

Railway Branch

G.O., No. 373-4/19

DATED 5th March 1898.

100/7
7 copies
with pocket letter
sent to
40

[Despatch Abstract.]

Preservation of timber for Railway
Sleeper purposes

Ordered that the note by the Senior Govt.
Inspector of Railways, Madras, on the — be
forwarded to the Railway Administrations
concerned for information, and copy of
the press. forwarded to the Govts of India and
Bombay.

Forwarding for info. Copy of the press
bodying the note by the Senior Govt. Insp. of Rygs
Madras, on the —.

I have no figures by me to show the annual renewals of wooden sleepers on Indian Railways. But I suppose that two millions annually will not be much over the mark for renewals alone, with another million for new extensions. If by any means we could save a rupee all round per sleeper on this quantity, it would represent the not-inconsiderable saving of Rs. 30 lakhs per annum. There is no need to go deeper into details to show that it is well worth while to see whether anything can be done to utilize other timbers than *deodar*, *pyngadu*, *sāl*, *teak* and *creosoted pine*. There are many well known woods which would make very excellent sleepers if it were not that they are destroyed in a period of from two to eight years in the road by internal chemical processes and by fungoidal and other enemies which, if the article to which I call attention is to be credited, can now be satisfactorily dealt with.

I now make a definite suggestion; namely, that it would be well worth spending a few thousand rupees on the experiment if the Forest Department were to send home specimens, on a fairly large scale, say, 50 of each of 10 likely timbers, cut into sleeper sizes, for treatment at the hands of Mr. S. E. Hankin. On return to India these could all be subjected to crucial tests under various inimical conditions. But as it seems a long time to wait until we learn, by lapse of ten or fifteen years, whether the experiment has or has not been successful, it might be possible for the Forest Department to advise, in consultation with their experts, whether it would or would not be advisable to encourage the patentees to start experimental works in some favourable locality for treating certain selected Indian timbers on a sufficiently large scale to give confidence to purchasers; and so, perhaps, to neutralize what at present looks like an unnatural restriction of the supply of the better known woods which are most in demand.

In this connection, it suggests itself that I have never learnt of any Indian railway trying the Australian Karri wood which is coming so largely into use in Europe for street paving.

21st February 1898.

FRANCIS J. E. SPRING, M.I.C.E.,
Senior Govt. Inspector of Rys., Madras.

ORDER—No. 373 Ry., dated 5th March 1898.

Communicated to the Agents, Madras, South Indian, His Highness the Nizam's and Nilgiri Railways, and Manager, East Coast Railway, and to the Revenue Department for information.

A copy of these Proceedings will also be forwarded to the Governments of India and Bombay for information.

[Here enter No. 374 Ry., dated 5th March 1898.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Agent and Manager, Madras Railway.

- " Agent, South Indian Railway.
- " Agent and Manager, His Highness the Nizam's Railway.
- " Agent and Chief Engineer, Nilgiri Railway.
- " Manager, East Coast Railway.
- " Revenue Department.
- " Consulting Engineer for Railways.

ENDORSEMENT—No. 374 Ry., dated 5th March 1898.

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FRANCIS J. E. SPRING,
Joint Secretary.

RAILWAY.

Government {1898} of Madras. PUBLIC WORKS.

Recd.

Enclosures

1898.

Regd.

Spare copies

G.O., Nos. 373, 374 Ry., 5th March 1898.

MARCH.

Preservation of Timber for Railway Sleeper purposes

Forwarding, for information, copy of the proceedings embodying the note by the Senior Government Inspector of Railways, Madras, on the —.

Government of Madras
Public Works Department
Railway

Read the following paper:

PRESERVATION OF TIMBER FOR RAILWAY SLEEPER PURPOSES.

Note by the Senior Government Inspector of Railways, Madras.

The object of this note is to invite the attention of the Railway and Forest Departments to an article in *The Engineer* of January 28th, 1898, pages 81—84, on THE HANKIN PROCESS OF PRESERVING TIMBER. The subject of the article is of the highest interest to Indian Railways and also to the Indian Forest Department; for, if the process therein described can be shown to be successfully applicable to local Indian timbers, other than the very limited and now very scarce sort for which we depend for our sleeper supply, the economic gain will be very great indeed. Nothing is said in the article about the cost of the process, but if for large quantities it should turn out to be not too expensive, and if the result should be all that is anticipated, it will apparently be possible to utilize all sorts of trees that for sleeper purposes are now nearly valueless.

Briefly described, the process is as follows: Into great boiler-like receptacles, 120' long and 6' 6" diameter, with one end open but capable of being hermetically closed in a couple of minutes, truck-loads of timber are wheeled. Air at a temperature of 400° Fahrenheit and at a pressure of 200 lb. per square inch is kept in steady circulation through the receptacles by means of powerful special machinery for a period of about 8 hours. The effect on the timber is not only to kill the germs of all destructive organisms, but to convert the saps and part of the fibre into antiseptic preservative of the turpene-phenol-carbolic type, which find birth and remain in the very pores and fibres of the wood itself, and so preserve it.

The article says: "In all cases a preservative effect is obtained from the products of the wood itself, without the addition of any extraneous material. Tests of sleepers, under heavy conditions of wear and exposure, have been made in America with satisfactory results."

Mr. Hankin's works are on the site of the old Samuda Shipyards in the Isle of Dogs, close to Messrs. Yarn and Co.'s works. The machinery which is described as being of great magnitude, has been all supplied by Messrs. Galloway. Rails are laid through the cooking cylinders, and trollies carrying the sleepers or scantlings to be treated are wheeled right in.

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21st February 1898.

FRANCIS J. E. SPRING, M.I.C.E. ^{in charge}
Senior Govt. Inspector of Rysl, Madras.

Order N° 373. Ry of 5th ^{smaller copy} ~~February~~ ^{March} 1898.

Communicated to the Agents Madras, South Indian, H. H. the Mysore & Nilgiri Rys & Manager East Coast Railway & the Revenue Department for information..

A copy of these Proceedings ^{also} were before forwarded to the Governments of India & Bombay for information

Nr 374 Ry of 5th ~~February~~ ^{March} 1898

Expenditure on envelopes ^{Forwarded}
to the India & Bombay of 11/3/98

To the Agent & Manager, Ry

- Agent S. Ry
- Agent Mysore & Nilgiri Ry
- Agent & Chief Ry Nilgiri Ry
- Manager East Coast Ry
- Revenue Dept
- Comptroller Ry

7/18
R

24/-

11/3/98

