 the Company's Consulting Engineer Sir John
 Hawkshaw.

2. With reference to the price of iron I feel
 certain that at the present price of iron we can
 procure them cheaper at home than in this country.

MADRAS RAILWAY.

From

The Agent and Manager.

To

The Consulting Engineer

for Railways

Recd
 15th May 1876

No. 512

Forwarding copy of
 letter from the Acting
 Ch. Eng. in reference
 to the proposition made
 by Mr. J. J. to the
 Government regarding
 the Madras Railway
 Mr. Hawkshaw.

where. I much doubt our being able to get the number required at within a reasonable time or for a reasonable rate.

3. We are now getting a very fair price for our scrap iron viz. Rs. 35 per ton, but when our foundry at Secunderabad is completed it can be utilized as proposed.

4. In conclusion I would suggest that as our stock of Pot. Sleepers and Rails is very low immediate advantage should be taken of the present favourable state of the market to effect the necessary purchases. I fear that neither the rails nor sleepers will be delivered in India a day before they are required.

Yours faithfully
W. D. Robinson
Chief Engineer

True Copy
[Signature]
Agent & Secretary

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,

Madras 15 May 1876.

No. 240

From

LIEUT.-COLONEL J. H. M. SHAW-STEWART, R.E.,
Consulting Engineer for Railways,

To

MAJOR-GENERAL G. W. WALKER, R.E.,
Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

Cotacound

In reply to memorandum No 724 dated the 25th ultimo, I have the honour to lay before Government a letter from the Agent of the Madras Railway Company, with enclosure from the Chief Engineer, conveying the opinion of those Officers upon the two suggestions contained in the memorandum in question, namely, that

No 572.
13 May: 76
with enclosure

that steel rails should be obtained from England instead of the iron ones indented for; and that the pot sleepers required should be cast in India out of the Company's old metal, instead of being procured from England.

2. I agree with the Railway officers that the question between iron and steel rails is one that hinges altogether upon their comparative cost. If Mr. Robinson is correct in stating that the cost of steel rails is rapidly approximating to that of iron, it would

would probably be a wise economy to purchase the better material; but this is a matter that can be decided only upon the spot; and it may be referred with safety to the Company's Consulting Engineer in London.

3. As regards the pot sleepers, I am of opinion that for the present it would be wise to procure them from England. The construction of an iron foundry at Perambore is now in progress; and when it is in working order, possibly by the end of next year, it is not improbable that it will pay the Company to use up their old metal

material in casting pot sleepers; -
but for the present I am satisfied
that they are right in proposing
to get them from England.

W. Robinson draws
attention to the smallness of the
stock of rails and pot sleepers, and
urges that immediate advantage
should be taken of the present
favourable state of the market to
effect the necessary purchases. He
adds that neither rails nor sleepers
will probably be delivered in India
a day before they are required.

Looking to the inconvenience which
may

may possibly result from delay in
supplementing the existing stock of
material, I am of opinion that it
would be well to anticipate to a
certain extent the sanction of the
Government of India, and to authorise
the agent to obtain at once, through
his Directors, a portion of the material
indented for, say, 10 miles of rails, 20,000
cast iron pot sleepers, and 10,000 wrought
iron tie-bars; leaving the Directors
to decide, in communication with
their Consulting Engineer, whether
the rails are to be of steel or iron.

I have the honour to be
Sir
Your most obedient servant
Wm. L. H. P. E.
Chief Engineer for Railways

1896 Sept
No. 8920

Public Works Department.
Proceedings of the Madras Government
Under date April 1876.

Read the following:-

From

The Consulting Engineer
for Railways

H.E. No. 170 dated 6 April 1876

Before approving this I should
desire to know whether it would
not be better to obtain steel rails
instead of wrought iron. There is no
possibility of getting the best sleep-
ers in India. As there must be a considerable
quantity of old cast-iron and
N.W. & a frequent delivery of
wrought iron would be very
expensive.

Under the circumstances

explained in his Correspondence
the tenders submitted
for 25 miles of rails, 60,000
cast iron post sleepers and
20,000 wrought iron tie bars
will be forwarded for the
selection of the Government
of India.

The Consulting Engineer for
Railways.

H.E. No. dated.

RAILWAY DEPARTMENT.
To The Consulting Engineer
for Railways.

Dated 15 May
Received 1 June

No. 240

The Secretary to Government,
P. W. Department,
Fort Saint George.

No. 1499

Sub with reference to the
in reference to the
solution made by
the Government.

Received 21/5/76 (21/5/76) in Council regarding
the 22/5/76 (22/5/76) in Council for the
in 17/5/76 (17/5/76) in Council for the
at 17/5/76 (17/5/76) in Council for the

20
The Secretary to the
Government of India

Sir

I am directed to forward herewith indents which have been submitted by the authorities of the Madras Railway

(1) for wrought iron rails for renewal of 25 miles of Railway at an approximate cost of Rs 3,11,781 and

(2) for 60,000 cast iron pot sleepers and 20,000 wrought iron tie bars at an approximate cost of Rs 1,62,500.

It is explained in the accompanying correspondence that owing to the great wear and tear to

which

which the rails in sidings are exposed as large proportion of existing stock is unsuitable for renewal on the mainline. And that although a smaller quantity than that now indented for may suffice for immediate requirements, present market quotations seem to offer a favorable opportunity for replenishing the stock on hand. The Consulting Engineer accordingly

recommends that sanction be accorded to the 25 miles of rail indented for.

A large number of the sleepers and tie bars are required for renewals between Mudalukery

and

It is to be seen from the above that the quantity of rails required for renewal of 25 miles of railway is 25 miles of 36 lb rails. The quantity of sleepers and tie bars required for renewal of 25 miles of railway is 60,000 sleepers and 20,000 tie bars. The quantity of rails required for renewal of 25 miles of railway is 25 miles of 36 lb rails. The quantity of sleepers and tie bars required for renewal of 25 miles of railway is 60,000 sleepers and 20,000 tie bars.

Letter from the Consulting Engineer for
Railways. No. 240 of 15th May 1876.

FOR ORDERS.

Submitted to His Grace
the Governor with reference
to remarks on the draft
G.O. on the Consulting Engineer's
former letter.

quite content to leave
the question of steel
v. iron rails to be
settled as proposed in
England. The policy
of steel rails being
distinctly raised —

The question of
utilizing old metal or
getting new sleepers in
India should be
left right of —
I do not see the necessity
of ordering in anticipation

Major Genl. R.C.

Secretary to Govt. P.W.D.

of sanction which should be
obtained in a month —
it is undesirable to do so if
it can be avoided

18/5

G.O. 30 May/76 No 1340

Er. C. M.

FOR ORDERS.

No 1340

Public Works Department.

PROCEEDINGS of the MADRAS GOVERNMENT

Under date the 30 May 1896

Read the following:-

From

The Cons. Engrs for
Railways

(No. 170 of 11 April 1896)

— do — do —

(No. 240 of 15 May 1896)

Recd 15

96-30 May/96 No 1340

Under the circumstances explained in this correspondence, the indents submitted for 25 miles of rails, 6000 cast iron foot sleepers, and 20000 wrought iron tie bars will be forwarded for the sanction of the Govt. of India. There seems no necessity for anticipating the sanction of that Govt. which will doubtless be communicated within

a reasonable time.

2. It is stated that the question as to whether steel or iron rails should be procured resolves itself into a mere matter of cost. In the opinion of His Grace the Governor in Council it is highly desirable that ^{on the main line or} existing iron rails should, ^{especially on the steeply ascending} whenever renewals are required, be replaced by steel rails, and as the present seems a fitting opportunity, owing to the comparatively low prices of the home markets, to lay in a stock of steel rails the Agent and Manager of the Company will be requested to bring the subject before his Board of Directors in connection with the present indents.

The

28
3. The question of utilizing old metal in the casting of pot sleepers in the country should not be lost sight of.

(M.C. No. 1341 d/30th May 1876.

No. 1341
To
The Secy. to the Govt. of India
Sir,

I am directed to forward herewith indents which have been submitted by the authorities of the Madras Railway.

(1) for wrought iron rails for renewal of 25 miles of Railway at an approximate cost of Rs 311,481

and

(2) for 6000 cast iron pot sleepers

Encl. Engr. for Rys. J

Desd 15/6/76

pot-sleepers and 20000 wrought-iron tie bars at an approximate cost of Rs. 162500.

2. It is explained in the accompanying correspondence that owing to the great wear and tear to which the rails in sidings are exposed a large proportion of existing stock is unsuitable for renewals on the main line. And that although a smaller quantity than that now indented for may suffice for immediate requirements, present market quotations seem to offer a favorable opportunity for replenishing the stock on hand. The Consulting Engineer accordingly recommends

recommends that sanction be accorded to the 25 miles of rail indented for. It will be seen from the Proceedings of Govt. that the Agent has been requested to submit for the consideration of his Board the question, whether, looking to the present prices of steel and iron rails, it would not be more advantageous to procure steel instead of iron.

3. A large number of the sleepers and tie bars are required for renewals between Muddukerry and Palghat, sanction to which was communicated in letter from the Govt. of India No. 401 G.R. dated 7th March 1873.

The

The stock then in hand has
since been utilized as ex-
plained by the Company's
Officers, and the additional
quantity now indented for has
become necessary.

Depd with 2 Students bearing Che 2482 7/18/6
on the 15/6/76

[Faint, mostly illegible handwritten text continues down the page]

End rec

2482
392

Oct. of 1870

PUBLIC WORKS.

the Cawlong for

30th May 1871, No. 114

Dec. 499-501

Permanent-way

Materials - Madras

Railway - Indents

for ——— ordered to
be forwarded to the

Govt of Madras

but in 1871
11-5-71