

Public Works (1895) Department.

RAILWAY BRANCH.

G.O., No. 86 R

DATED 29th July

[Despatch Abstract.]

Establishment. — The scale of — for the Madras-
Kannur section of the Bezwada-Madras Railway,
detailed in Schedule A of the final issue of the
revised and budget estimates for 1894-95 and
1895-96, sanctioned.

11. *Stone Covering.*—The effect of the covering of stone over the sand ballast to allay the inconvenience caused to passengers by dust was most marked throughout the inspection. The programme is to first complete the portion between Madras and Méttupálaiyam. The present state of the work is as follows:—

Madras-Méttupálaiyam.—Thirty-four miles out of the 328 remain to be covered.

Podanur-Calicut (112 miles).—Nothing done, but the 25 miles between Tirur and Calicut is ballasted with laterite and does not require any covering.

Bangalore Branch-North-west Line.—Nothing done except trial sections for estimate purposes.

12. *Stations.*—The station buildings, platforms, yards and compounds are kept in excellent order. Particular attention has been devoted towards supplying the wants of native passengers by the erection of refreshment stalls at the principal stations for the sale of fruits, sweetmeats, &c.

13. *North-west Line-Nandalur.*—The loop siding extension has been completed. The other work for converting this into a locomotive changing station has not yet been commenced.

14. *Raichur.*—Some open top bridges were observed in the station yard which require to be planked over.

15. The staircase leading to the over-bridge from the main platform is to be shifted so as to be in continuation of the line of the bridge; it at present obstructs the view of the signals at the G.I.P. end of the yard.

16. *Gold Field Branch-Urigam.*—The take off for a new private siding between the north distant signal and the loop points was approved.

The siding accommodation is stated to be insufficient.

17. *Bangalore Branch-Bowringpet Junction.*—The new gridiron sidings for facilitating the marshalling of the Gold Fields Branch trains are about half completed.

18. *Bangalore City.*—The new Madras Railway platform and alteration of sidings are completed. The new station buildings are about up to roof level.

19. *South-west Line.*—A site was selected and approved for a new trial station at mile 68/10 on a gradient of 1 in 336.

20. *Kātpāli.*—The platform at the lay-bye buffer-stop should be finished off by a ramp and fence which latter may be allowed to infringe the six-feet-from-edge-of-platform standard dimension.

21. *Kallavi station*—is on a gradient of 1 in 120. I think a safety siding should be provided.

22. *Mile 186½.*—A crossing station is proposed here. Being situated at the top of the Salem ghāt, a saving of assisting engine mileage will be made as engines will be able to return to Salem from here instead of running on to Mallapuram. This site is supposed not to be feverish. Kāḍāmpāli, the next station in the direction of Salem, is very feverish and is not a crossing station.

23. *Olavakole.*—A portion of land to the north for stacking fuel on is asked for.

24. *Palghat.*—The existing temporary station house is thatched. This is not only dangerous, but requires constant repairs. It should, I think, be tiled.

25. The only piece of land suitable for building staff quarters on, lying between the present stationmaster's house and the public road, should be reserved for the Company's use, squatting thereon by unauthorized persons should at least be prevented.

26. *Kallai.*—A portion of land is required for goods shed extension.

27. *Mangalam.*—Extension of goods shed necessary. A zinc shed now at Bowringpet will be transferred here.

28. *Periyanaikanpalaiyam.*—It would be a convenience to the railway officials if the name of this station could be reduced.

29. *Staff quarters.*—The management give great attention to the comfortable housing of the staff. Institutes have been erected, or are in course of erection, at the important centres.

30. *Cuddapah.*—Two bungalows have been pulled down for re-erection at Nandalur in anticipation of the scheme for the transfer of this locomotive changing station to Nandalur.

31. *Gooty.*—The school room accommodation seems deficient.

32. *Jalarpet.*—Same remark as for Gooty.

33. *Points and Crossings.*—The points at many stations were carefully examined and all were found to be in good order. The movement in those fitted with Stoney's and Winter's Patent Locking bar was practically nil. Lay-bye facing points are usually fitted with an adaptation of Annett's lock which gives entire satisfaction.

34. *Tadpatri.*—The grouped points whereby one man does the work of four have been in use here for seven years, no derailment having occurred during that time.

35. *Raichur.*—The safety switch controlling the road leading from the G.I.P. locomotive yard is, in its present condition, useless. The points are so designed that they can be pinned over against the weight, and the disc signal working in connection was out of order.

36. *Bisanatham.*—The switches are of bad design and were ordered by the Chief Engineer to be removed.

37. *Palghat.*—A point indicator is wanted at the outermost points.

38. A lock for points without any loose parts except the key and a new type of point handle in which the handle works in a slotted drum were exhibited by Mr. Stoney; both worked well and appear to be a great improvement on existing devices.

39. *Safety Sidings.*—*Bangalore City—Southern Mahratta Railway yard.*—The weighted points should be interlocked with a proper signal. As the siding stands, an outgoing train, if inadvertently turned into it would probably be precipitated down the high bank at the end of the siding. I consider it unsafe. It should either be laid to a steep rising gradient or a weighted detector bolt worked by the stationmaster from the platform fitted to the point rod in connection with the signal.

40. I think the Madras safety sidings (which are all on the rising gradient principle) should be provided with treadle bars or detector bolts.

41. *Balaghat and Champion Reef.*—The safety sidings at these stations are now satisfactory, but the points require to be weighted and interlocked with signals.

42. *Urigam.*—Position of new slip siding was selected and approved. As, however, this position is unavoidably some distance from the station, I think the north home signal should be erected at these points.

43. *Mallapuram.*—Safety siding points should be weighted.

44. *Signals*—were all in good working order.

45. *Interlocking of Points and Signals.*—*Tiruttani.*—This station has been fitted with interlocked points and crossings by Saxby and Farmer and constructed in conformity with the Board of Trade rules. Clause 2 (b) of the enclosure to Government of India Circular No. IX, Railway, dated 18th August 1893, reads as follows:—

"Facing points, if worked at a distance from the lever, to be fitted with point locks and locking (treadle bar), and means to be provided for detecting any failure of connections."

If this rule be strictly interpreted, Saxby and Farmer's system fails to comply with the conditions, for, were the point rod, the point locking bolt and the signal wire point detector slide or their connections to fail simultaneously, the home signal could be pulled off. The signal wire point detector slide is 1½ inches diameter solid bar and has hardly any strain on it; the point lock and rodding is amply strong. I consider it practically impossible for such connections to fail simultaneously.

The interlocking is complete and satisfactory, the workmanship excellent and the levers were pulled with ease.

46. Being on the English principle, it is so arranged that the distant signal cannot be pulled off until the starter or electric section signal is lowered. Hence for trains which have to pass other trains at this station the distant will be on and the home off. Under existing rules the driver of a train on finding the distant signal against him has to stop dead and then draw his train inside it.

It is urged that drivers, seeing the home off while the distant is against them, will habitually break the rule about stopping outside. With this I agree and suggest that at all stations where the home signals are at the points, the distant signal, as in the English system, is not to be considered a stop signal, but merely a warning signal and that no shunting is to be allowed outside the home signal after line clear has been given to the next station in the same direction.

47. I recommend that trains be allowed to run through the facing points at this station up to a maximum speed of 40 miles an hour provided they run through on the main line.

48. *Pudi*.—The interlocked points and signals at this station were originally inspected and passed, subject to certain alteration being carried out, last June. The alterations have been satisfactorily completed and the system has been in daily use since July. The points were carefully examined and found to be in perfect working order.

The system (which is an adaptation of Anderson's) as regards the failure of connections is similar to Tiruttani. The rodding working the points and the signal wire point detector slide must both fail before a conflicting signal could be given, which I consider practically impossible.

I recommend that trains be allowed to run through this station on the main line at a maximum speed of 25 miles an hour.

49. *Mamandur*.—This station has been interlocked on Mr. E. W. Stoney's system, the principal feature in which is that one line of rodding locks and detects all points and also lowers either home signal, the points being worked as heretofore by pointsmen at the points. In this system were any one failure to take place in the signal rod point detector slide, either signal could be pulled off; but I assume, as the points are not worked at a distance, rule 2 (b) above referred to does not apply.

The interlocking is complete and satisfactory, but the levers could only be pulled with great difficulty owing to the travel on the support pulleys being too small. There was also too much play between the point rod pins and the slots they work in and also between the slotted plate and its casing.

The detector rod between the lay-bye points and the signal rodding has too much spring in it. These points should remain padlocked as at present.

There is no locking bar fitted to the lay-bye points, but, as before remarked, these points being worked by a pointsman in the usual manner, rule 2 (b) of Circular No. IX above referred to does not apply.

I recommend the opening of this system, but on the understanding that, until the next half-yearly inspection, the limit of speed remains as at present ten miles an hour.

50. I think the stationmaster and the permanent way sub-inspector of the section should together examine each interlocked system daily.

51. *Fencing*.—The aloe fencing, in spite of the trouble and expense bestowed on it, has several gaps, particularly near mile 58 and north of Cuddapah in the black cotton soil. It is generally temporarily wired at the worst places.

52. *Rolling-stock*—is in its usual excellent condition. The oil lighting for carriages is very poor, but I understand the plant for Pintches oil gas installation is now on its way out.

53. *Workshops*.—It is contemplated to remove the heavier plant from Podanur to Perambur.

54. A new well is asked for at Arkonam to supply the Company's sodawater manufactory with pure water as its present supply is liable to contamination.

55. More land is required for the Engineering department workshops recently transferred to this station from Rayapuram, consequent on the original site being abandoned owing to the impossibility of carrying it out for the estimate.

56. *General*.—It would be a great convenience to third-class passengers if arrangement could be made with the G.I.P. to run through trains between Madras and Bombay. At present not only the third-class passengers but on occasions hundreds of parcels have to be transhipped from one company's carriages to those of the other, necessitating great delays.

57. A new block instrument, the invention of Mr. G. K. Winter, the Company's Telegraph Engineer, is working at Arkonam station. By means of this instrument, which somewhat resembles the electric tablet system in principle, the line-clear ticket is automatically issued by the combined action of the stationmasters at each end of the section and that only after the last train for which line clear was given has cleared the section. This instrument, the price of which is comparatively small, I think supplies a long-felt want for single line working.

58. More attention might be paid by guards and stationmasters towards helping native passengers to find seats in crowded trains. At present this duty is usually left to the porters who have not the necessary status or perseverance when obstructive passengers wish to keep compartments more or less empty for themselves.

(Signed) C. T. R. SCOVELL,
MADRAS,
26th February 1895.
Government Inspector of Railways.

NOTE by the Senior Government Inspector.

The report is satisfactory.

The attention of the Engineering Department is drawn to paragraph 8.

The safety sidings at Raichur and Bangalore City stations mentioned in paragraphs 35 and 39 should be at once put in order. Safety siding points should be weighted to stand always open for the siding and interlocked with a disc signal.

Paragraphs 47 and 48.—Until a decision is come to as to the conflicting signals, I cannot support the recommendation to open these stations for fast through running.

I consider the signals should conform to the general rule that obliges drivers to stop dead at a distant signal against them. It should be remembered that the trial of the different systems was only intended to be provisional.

(Signed) F. R. UPCOTT,
MADRAS,
26th February 1895.
Senior Government Inspector.

Dr

Please see draught
on your inspection
Report with communi-
cations at foot.

THE MADRAS GOVERNMENT.

Read the following

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on the Madras Railway
per order 31st Dec 94.

Communicated
to the Agent & Manager
Madras Railway for
information & necessary
action.

2. A copy of these pro-
ceedings will be forwarded
for the information of the
Government of India.

DESPATCHED
8-MAR.95

To

The Agent & Manager, M. R. N. C. Co. 123, R. 4th March 95
" Revenue Department - Forwarded
" Resident in my care
thru the Rail Dept.
" Govt of Bombay No 2

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