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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 3841

Press
Mis.

202-203

Dated 10-12-1867.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
10th December 1867.*

No. 202. Read the following Proceedings of the Government of India, in the Public Works Department, (Railway,) dated Simla, 30th October 1867, No. 971 R :—

Precautions that should be taken for lessening the danger attendant on Railway travelling during the Monsoon.

Read Despatch—

From the Secretary of State for India, to the Government of India, dated 14th September 1867, No. 68.

1. The accompanying copy of a letter* has been received from Mr. West, late Resident Engineer, Great Indian Peninsula Railway, in reference to the

late lamentable accidents on that Railway.

2. I do not offer any opinion on Mr. West's propositions, but I forward it for your consideration, as you will, no doubt, be willing to give attention to any proposal for averting, as far as possible, any risk of accident.

From the late Resident Engineer, Great Indian Peninsula Railway, to the Government Director of the Indian Railway Companies, dated 24th August 1867.

I have the honor of addressing you with reference to the fearful accident which occurred on the Great Indian Peninsula Railway, between Bhosawul and Nimbora, before day-light on the 26th of June last, and with regard to the best means of preventing similar accidents in future.

It appears that one of the causes of this accident was the washing away of some ballast and part of the earth-work of an embankment near a bridge, so as to leave a short length of the rails insufficiently supported. Whether this occurred (in the usual manner) by the flood over-topping the embankment, or was merely the effect of a scour and slip in the earth-work, it is evident that the bridge must be one of considerable stability to stand the test of so heavy a flood without damage to the masonry; and any repetition of the damage to the embankment will, no doubt, be easily prevented by increasing the water-way.

But there was another cause of the fatal accident to the train, which no extra works upon the line will remove, and to which I beg to direct your particular attention, as I fear it is kept too much in the back ground, both by the Officers of the Railway Company, and by those of the Bombay Government. I allude to the practice of running passenger trains at night during very wet weather. If the flood had occurred in the day time, the Company's work-people would have been on the alert, and would certainly have discovered the damage done by it in time to stop the train (as has often happened in former cases of similar damage), and no accident would have happened either to passengers or rolling-stock. I have, therefore, no hesitation in attributing the loss of life to the practice of night travelling during the monsoon.

Unless the Indian Government can feel perfectly sure that the Railways are free from all risk of the washing away of works in future, it must either be prepared to expect the occasional occurrence of fearfully fatal Railway accidents, or it must prohibit the running of passenger trains at night during the rainy season.

Having had a longer experience (extending from 1853 to 1866) of the maintenance of Indian Railways than any other Engineer, I may perhaps be permitted to offer an opinion as to the possibility of rendering those Railways secure from damage by floods. In nearly every one of the thirteen years just mentioned, I have found it necessary to provide extra water-ways in that portion of the Great Indian Peninsula Railway which lies between Bombay and the Ghâts; but though these extra water-ways answered their purpose, and prevented subsequent damage in the particular localities where they were provided, yet it was usually found that the next rainy season produced

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dangerous floods in some other locality, which in former seasons seemed perfectly secure. I have, therefore, come to the conclusion that Indian Railways will never be safe from serious damage by occasional floods (say, on the average, once a year, on some part of a line 1,000 miles in length), although they may be rendered secure from all ordinary annual floods by judicious provision of extra water-ways during the first ten years after their opening.

Near the Western Coast of India there are rarely more than four or five nights in each rainy season, during which it is positively unsafe to travel, but these may occur at any time between June 15th and August 31st (though most commonly between June 26th and July 7th, and the same dates a month later); so that it would be difficult to provide for the proper safety of passengers in that part of the country except by prohibiting the running of passenger-trains at night between the extreme dates I have mentioned. In other parts of the country the dates of the worst weather are different.

In the early days of the Great Indian Peninsula Railway, night trains were few, and nearly all the damage from floods occurred during day light, there were consequently no accidents to trains from the effects of floods, but only a few narrow escapes. Taking warning from these, I obtained the discontinuance of night-trains for one or two years during the worst part of the rains in the Konkan; but my influence was not sufficient to secure a continuance of this prudence, and night-trains were again run, and in increased numbers, throughout the rains. Before two seasons had passed away, a passenger train found the line damaged by a flood before day-light, and several lives were lost. Notwithstanding this, passenger-trains appear to be still run at night during bad weather, and will probably continue so to run, unless the Government interferes, or until several important European lives have been sacrificed.

The usual objections to a discontinuance of night passenger-trains during the worst part of the rainy season, are as follows:—

1st.—It is not customary in England to take any similar precautionary measure.

2nd.—It disturbs the usual arrangements for carrying the mails.

3rd.—It is inconvenient for through-passengers to be delayed on their journey.

To the first objection, I would reply that England never has such heavy rains as India, and therefore does not require similar precautions to be taken. Any one of the few Engineers who have watched the works of an Indian Railway, whilst rain has been falling at the not uncommon rates of an inch in 15 minutes, or 20 inches in 24 hours, for two or three successive days, would be fully aware that a week's Indian monsoon-weather would stop the traffic on every Railway in England. But English Engineers find it more unpleasant to confess their inability to secure the Indian Railways from damage by unexpected floods, than to allow passengers to risk their lives by travelling when it is unsafe to do so.

The second objection is easily removed, as the risk of damage to the line (after it has been opened for five years) is not so great as to render it advisable to prevent the Company's servants from travelling at night. The mails when travelling at night during the rains, ought, therefore, to be carried by a light and fast goods-train. If the line be damaged by floods, the driver and firemen usually run over the spot without loss of life; and the mail and guards, if in the rear of the train, are seldom much hurt. This plan has been proposed formerly to the Great Indian Peninsula Railway Company's Traffic Officers, who objected that the fast goods-trains would not pay: it will certainly not pay so well as a heavy goods-train; but it would be preferable to running a special train gratis for the mails: and all unnecessary delays at Stations can be avoided by reserving through goods for this train.

The third objection would soon be settled by the passengers themselves, if they were informed that there was any doubt of the stability of the line over which they were about to pass; and I am inclined to think that most through-passengers would prefer to halt at all seasons in the middle of their journey, if proper Station accommodation were provided for their comfort. Most Native passengers prefer travelling by day-light in the rainy season; and Europeans would likewise prefer it, if they were better acquainted with the risks of night travelling.

Any other objections that may be made to a prohibition of night passenger-trains in the monsoon, can certainly be as easily disposed of as the above; but my object is merely to call your

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10th December 1867.*

attention to the advisability of moving the Indian Governments to take some decided steps in the matter; and I, therefore, refrain from going into the subject in all its details.

If such trains be not prohibited, the Indian Railway Companies should certainly be compelled to go to the expense of having their lines efficiently inspected at night. On the Great Indian Peninsula Railway no inspection is attempted at night, except on the Ghât Inclines, and (as a temporary measure) at particular spots where risk may be specially apprehended; and the inspection on Sundays is very slight. The consequences may probably be learnt from a comparison of the Sunday and night accidents with those occurring on week days, and in the day-time, allowing for the difference in the number of running trains.

An efficient system of night inspection of the line and works would possibly increase the cost of maintenance 10 per cent. for the time it was enforced, without any apparent result except the occasional prevention of accident; an effect very apt to be overlooked. It is therefore unlikely that the Directors of the Companies would adopt such a measure unless compelled by pressure from without; and none of the Company's Officers can venture to establish such a system, or perhaps, even to propose it, in the teeth of frequent instructions for the reduction of expenditure. If I am correctly informed, the present tendency is in an opposite direction, towards a dangerous reduction of numbers in the watchmen hitherto employed on such confessedly hazardous parts of the line as the Ghât Inclines.

I do not place much reliance upon any practicable system of night inspection for the prevention of such accidents as that of June 26th, as I am aware that it would often fail from the neglect of one individual and from other causes that I need not mention. Neither would a pilot-engine, one stage in advance of the passenger-trains, (as was once suggested) be sufficient to warn of danger in all cases. I would, therefore, strongly recommend to your notice the far more efficient plan of prohibiting the running of passenger-trains at night during such periods as heavy rains and floods may be reasonably expected, which periods differ in different localities.

ORDER.—Ordered, that a copy of this Despatch and enclosure be forwarded to the Local Governments and Administrations noted in the margin for report, and such action, with reference to more frequent inspections during the rains, as may be considered necessary.

Madras.	Punjab.
Bengal.	Oudh.

(Signed) W. McCLEERY, C. E., *Offg. Asstt. Secy.,
for Secy. to the Govt. of India.*

To the Secretary to the Government of Madras, Public Works Department, Railway Branch.

No. 203. ORDER THEREON, 10th December 1867, No. 3,841.

RAILWAY, No. 11.

Communicated to the Consulting Engineer for Railways, who will furnish the report called for, together with such suggestions as he may have to offer with reference to more frequent inspection of Railway lines during the rains.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. S. T. Augustin.

Public Works Department.

3851/23841

Proceedings of the Madras Government
Under date the 10th Dec^r 1867

Read the following

From The Secretary to the Govt. of India } H. E. No 971 Dated 30th Oct/67

Communicated to the
Consulting Engineer for Rail-
ways, who will furnish the
report called for, together with
such suggestions as he may
have to offer with reference
to more frequent inspection
of Railway lines during the
rains.

Wm

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To

The Consy Eng for Railways.

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P. W. 1867. Department.
Proc. of Govt. for December
No. 3821

PROCEEDINGS OF GOVERNMENT *of Madras*

Dated 10th December 1867

Directing the Consulting
Engineer for Railways to furnish
the report required by the Govt.
of India, relative to the
precautions that should be
taken for lessening the danger
attendant on Railway travelling
during the Monsoon together with
suggestions for the more frequent
inspection of Railway lines
during the rains.

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202-203 1867 Dec 10/67