

*Proceedings of the Madras Government, Public Works Department,
29th February 1872*

No. 485. Read the following Endorsement of the Acting Consulting Engineer for Railways, dated Madras, 16th February 1872, No. 83 :—

From the Agent and Manager of the Carnatic Railway Company, to the Acting Consulting Engineer for Railways, dated Madras, 22nd January 1872, No. 320.

With reference to my communications marginally noted respecting permanent way, I have the honour to submit herewith copy of a report which I have just received from the Chief Engineer setting forth the result of the small

portion of de Bergues' permanent way, which was laid down on the open portion of our line for the purpose of testing its efficiency upwards of twelve months ago, and as the report appears to me to be so satisfactory in all respects, I would recommend the same for the favourable consideration of the Government.

From the Chief Engineer, to the Agent and Manager of the Carnatic Railway Company, dated Madras, 20th January 1872, No. 47.

A few days ago I took an opportunity of again examining the short length of iron permanent way which has been laid down on the open line for the purpose of testing its efficiency on a railway such as ours. The trial has now extended over a period of twelve months, and during that time the trains have been running over it daily, and the result has been in every respect satisfactory.

2. The sleepers were first laid on a straight portion of the line and remained there for six months; they were then taken up and relaid on the sharpest curve of the line (of 10 chains radius) where they have now been for six months. I have very frequently examined the permanent way here, and have had notes kept with regard to the maintenance with a view to compare the iron sleepers in this respect with the wooden ones. The rolling stock runs as smoothly over the iron sleepers as on the wooden sleepers, and there is an entire absence of the jar or vibration such as might be looked for where the line is too rigid, and which, I have remarked, is felt in some kinds of iron permanent way. The parts of the system being few in number, and none of them very heavy, the plate laying can be done with great facility. From the notes which were kept of the maintenance it has been found that these sleepers require very little attention as regards lifting or keeping to the alignment; from the 10th of June to the 1st January last the rails did not need to be straightened or lifted, whilst the wooden sleeper road, on part of the same curve, required it once in every month during the same period.

3. On examining the rails where they rest on the sleepers there was no indentation of the wrought-iron rail by the cast-iron sleeper, such as is caused by a cast-iron chair in ordinary permanent way, and I formed the opinion that, from the nature of the fastenings, all movement between the rail and sleeper is prevented, and it is, I think, owing to this fact that there is such a freedom from vibration or "jar" that I have before spoken of.

4. According to the estimate lately sent you for the Consulting Engineer, the comparative cost of different kinds of permanent way are as follow :—

	RS.	
Iron way (de Bergues' Patent)	7,016	per mile.
Wooden sleepers, teakwood	6,481	per ..
Do. do., creosoted fir	4,822	per ..

From this it will be seen that when the time arrives for the renewal of the wooden sleepers (after about ten years for fir, possibly fifteen for teakwood), the wooden road will have cost much more than the iron one in first outlay; and when, in addition to this, the increased cost of maintenance, and

Proceedings of the Madras Government, Public Works Department,
29th February 1872.

the inconvenience caused by renewals of wooden sleepers are taken into consideration, the advantages appear to be very much in favour of the iron permanent way.

5. I would conclude by stating my opinion that the experimental use of the de Bergues' permanent way for the past twelve months has proved it to be exceedingly well adapted for our line, and I would strongly recommend its employment throughout the whole length about to be constructed.

From the Agent and Manager of the Carnatic Railway Company, to the Acting Consulting Engineer for Railways, dated Madras, 9th February 1872, No. 335.

With reference to your communication No. 25, I have the honour to state that the number of sleepers laid down on de Bergues' system is fifty-six and the length of line 76 feet. The total vehicle mileage "on this portion of the line" has been 216 up to the 31st January 1872.

SUBMITTED to Government in continuation of this office endorsement No. 556, dated 18th December 1871, embodied in G. O., No. 152 of the 17th instant.

2. It is to be observed that a very small length of the line, 76 feet, has been laid with de Bergues' sleepers, and the trial has extended over only a year.

3. The question however which has been put before the Government is whether wooden sleepers are necessarily to be used on a Guaranteed Railway on the metre gauge, or if an iron road will be sanctioned, vide G. O., No. 3,098, of the 8th December 1871.

(Signed) H. L. PRENDERGAST, Major, R.E.,
Acting Consulting Engineer for Railways.

No. 586. ORDER THEREON, 29th February 1872, No. 553.

RAILWAY, No. 67.

ORDERED that these papers be forwarded to the Government of India in continuation of the under-mentioned papers:—

8th Dec. 1871, No. 3,099.

17th Jan. 1872, ,, 153.

(True Extract.)

(Signed) J. CARPENDALE, Colonel, R.E.,
Secretary to Government.

No. 487. DOCKET No. 554, dated 29th February 1872.
Copy of the above forwarded to the Government of India.
(True Extract.)

Exd. E. C. Shunker.

Colonel, R.E.,
Secretary to Government.

Carnatic Railway Co. Ltd.
Agent & Manager's Office
Madras 22nd January 1872

No. 320
From

J. I. Fisher, Esq.
Agent & Manager
Carnatic Railway Co. Ltd.

Major H. L. Prendergast, R.E.
Ag. Consulting Engineer for Rys.

Sir

With reference to my communications marginally noted respecting permanent way, I have the honor to submit herewith Copy of a report which I have just received from the Chief Engineer setting forth the result of the small portion of De Bergues permanent way which was laid down on the open portion of our line, for the purpose of testing its efficiency upwards of twelve months ago, and as the report appears to me to be ^{in all respects} satisfactory, I would recommend the same for the favorable consideration of the Government.

I have the honor to be
Sir

Your most obedient servant
for J. Fisher
Agent & Manager

Carnatic Railway Co. Ltd.
Chief Engineer's Office
Madras 20th Jan'y 1872

N^o 47
J. T. Fisher, Esq^r
Agent & Manager

My dear Sir
A few days ago I took an opportunity of again examining the short length of Iron Permanent way which has been laid down on the open line for the purpose of testing its efficiency on a Railway such as ours. The trial has now extended over a period of twelve months and during that time the trains have been running over it daily and the result has been in every respect satisfactory.

The sleepers were first laid on a straight portion of the line and remained there for six months, they were then taken up and relaid on the sharpest curve of the line (of 10 Chains radius) where they have now been for six months. I have very frequently examined the permanent way here, and have had notes kept with regard to the maintenance, with a view to compare the Iron sleepers in this respect with the Wooden ones. The Rolling Stock runs as smoothly over the Iron as on the Wooden sleepers and there is an entire absence of the jar or vibration such as might be looked for where the line is too rigid and which, I have remarked, is felt in some kinds of Iron Permanent way. The parts of the system being few in number and none of them very heavy the platelaying can be done with great facility; from the notes which were kept of the maintenance it has been found that these sleepers require very little attention as regards lifting or keeping to the alignment, from the 10th of June

2/558.46.1

To Agent on 18.25.8.29 Jan'y 72

Enclosed a Report from the Chief Engineer in re the sleepers laid on the open line & been made with for the favorable considered of Government

Dated 22 Jan'y 72
Received 20.3.72
No. 320

Ch. Engr. Carn. Engin.
for (Sgt.)

Ch. Engr. & Manager
Hon. Secy to Govt.
Chand.

672

to the 1st January last the rails did not need to be straightened or lifted whilst the Wooden sleeper road, on part of the same curve, required it once in every month during the same period.

On examining the Rails where they rest on the sleepers there was no indentation of the wrought Iron rail by the Cast Iron sleeper, such as is caused by a Cast Iron Chair in ordinary Permanent way, and I formed the opinion that from the nature of the fastenings all movement between the rail and sleeper is prevented - and it is I think, owing to this fact or "fact" that I have before spoken of.

According to the Estimate lately sent you for the Consulting Engineer the comparative cost of different kinds of Permanent way are as follows:-

Iron way (De Bergues Patent)	Rs.	Per mile
Wooden sleepers Teakwood		7,016
do do Creosoted Fir		6,481
		4,822

from this it will be seen that when the time arrives for the renewal of the wooden sleepers (after about 10 years for Fir, possibly 15 for Teakwood) the wooden Road will have cost much more than the Iron one in first outlay - and when, in addition to this, the increased cost of maintenance and the inconvenience caused by renewals of wooden sleepers are taken into consideration the advantages appear to be very much in favor of the Iron Permanent way.

I would conclude by stating my opinion that the experimental use of the De Bergues permanent way for the past twelve months has proved it to be exceedingly well adapted for

our line and I would strongly recommend its employment throughout the whole length about to be constructed.

Yours truly
Signed/ H. L. Dibblee
Chief Engineer
True copy
for J. Fisher
Agent & Manager

P.W. 853/72.

CARNATIC RAILWAY CO., (LIMITED.)

AGENT AND MANAGER'S OFFICE,

MADRAS, 9th February 1872.

No. ~~234~~ 335

FROM

J. J. Fisher Esq.

AGENT AND MANAGER, CARNATIC RAILWAY CO.,
Madras.

TO

Major H. L. Pringle Esq.

CONSULTING ENGINEER FOR RAILWAYS,
Madras.

SIR,

With reference to your Communication
No. 25, I have the honor to state, that the number
of sleepers laid down on Le Berquier System
is 56, and the length of line 76 feet. The total
Vehicle mileage on this portion of the line has
been 216 up to the 31st January 1872.

I have the honor to be
Sir,

Yours most obedt. Servt.

J. J. Fisher
Agent & Manager

No 83

[Faint, mostly illegible handwritten text at the top of the page]

Submitted to Government in continuation of this office endorsement No 556 dated 18 December 1871.

embodied in G.O. No 152 of the 17th instant.

2. It is to be observed that a very small length of the line, 76 feet, has been laid with De Berques sleepers, and the trial has extended over only a year.

3. The question however which has been put before the

26/11/1872
26/11/1872
26/11/1872

DATED 9th Feb 1872
RECD 12 -

No. 335

Since the length of the line laid on De Berques sleepers -

To
The Consulting Engineer
for Railways.
The Agent and Manager,
CARNATIC RAILWAY COMPANY,
(LIMITED),
MADRAS.

From

the Government, is, whether
wooden sleepers are necessari-
ly to be used on a guaranteed
railway on the metre gauge,
or if an iron road will
be sanctioned. Vide G.O.
No. 3098 of the 8th December
1871.

Mada's { Newbould's } Major R.E.
16th Feb 74 }
1872 }

Memorandum for Railway

To the Secretary to Government,

P.W. Department

Fort St George.

Nov 8th December 11th No 136-138
" 17th January 11th 329-331

N.Y. 1872 Sept

Siem N^o 853.

Sherry: bone: Eggs.

For Railways

Мадонна

The Secretary to Govt
 10 W Depot
 Fort St George

Dated 16th July 1832
Received 19th July 1832

Enc: 3. N^o 83

Submitting letters

No 320 & 335 of 22^d January
and 9th February 1882 from
the Agent for the Depart-
ment the result of the
Dr Berques permanent
way which was laid down
on small portion of the line

With an order

20

1855.
Under that

These papers Mr

presented to the H. of Commons in confirmation
of the underwritten Address:

To the Librarian of the
 Dec 10 / 13 / 32 17 Jan'y 1932
 Dec 10 / 13 / 32 17 Jan'y 1932

Copy of the above

C/o 853

Govt. of 1872 Madras.
PUBLIC WORKS.

To The Consulting Engineer
for Railways
To the Secretary to the Govt
of India

Dated

Recd.

Encls 2

G. O 29 Feb 1875 553-554

Nos. 485-486 & 487

De Bergue's Sleepers.

Forward report on
that made with
Bergue's Sleepers
to Committee by
the Engineer in the
report, submitted by the
Engineer for Rs. in the
trial made with De
Bergue's Sleepers in the
Committee by.

way which was laid
on small portion of the
with an order

Copy sent to Mr. De Bergue 10/3/72