

Public Works (189.3.) Department.

CONCERNS BOTH BRITISH INDIA
AND INDIAN STATES.

RAILWAY BRANCH.

G.O., No. 334 R

DATED 16th February

[Despatch Abstract.]

Inspection. — Report on the — of His Highness the
Nizam's Guaranteed State Railway and the
Bejwada extension for half-year ending 31st
December 1892, recorded.

FURTHER PAPERS.

[illegible]

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

The inspection was made in company with the Agent and Manager and the Chief and the Resident Engineers. It commenced on 6th January 1893 and ended on 11th January 1893. The banks and cuttings are generally in very good order; on the

2. **Earthwork.**—The banks and cuttings are generally in very good order; on the length between Wadi and Secunderabad, the side catch-water drains (water tables) want looking to particularly when in black soil, and in many places the earth taken from them appears to have been placed on the banks outside the ballast, thus preventing the proper drainage of the latter. Slight cracks appear in parts outside the ballast where the line runs through black soil, but this will always occur unless it is coated over with moorum or clay. Where the line runs through moorum or hard clay both banks and cuttings are in excellent order, but again on the Bezvada length where the black soil prevails they want repairs in parts.

3. Bridges.—With the exception of the Warren 60 feet girders the bridge-work throughout is good, the masonry between Secunderabad being rough but strong.

4. At mile 8/13 one of the retaining walls to the bridge approach has partly gone at foot of a highest bank; this should be repaired before next rains.

5. In many of the girder bridges there are no holding-down bolts between the girder and timber bed plates although long slots have been provided in the former for them; dog spikes have been substituted, but the arrangement is not satisfactory.

6. At mile 76/3 an arch of a 2-4 foot culvert is slightly cracked at the crown, but it does not seem likely to extend or be a cause of danger. The wings are return ones and want to be removed as they are being forced out by the bank and ought to be replaced by splay ones on the up-stream side and extended by strong rough pitching.

7. *Mile 166/1.*—Both faces of arch and abutments of a 4-foot arched culvert are slightly cracked. The wings being returned ones give no outward support. It is proposed to extend the abutments a little and substitute splay wings for the return ones.

8. In mile 218, two bridges—one 3 spans of 20 feet, the other 2 spans of 20 feet—are too low, the water during last floods having come up on the girders. It is proposed to raise them 2 or 3 feet.

9. One 12-foot arch at mile 13/11 on the Mineral branch is slightly cracked, but not dangerously so.

10. On several of the bridges the sleepers are either on the ballast walls or jammed up against them, and in some places longitudinal rail bearing timbers pass through these walls in close contact with the masonry which is consequently shaken in all such cases. These defects should be corrected by leaving a space between the sides or backs of the walls and the timbers.

11. The question of the Warren girders has been fully gone into before. There are several bridges of this description on this line. In several cases, if not in all, it is believed that the number of spans are greater than required and it is proposed, when reducing the size of the bridges, to substitute plate 60-foot spans for the Warrens. The cost will have to be faced some time or other and I think the sooner the better. The Chief Engineer has gone into the question of the waterways and will forward his views and data on the subject to this office at an early date.

12. **Permanent way.**—Between Wadi and Secunderabad the rails in many places have done as much work as ought to be expected from them. The road is carefully looked after; the worst rails being replaced with new or less worn ones, and complete renewals are taking place at the rate of about six miles a year. This will probably have to be increased as in many places no more work can be expected out of the old rails now in the line. As a rule the road is in very good order and well kept particularly on the newer parts between Secunderabad and Bezwada. Here and there the rails want a little straightening, but, as a rule, there is nothing to complain of.

13. A statement of the renewals of permanent way for the last half year is attached.

14. **Ballast.**—As a rule the line is well ballasted either with broken stone or with sand.

15. In parts it is a little short and in some places has the appearance of being so from the piling up of the clay taken out of the side drains outside the ballast. Some extra ballast is desirable on some lengths.

16. **Stations and Buildings.**—The station buildings, quarters, yards, latrines and platforms are well and neatly kept. Plants and flowers are cultivated at most of the stations, which is a great advantage. The station buildings are, as a rule, small, consisting of one room about 16 feet square with an open-sided 40-foot goods shed attached. Many of the station rooms are roofed with corrugated iron and unceiled which makes them extremely hot. It is proposed to improve them by substituting terraced roof for the corrugated iron or putting up ceilings. When required extra rooms are added and the goods shed lengthened.

17. The station accommodation appears to be quite equal to the requirements. At *Scram* and one or two other stations the platforms are short, but there does not appear to be much necessity for lengthening them.

18. At *Ganguwaram* it is proposed to add a refreshment room which will be of considerable advantage and make the accommodation much better than at present.

19. At *Collaguda* the platform wall is a little bulged out at one end. It does not appear as if it would go, more so than at present; all that is required is that the nosing be brought a little in.

20. The platform wall of *Shankarpalli* is also slightly bulged outwards. It can be remedied in the same way.

21. *Hyderabad* station is very much exposed to the midday and afternoon glare probably accentuated by all the white buildings around. It has been under consideration for a considerable time to cover in the platform and the adjoining rails. The difficulty appears to have been in adhering to the standard dimensions, but from the plan shown me by the Chief Engineer I don't see much difficulty in the case.

22. At *Kazipet* a large and very expensive coal shed has been recently built, why so high I fail to see.

23. At *Dornakul* junction the refreshment room so much wanted has been built and is now ready for use. At this station also a large coal shed is being erected which, if built like the other, will be too high and is I think in the wrong place.

24. At *Yellandu* station from whence the Singareni coal comes the station accommodation is very small, consisting of only the usual one 16-foot room and a 40 feet shed. This is quite enough for the ordinary road side stations, but I feel assured that a waiting room or two where Europeans could stay the night or do business would be of great advantage.

25. *Kondapalli* station was subjected to considerable damage during the last rains by the bursting of a tank quite near, which gave way three times, the water in each case flooding the station, carrying away the ballast and earthwork and doing considerable damage. The Agent has, I understand, applied several times to the civil authorities on the subject, but up to the present has failed to get a satisfactory reply.

26. *Bezwada.*—Several of the buildings in this station are not in a good state owing to cracks and settlements, due to their being built on black soil. Except so far as ensuring their safety, it is not advisable that anything more be done by this line at present, as ere long the entire station arrangements will be altered and new buildings erected for the joint station.

27. All the stations are neat and well kept, the quarters are generally good and up to the requirements, the latrines are clean and neat, and signals, home and distant, in good working order.

28. The workshops at Secunderabad are being pushed on, the ground being levelled off and masonry in progress. Two houses for the Locomotive Superintendent and his assistant are all but complete. These shops were not started before they were required. I can well understand the difficulties the Locomotive Superintendent has at present to contend with in the turning out of satisfactory and economical work from shops so cramped and yet so scattered as his present ones.

29. **Fencing.**—The line is fenced between Wadi and Secunderabad; beyond that and between it and Bezwada there is very little. Gates and posts or in some cases only posts are at the level crossings. In some fencing is carried back on each side from the gates posts and in some cases not. In such a country, unless a line is fenced completely, I do not see the object of a little fencing here and there.

30. **Rolling-stock.**—The rolling-stock is, as a rule, in good order, both engines and carriages being as well kept as the want of covered shops will permit.

31. This railway appears to be very well managed in the face of difficulties not easy to surmount. While willing to do all that is actually required for the safety and requirements of the line, the Agent naturally objects to spending money on works of a non-remunerative nature. It is to be hoped that the opening of the south-east portion of the East Coast Railway at first to Rajahmundry and later on to Cocanada will add somewhat to the meagre traffic of the south-east portion of this line.

MADRAS,
23rd January 1893.

(Signed) F. B. WALKER, M. INST. C. E.,
Offg. Consulting Engineer for Railways.

APPENDIX.

RAILS.

Details.	IRON.			STEEL.			Total iron and steel.
	Double-headed weighing 68 lb. per yard.	(other).	Total.	Steel weighing 66½ lb. per yard.	Steel weighing 68 lb. per yard.	Total.	
1. Miles of rail in way including sidings	97.45	39.81	137.26	620.73	18.37	639.10	776.36
2. Average age of rails in way at the end of the half-year	17.60	15.00	17.00	6.00	0.50	6.00	8.50
3. Rails removed	15.40	1.16	16.56	0.04	...	0.04	16.60
3-a. Rails laid	0.86	(4) 1.27	2.13	14.67	...	(a) 14.67	16.70
4. Proportion removed per mile of rail (1)	0.158	0.029	0.180	...	...	...	0.021
5. Average number of tons hauled over each kind of rail in the half year	...	...	...	...	...	...	...
6. Thousands of tons hauled on an average over each kind of rail during the average age of rail in way (2)	...	...	...	...	...	...	...

* Expressed in miles and decimals of a mile.

(a) 14.55 miles of double-headed iron rails taken out and replaced by 14.65 miles of F.F. steel rails on account of 7.276 miles of line renewed.

(b) 0.10 miles of rails or 0.05 miles of track was extended at Yellandu station.

SLEEPERS.

Details.	Wood.			Iron.	STEEL.	Total.
	Transverse.					
	Jungle 10" X 9" X 6".	Others.	Total.			
1. Number of sleepers in way including sidings at the commencement of the half-year	..	37,212	37,212	2,57,910	5,21,946	8,17,068
2. Average age of sleepers in way at the end of the half year .. Years.	..	13.00	13.00	19.00	6.00	10.00
3. Number removed ..	..	2,114	2,114	13,236	29	15,379
4. Number laid ..	..	860	860	455	(a) 14,279	(b) 15,494
5. Percentage of removals on total of each class (1).	..	5.681	5.681	5.132	0.006	1.942
6. Number of sleepers in way including sidings at the end of the half-year ..	..	35,958	35,958	2,45,129	5,36,196	8,17,243

(a) 7.275 miles of line renewed with 12,320 steel peaspod sleepers in S.C.-W.D. section in place of C.I. pots removed.
(b) 215 sleepers in excess put in, viz. 156 wooden sleepers in extension of Yellandu siding and 19 sleepers elsewhere.

Form No. 2.

PUBLIC WORKS DEPARTMENT.

OFFICE OF CONSULTING ENGINEER FOR RAILWAYS,
Madras, 8th February 1993.

Report on the inspection of H. H. the
Nizam's guaranteed State Railway and the
Belwada extension, for the half year ended
the 31st December 1892.

No. 67

SUBMITTED. for the information of Government.

2. Forty copies ^{of the report} have been forwarded to the Resident at Hyderabad, 5 for his own use and 35 for transmission to the Government of India.
3. The attention of the Agent and Manager of the Nizam's Railway has been drawn to para.

8.1
P.W. 12/2/93

in regard to the side catch-
water drains and also to
paras 4, 5, 6, 7, 8, 10 and 15
of the report. He has also
been informed that the
views of the Chief Engineer
on the question alluded
to in para 11 would be
awaited.

R.D.G. Shelley

Capt. R.S.,

for offg. Comdg. Engrs. fordy.

Form No. 3. W. C. No. 1243

B. No. 334 R 7 16 Feb 193.

From
THE CONSULTING ENGINEER
FOR RAILWAYS,
Madras,

Recorded.

10/2/93

for S.R.

No. 67

Dated 8th } February 1893

Received

B. No. 334 R 7 16 Feb 193.

No. of ENCLOSURES.

Subject.

Report on the inspection
of the Vizag's Old State
Railway and the Bezwada
Extension for the half year
ended 31st Decr 1892.

Toppin L. H.

18/2

With orders

10/2