M.R.O. 1—77,006—8-6-37.

(1) Number of pages 4

(2) Date of repair 9-8-40

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

K-S-A

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 69 Press
139-40 Mis.

Dated 16-1- 1871.

Not to be folded or roughly handled

No. 139. Read the following Proceedings of the Government of India, Public Works Department, (Railway,) dated Fort William, 30th November 1870, No. 1,893-R.:—

Maximum speed to be permitted for Engines passing through Station points.

Read again:—

Clause 18, Section XIII., Rules and Regulations of Indian Railways.
From Government of Madras, No. 207, dated 11th May 1863.
To Government of Madras, No. 2,938, dated 27th June 1863.
From Government of Bengal, No. 392-G., dated 19th February 1870, and enclosures.
To Governments of Madras, Bombay, and Punjab, and Administration of Oudh, Nos. 967—70, dated 3rd June 1870.
Public Works Department Circular, No. 19-R. of 1870.

Read also:—

From Government of Punjab, No. 2,751-G., dated 14th July 1870, and enclosures.
From Government of Madras, No. 2,112, dated 2nd September 1870, and enclosures.
From Government of Bombay, No. 1,276, dated 11th September 1870.
From Chief Commissioner of Oudh, No. 1,882-R., dated 8th October 1870, and enclosure.

OBSERVATIONS.—In February last the Government of Bengal forwarded, for favourable consideration, a proposal from the Agency of the East Indian Railway to increase the maximum speed of trains running over station points from 5 to 8 miles an hour, alleging, as a reason for this change, that it was impossible to hold engine-drivers departmentally responsible for running at too high speed through stations on account of the unnecessary stringency of Clause 18, Section XIII. of the Rules and Regulations, which stipulates that "in going through points at junctions or sidings, no engine is to run at a greater rate than 5 miles per hour."

2. As a preliminary to the consideration of the proposal, other local Governments entrusted with the control of guaranteed Railways were asked for an expression of opinion, and enquiry was at the same time made concerning the minimum radius of curves leading from the switch-rail to the crossing-plate at the several Railway station sidings. The replies show that, except in Madras, the Railway authorities deprecate any change, but the Bombay Government would allow a higher speed than 5 miles through following points. In Madras since 1863 an increased speed of 10 miles per hour through facing points during daylight and in clear weather has been permitted under the sanction of the Government of India, and without any evil result.

3. The rules in force on Indian Railways were drafted nearly twenty years ago on the model of the rules of the Great Northern Railway of England, but numerous improvements have been made since then, and, as a consequence of the vast increase of traffic, many expedients for running the traffic safely have been resorted to, especially in England. It is not certain that a low speed of 5 miles per hour through facing points reduces the number of accidents which would occur if a speed of 8 or 10 miles per hour were adopted, but the results of the accidents at the lower speed are much less serious than at the higher. Immunity from frequent accident at facing points can, it is believed, be in great measure secured by having a well raised semaphore or disc signal for every set of points, and by

in Para 9, and on the

having the signal and the switch-rail absolutely interlocked. No mechanical system can prevent a pointsman making an error, but the presence of a signal at the points shows an approaching engine-man how the switches, in the opinion of the Station Master, ought to be, and when the switches and the signal are interlocked, the engine-man is told correctly how the switches are actually set, and how they will remain during the period of his passage over them. The presence of the signal and the interlocking apparatus in no way lessens the amount of damage done when an accident occurs, but it reduces to a minimum the chance of the accident.

4. The mechanical difficulties in the way of devising an effectual interlocking apparatus were considerable, but they have been overcome. The switch-rails throughout a large terminal or junction station can be arranged so that all the points shall harmonize; if the signalman, from his raised cabin, desires to pass an engine in any particular direction, the very act which notifies this desire to the engine-man, also sets the road for him, and raises deterrent signals before other engine-men who may be travelling on converging lines, and who are thus always warned in time to stop when danger is ahead. Such admirable contrivances are suited to the complex arrangements of many English stations, where trains are passing constantly backwards, forwards, and transversely. The Inspecting Officers of the Board of Trade advocate the general introduction of the interlocking apparatus, and attribute a large per-centage of accidents in England to the want of such precautions, but they are not yet necessary in India to the full extent recommended for England.

5. There seem to the Government of India to be two clear courses open for adoption. The first is to make no alteration in the present rule, limiting the speed over facing points to 5 miles per hour, thus ensuring (so long as regulations are obeyed) that, if an accident should unfortunately occur, it shall be of a trifling character. The second course is to permit an increased speed over facing points, but to insist upon a conspicuous signal being fixed at every set of facing points on the traffic lines and interlocked with them, so that the engine-man may know how the road is set, and also may be sure that no alteration can be effected during the passage of his train. The former course may perhaps be adopted in Bombay, Oudh, and Punjab, where change is deprecated, and the latter in Madras and Bengal. In Madras the question is comparatively unimportant, for the traffic is small, but the case is different on the East Indian Railway, where the traffic is already large and of growing importance, and where accidents at facing points have been frequent and sometimes serious.

6. On a careful consideration of the question, the Government of India have no objection to the maximum limit of speed for engines passing, forwards, over facing points on traffic lines at station sidings being raised to ten miles per hour, but on the condition that every facing point, where this alteration of speed is permitted, shall be provided with a well raised conspicuous semaphore, or disc night and day signal, and shall have an interlocking apparatus; both signal and apparatus to be of patterns approved by the local Consulting Engineer. Captain Tyler's Memorandum, circulated with Public Works Department Circular No. 19-R, dated 19th November 1870, mentions several different systems of locking apparatus,

Proceedings of the Madras Government, Public Works Department,
10th January 1871.

such as Messrs. Saxby and Farmers, and contains much valuable information on the subject.

7. The Governor-General in Council believes it to be undesirable to alter the rule so as, authoritatively, to permit extra speed through trailing or following points, for the alteration might, as the Punjab authorities anticipate, lead to dangerous disregard of safe speed on the part of engine-men, who are difficult to control in this respect.

8. Only one maximum speed through facing points can be allowed on each Railway. It is open to the Governments of Bombay and Punjab and to the Oudh Administration to adhere to the low maximum limit for the lines under their control, but the Government of Madras should adopt the precautionary measures mentioned in paragraph 6 of this Resolution, if it wishes to retain a higher maximum than 5 miles.

9. When a Railway Company desires to make the alteration increasing the maximum speed through facing points, the Local Government concerned will depute its Consulting Engineer to examine the interlocking apparatus and signals; and on the Consulting Engineer having made the necessary declaration, will address the Government of India in view to the requisite alteration in the regulations being sanctioned for that particular Railway by the Governor-General in Council, and notified in the *Gazette of India*.

Madras.	Oudh.
Bombay.	Central Provinces.
Bengal	Mysore.
N. W. Provinces.	Hyderabad
Punjab.	Central India.

ORDER.—Ordered, that copies of this Resolution, and of the papers read, be forwarded to the Governments and Administrations noted in the margin for information and guidance.

No. 140. ORDER THEREON, 10th January 1871, No. 69.

RAILWAY, No. 18.

COMMUNICATED to the Consulting Engineer for Railways who will ascertain the wishes of the Railway authorities regarding the retention of a higher maximum speed than 5 miles per hour through facing points, and in the event of their desiring to continue the present rate of speed he will require the adoption of the precautionary measures noticed in paragraph 6, and on his satisfying himself that the Railway Companies have taken steps for giving effect to the instructions of the Government of India he will make the declaration referred to in paragraph 9 with a view to that Government being addressed on the subject.

(True Extract.)

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

To the Acting Consulting Engineer for Railways, with seven spare copies of the enclosures.

Exd. S. T. Augustin.

Rly

P.W. Dept

No. 69 of 79

Proceedings of the Madras Government. 2

Under date the 10th ~~December~~ January 1879

Read the following

From the Dy Secy to the Govt of India

W.E. No 1893 R. of 30th Nov 78

Communicated to the Consulting Engineer for Railways who will ascertain the wishes of the Railway authorities regarding the retention of a higher maximum speed than 5 miles per hour through facing points, and in the event of their desiring to continue the present rate of speed, he will require the adoption of the precautionary measures noticed in para 6, and on his

his satisfying himself
that the Railway
Companies have taken
steps for giving effect
to the instructions of
the Govt. of India
he will make the de-
claration referred to
in para 9 with a view
to that Govt. being addressed on the
subject.

(11)

Further Rec'd 356 Dft Feb 8/71
869-870 Dft 3.71

To the Govt. of India
Under Secy to the Govt.

Secy's Deptt 10/1/71
A-C 26/1/71

16 Jan/71 Q2.9

No. 597

Govt of 1871 Madras.

PUBLIC WORKS.

To

The Acting Consulting Engineer
for Railways.

Dated

Read.

No. /

G. O. No. dated 1871, No.

Nos. 154 - 155

Enquiries regarding Station
points. Proposed Circular
forwarded in reply. Results
regarding the maximum
speed which is permitted for
Engines passing through
Station points, and the
Engineers for Railways
with remarks.