

# Public Works (1893) Department.

RAILWAY BRANCH.

G.O., No. 1288R

DATED 14<sup>th</sup> October

[Despatch Abstract.]

Inspection report. — Proceedings of the Govt of Bombay forwarding copy of the — of the Southern Mahratta Railway (including the Mysore, Kolhapur and Bellary-Kistna State Railways) for the first half of 1893, records.

## BACK PAPERS.

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## FURTHER PAPERS.

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SOUTHERN MAHARATTA RAILWAY.

*Periodical Inspection for the first half of 1893.*

**Metro Gauge. Length, 1,516 miles.**

I made this inspection between the 8th and 19th of August 1893, accompanied by Mr. P. Scott, Chief Engineer, and Mr. W. M. Stewart, Acting Traffic Manager, over the whole system, and by the district officers over their respective lengths.

2. Speaking generally the line is in very good running order and is carefully maintained. Special remarks regarding particular sections will be found below. Appended to this report will be found table showing the renewals of rails and sleepers and the amount of ballast spread and collected during the half year.

3. The traffic during the last half year was the best that has ever been known on this line; even the Bellary-Kistna section which has usually been so bad has shown decided improvement and it is to be hoped that the corner has at last been turned and that the line may soon pay its interest on all its capital.

4. **Fencing.**—Most of the line is unfenced; where there is a wire fence it is well maintained, but as many of the level crossings have unmanned gates, it is rather conducive to cattle accidents than otherwise; in fact there seems no object in providing fencing if the level crossings are not properly guarded. The Company are unwilling to incur the expense of manning all the crossings, and the Chief Engineer has at present under consideration a system of cattle guards by which cattle would be prevented from straying on to the line and would have to cross over; this, if successful, would meet all the exigencies of the case. In this connection it may be mentioned that the Company are selling most of their old rails; I think that this is a mistake and that it would be much truer economy to keep them for use as fence posts. On the Rajputana-Malwa Railway there are many miles of this fence. Each 24-foot rail is cut into eight posts; they make a strong and durable fence and are considerably cheaper than posts imported from England.

5. As regards the Aloe fence of which there is a good deal especially on the Mysore State Railway it seems to me to be a mere waste of money. In the first place it takes some three or four years under the most favourable conditions for it to grow into anything like a fence, and it will not grow properly on black cotton soil nor in swampy places. Then it is practically impossible to keep it free from openings made by cattle and villagers, and further a few years after it has grown to maturity it begins to seed and every plant which seeds dies down and has to be replaced, a work of great labour, and what is perhaps worse, these dying plants readily catch fire from sparks from the engines and damage the living ones. Altogether although this fence is said only to cost Rs. 500 per mile yet considering the labour of maintenance and that it is practically impossible to keep it continuous, I think it is very dear at the money and it seems to me a great pity that it has been put down by the Mysore Government on the section lately constructed by them between Yesavantpura and Hindupur.

6. **Refreshment Rooms.**—Many of the refreshment rooms on this system get very little custom; the more important ones appeared to me to be well equipped. I examined all the complaint books; the complaints are comparatively scarce and the commendations numerous.

7. **Losses on cash remittances from stations.**—Considerable trouble has been experienced on this system with shortages and thefts from cash remitted from stations. I give below an abstract of these losses for the 12 months ending June 30th, 1893 :—

| Month.            | Number. | Total amount. | REMARKS.                                                                              |
|-------------------|---------|---------------|---------------------------------------------------------------------------------------|
|                   |         | Rs. a. p.     |                                                                                       |
| 1892, July ...    | 17      | 9 2 6         | One of Rs. 5.                                                                         |
| " August ...      | 17      | 10 6 9        | One of Rs. 7.                                                                         |
| " September ...   | 21      | 14 11 0       | One of Rs. 5.                                                                         |
| " October ...     | 21      | 45 12 6       | One of Rs. 11, one of Rs. 10, one of Rs. 8.                                           |
| " November ...    | 21      | 36 6 9        | One of Rs. 6.                                                                         |
| " December ...    | 15      | 160 6 0       | One of Rs. 100, one of Rs. 11, one of Rs. 11, one of Rs. 9.                           |
| 1893, January ... | 7       | 29 7 6        | One of Rs. 15, one of Rs. 10.                                                         |
| " February ...    | 15      | 68 6 9        | One of Rs. 25, one of Rs. 21.                                                         |
| " March ...       | 11      | 1,450 13 3    | One of Rs. 1,395, one of Rs. 20, one of Rs. 7, one of Rs. 5.                          |
| " April ...       | 13      | 493 5 0       | One of Rs. 112, one of Rs. 100, one of Rs. 75, Rs. 50, Rs. 37, Rs. 11, Rs. 10, Rs. 5. |
| " May ...         | 8       | 167 11 6      | One of Rs. 127, one of Rs. 20, one of Rs. 11.                                         |
| " June ...        | 9       | 50 7 6        | One of Rs. 46.                                                                        |
| Total ...         | 175     | 2,427 4 0     |                                                                                       |

8. It will be seen that though the number of shortages in a month decreased yet the individual amounts increased in an alarming manner till they culminated in Rs. 1,395 stolen from the earnings of Bangalore station in March 1893. Mr. Quinlan, Examiner of Guaranteed Railway Accounts, was asked to enquire into the matter and submitted a report of which the following are the main heads: he recommended that a set of rules should be drawn up on the lines of those in force on the Eastern Bengal Railway; he pointed out that the cash safes at present in use were unsuitable for a large system as, when full, bags could be abstracted (this was established by actual experiment); that cash counters should have nothing to do with the weighing of cash bags, that counting platforms were much preferable to the cages now in use, and that the windows in the cash office should be secured with wire netting to prevent notes and coins being passed outside.

9. The Bombay Government sent a copy of this report to the Agent with their Government Resolution No. 339, dated 13th February 1893, and requested that "early steps be taken to remedy the defect in the procedure of despatching and receiving the daily cash remittances." The Agent informed me that the matter was receiving his attention, but nothing had been done up to the time that I made my inspection, the windows in the cash office not even having been secured with wire netting. I understand that the present procedure is to recover shortages from the pay of station masters, but, as it appears from Mr. Quinlan's report that the money can be abstracted both in transit and in the cash office, the justice of this course is not evident.

10. **Locomotive workshops, Hubli.**—I inspected these shops in company with Mr. Whitcombe, Locomotive Superintendent; extra machinery has been ordered out from England for the boiler shop and to make room for it it will be necessary to place the foreman's office outside. A wagon repairing shed 200 feet long, to cover five lines, is required in the wagon repairing yard outside the boiler shop, as it is difficult to get the wagon repairers to work properly either in the hot weather or when there is rain. Machines are gradually being placed in the wood shop so that the machine work required for that shop may be carried out inside it; a wheel lathe was in place and a drilling machine was being put up. Owing to the increase of train mileage more heavy repairs come into the machine shop than the present machinery can cope with; estimates for extra machinery are being submitted. The Assistant Locomotive Superintendent in charge of the shops now has to do his office work in the machine shop, a proper office is required for him. The gates all round the yard have now been completed.

11. The Locomotive Superintendent has five assistants, all of whom except one at Bangalore are stationed at Hubli. This system, though not in accordance

with that in force on most Indian lines may have answered well enough while the line was young and the traffic small, but now that the traffic has begun to make large advances, I think it requires consideration whether some of these men should not be placed out in charge of districts. I am led to make these remarks by the large number of engine failures that have occurred during the last half year. I abstract from the Accident Returns the figures for the Rajputana-Malwa and Southern Mahratta Railways for the half year ending June 30th, 1893:—

|                               | Through the bursting of tubes. | Through the failure of machinery, springs, &c. | Total. |
|-------------------------------|--------------------------------|------------------------------------------------|--------|
| Rajputana-Malwa Railway ...   | 10                             | 12                                             | 22     |
| Southern Mahratta Railway ... | 34                             | 22                                             | 56     |

12. It will be seen that the failures are twice as many on the Southern Mahratta Railway although the Rajputana-Malwa Railway is rather longer and has quite double the traffic. The Locomotive Superintendent states that a great many are due to defective tube plates supplied from England, but I think it is doubtful whether the great excess can be explained on this reason alone. It seems to me that at present the care and attention of engines is too much in the hands of Locomotive Foremen, and that it is impossible to exercise from Hubli proper supervision over the out-stations, as for instance, Donakonda, which is a 30 hours' journey away.

13. The General Stores are tidy and well arranged.

14. **Bijapur Branch, Hotgi, to Cadag, 172½ miles.**—This length is laid with 41½-lb. steel rails and steel trough sleepers. From Hotgi to Bijapur the sleepers are of the old pattern with five moveable parts on each side; from Bijapur to Cadag they are of the new pattern with one steel wedge for each rail. There is a full supply of ballast throughout, and the line taken as a whole is in very good running order, though the black cotton soil banks towards the southern end showed the effects of recent rain. At mileages 57/11 and 57/15 there were wash-aways on the 22nd July, apparently caused by local heavy rain; these places had been repaired before I passed over them.

15. The timbering of the bridges appeared to me to be in good condition nor did I notice any of the girders which required painting. The girders of the Dhon bridge have been found to have crept and arrangements are being made to pull them back into place.

16. The stations are neat and clean; the platforms are well kept and properly fenced; time and fare tables in the vernacular are exhibited at every place. The station machinery all appeared to me in good condition except the south distant signal of Balaganur station, of which the red glass did not come before the lamp when the arm was raised.

17. At *Bijapur* the Permanent-way Inspector's bungalow has been completed. Estimates are in hand for providing store rooms at nine stations, and also for station master's quarters at *Har* and *Malapur*. A latrine has been sanctioned for *Tahval* and the one at *Indi Road* has been removed to a more convenient site.

18. The land has all been demarcated with boundary stones, but it is found that the villagers are constantly removing them.

19. **Southern Extension, Hubli to Harihar, 81½ miles.**—The rails are 41½-lb. steel, the sleepers are jungle teak of all shapes as far as Haveri (46½ miles) and steel troughs of old pattern from thence to Harihar. A certain amount of ballast has been supplied during the last half year, but a great deal more is required especially in the northern part; I understand that it has been

collected and is now being broken preparatory to spreading. Additional earth-work to the cess is also required in some places. Between Hubli and Haveri the running is rather rough, partly due to the subsidence of the black cotton soil banks under heavy rain, but also I fancy due to lack of ballast. From Haveri to Harihar the running is very good. Many of the half round sleepers look as if they were broken; this is not the case and the appearance is due to their having been adzed down from too large a section and the piece outside the rail, being left in its original condition, it sticks up as if it were broken.

20. The bridges, stations, platforms, and station machinery are in good condition.

21. At *Karajgi* a feeder road to the village three miles off is required.

22. The following works have been completed during the half year: at *Hubli* quarters for Traffic Inspector, and also for Travelling Inspector of Accounts; at *Haveri* quarters for Assistant Station Master; at *Byadgi* extension of goods-shed and goods lines, and Assistant Station Master's quarters; at *Rani-benner* Permanent-way Inspector's bungalow, and Assistant Station Master's quarters.

23. The land has been demarcated with stones and the same difficulty as regards the villagers removing them is met with as on the *Bijapur* branch.

24. **Mysore Stato Railway, Harihar to Nanjangud, 31½ miles.**—This section is laid with 41½-lb. steel rails mostly on Mysore teak sleepers, but there are still some of the old pine sleepers remaining, and there are about six miles of steel troughs (old pattern) between Harihar and Arsikere. The road is fully ballasted and is in excellent running order throughout, the piece from Mysore to Nanjangud being particularly good. The bridges, stations, platforms and station machinery are all in good condition. Many of the distant signals between Gubbi and Mysore are placed very close to the station points. I understand that the matter is being taken up. The line has been re-measured and the telegraph posts are now being marked accordingly.

25. **Demarcation of Land.**—The Mysore Darbar intend to depute a special officer to mark out the permanent land and to take over the temporary land which is no longer required.

26. *Harihar.*—Sanction had been given for an engine shed, but it has been found necessary to make alterations in the design and revised proposals have now been sent forward.

27. *Duvangere.*—The goods shed is being moved back and two more lines being put in.

28. *Holallere.*—The idea of purifying the water here by Clarke's process has had to be abandoned, it having been found from an analysis of the water that the process is not suitable for the water met with. A goods shed of masonry has been sanctioned, but as it would have to be placed where there is a 5-foot bank, a revised estimate for one made of old rails is being prepared.

29. *Ajjampur.*—When the new goods shed and sidings are put in here it will be necessary to close the present level crossing. There seems no necessity to put in another further on as there is an underbridge which will take all the traffic.

30. *Birur.*—Nothing has yet been done about the horse and carriage dock here; the traffic officers say it is required.

31. *Kolar.*—The goods shed, ashpit, and horse and carriage dock are in hand.

32. *Mastihalli.*—This temporary station has been closed as it was found not to pay.

33. *Arsikere.*—The platform has been made up. Sanction has been accorded to various additions including a cross-over road, institute, Assistant Station Master's quarters, and additions to station building.

34. *Tiptur.*—The extension of the goods shed has been sanctioned and the contract for the work has been let.

35. At *Gubbi* the construction of the goods shed is in hand; at *Tumkur* the Permanent-way Inspector's bungalow is finished; at *Hirehalli* a siding for firewood traffic is being put in; an estimate for an additional ashpit and water-column at *Dodbele* has been submitted.

36. *Bangalore.*—The question of the new station and the re-arrangement of the yard is still under consideration. Increased accommodation to the engine shed and shops are being provided, and extra machinery for the latter has been ordered out. The shops are neat and well looked after.

37. The question of the catch siding was discussed by Colonel Firebrace (who had come to inspect the unopen line between *Dodballapur* and *Hindupur*) and Mr. P. Scott, the Chief Engineer; it was decided that a shunting siding on the level, sufficient to take a full train, could be taken off on the west side just before the 1 in 70 grade commences, and that a small catch siding to take three wagons should be put in on the east side, just beyond where the shunting side took off.

38. *Mudgere.*—Sanction has been accorded to lengthen the siding which is at present only 500 feet long.

39. *Paschamrahini.*—The goods platform requires extending, a better ramp should be put in for carts, and the siding, at present a dead end, should be made a loop so that the crane may easily be shifted to one end or other of the platform as required. The present through siding might with advantage be shortened. There is a heavy timber traffic at this station.

40. The new station at *Mysore* is still under consideration.

41. *Nanjangud.*—It has not been found possible to secure the cart traffic which was mentioned in the last report as being seen along the road between this and *Mysore*. The carts come in from long distances and the traders do not consider it worth while to unload them at *Nanjangud*, merely for the 15 miles of line from thence to *Mysore*.

42. **Bangalore-Guntakal Section, Yesavantpura to Dodballapur, 19½ miles.**—This piece of line was constructed by the Mysore Darbar, and has only been open to traffic for about six months. The piece from *Dodballapur* to *Hindupur* which has also been constructed by them (except the seven miles from the frontier to *Hindupur*) was being inspected by Colonel Firebrace prior to opening, the same day that I was inspecting the open portions, and it is expected that it will be opened on the 1st of September. The permanent-way consists of 41½-lb. steel rails on Mysore teak sleepers with murum ballast. The line is in very good running order but is very dusty in places, owing apparently to inferior murum ballast having been supplied.

43. The bridges are in good order. The stations and their machinery are in good order, but I note that only a small piece of the platforms is fenced with a palisade, an aloe fence, which at present is about 12 inches high, being used for the rest. This should be remedied as soon as possible, the palisade being continued all round.

44. An aloe fence has also been supplied along the line. I have remarked on aloe fences above (paragraph 5) and need only here reiterate that it seems to me a waste of money to supply these fences as they can never be made really efficient, and are a cause rather than a prevention of cattle accidents.

45. **Hindupur to Guntakal, 112½ miles.**—This section which was constructed by the South Indian Railway is laid with 41½-lb. steel rails on steel trough sleepers (new pattern) and is fully ballasted with good stone. The line as a rule is in good running order, but as some of the banks never had any rain on them till this season they show the effects of it, more especially between *Hindupur* and *Chakarlapalli* and between *Penukonda* and *Guttur*. The curves also appear to require attention, in some cases the cant does not appear to have been run out on to the straight and in others it does not appear to be even all round the curve.

46. The bridges are in good order; the road is being raised over the 25-foot girders which infringe standard dimensions. The stations and station machinery are in good order, and time and fare tables are being supplied.

47. *Hindupur*.—A refreshment room and cook-house are required here, as when the line is opened through to Bangalore, passengers from Bangalore will dine here, and to Bangalore will take early breakfast; it would be as well to build it separate from the station building, and of a greater breadth.

48. The goods sheds all along this length are of a most unsuitable type; they are made of rails and corrugated iron and are so designed that there is absolutely no protection for goods and the goods clerk has to work in an office entirely surrounded with corrugated iron with no ventilation whatever except what comes through the door; in the hot weather it must be a perfect oven. Arrangements will have to be made to cover in the sides of the goods sheds proper and to improve the offices. Beside the above improvements the goods sheds at *Hindupur* and *Dharmavaram* will have to be enlarged.

49. *Penukonda*.—The third class waiting shed requires to be enlarged and also accommodation supplied for upper class passengers.

50. *Dharmavaram*.—The traffic officers state that they require 25 more menials' quarters at this place, and also a traffic inspector's bungalow. This station has not yet been properly equipped by the South Indian Railway; no furniture has yet been supplied for the waiting rooms. I note that there is no drainage to the bath rooms attached to the waiting rooms. Attention was drawn in the last report to the fact that the staff quarters had not yet been formally taken over from the South Indian Railway and allotted amongst the different departments; this still remains to be done.

The following capital works are being completed by the Southern Mahratta Railway: engine shed, watering arrangements, weigh bridge, overbridge and recreation rooms.

51. This section is not fenced; gates are provided at the main roads. I noted that at mileage 439/5 (old mileage from Madras) there was a gate on one side of the crossing and not on the other.

52. **Main Line, Guntakal to Kistna Canal, 277½ miles.**—The permanent-way consists of 41½-lb. steel rails supported on steel trough sleepers (old pattern) from Guntakal to Pendekallu, wooden sleepers from thence to Nandyal, and from Nandyal to Kistna on steel sleepers (new pattern) except where sharp curves requiring guard rails necessitate the use of wooden ones. There is a most marked improvement in this section from what it was when I inspected it early in 1891. It is now properly ballasted throughout, the crooked rails have all been straightened, and the curves on the ghat section have been put into good order. The running now is generally very good, though some of the high banks on the ghat section still give trouble and I noticed some slack places here and there, notably between Markapur and Gajjalakonda, and between Satalur and Phirangipuram.

53. The question of the bridging appears to have been very inadequately considered when the line was being constructed; it has suffered considerably from floods in consequence, and new bridging has continually to be added as work year:—

At mileage 295/320-foot girders substituted for 10-foot; both at mileage 295/7 and 295/10 20-foot girders have been substituted for double 3-foot openings.

At mileage 316/13 two 20-foot and two 24-foot girders have been added to a bridge already consisting of four 20-foot girders, and also the east approach has been raised 3 feet.

The following are in hand:—

At mileage 256/2 a bridge of two 20-foot girder openings is to be doubled.

At mileages 297 and 301/10 the banks are being raised 3 feet and 10-foot girder openings are being doubled.

Estimates have been submitted for the following:—

At mileage 468/6 four 10-foot girders to be added to a bridge already consisting of one 10-foot.

At mileage 474/3 three 40-foot girders to be added to one 40-foot.

At mileage 475/3 one 10-foot to be added to a bridge already consisting of one 40-foot and two 20-foot girder openings.

54. The stations and station machinery are all in good order. As originally constructed no palisade fencing was supplied to the platforms; this has been added at some of the stations and the traffic officers ask that it may also be given at an early date at the following places: *Betamcherla*, *Panyam*, *Giddalur*, *Markapur Road*, *Narasaravupet*, *Phirangipuram*, and *Mangalgiri*.

55. *Guntakal*.—When the through line to Bangalore is opened this will be a very large and important junction; it would be a good plan to supply retiring rooms which passengers could use on payment of a rupee a day similar to those at Ahmedabad and Ajmere and many places on the Madras Railway. These might with advantage be placed on the top of the station building more especially as the present roof is in such a bad state that when it rains passenger in the waiting rooms find the only dry place is under the table and the clerks in the offices have to work under umbrellas.

56. The present platform accommodation for trains from the Hindupur branch is quite inadequate and further all the trains have to cross the main line to Kistna to get to it. The only feasible plan seems to be to build another platform on the opposite side and connect them by an overbridge. This overbridge would also serve instead of the one the civil authorities have been pressing for.

57. When the new bogie weighbridge now being put in is completed the old one and the loop leading to it may be taken up; the traffic officers ask that the permanent-way thus set free may be used to lengthen a dead end; they also state that the tranship platform requires to be lengthened 100 feet.

58. The coal tranship sidings are in hand; additional menials' quarters for Locomotive and Traffic staff have been sanctioned; estimates have gone forward for providing quarters for the transshipping coolies.

59. It is surprising that no school has yet been supplied here; I understand that there are some 40 children and their parents' salaries are not sufficient for them to be able to afford to send their children away to boarding schools elsewhere.

60. *Nandyal*.—There is a large cotton traffic here and the goods platform now open should be covered over to prevent the risk of fire. The traffic officers ask that a portion of the old waiting shed now disused and unroofed should be partitioned off for a cooking place for third class passengers who often wait here some time.

61. *Pinukonda*.—The waiting shed has been enlarged and a palisade fence put round the platform.

62. Stand pipes have been put in at *Markapur*, *Danokonda*, *Santalamagur*, and *Guntur*.

63. *Narasaravupet*.—Permanent-way Inspector's bungalow is finished.

64. *Guntur*.—There was no complaint book in the refreshment room.

65. *Kistna*.—As what will be the main line to the bridge crosses the line to the canal station, the latter has to be diverted. The diversion is being constructed by the East Coast Railway and was nearly ready when I saw it. There is no objection to its being linked up when ready, and I gave permission accordingly.

66. It has been arranged that at any rate for the present the metre gauge trains are to cross to Bezvada and transshipping is to be done there. The third rail is now being laid across the bridge and it is believed that everything will be ready in a month.

67. The canal authorities have given notice that they intend to widen the canal and that the line along the canal bank must be taken up by December

31st, 1893. It would be a great pity to lose the river traffic which I understand has only lately taken to use the Railway instead of carts to Guntur, and which last half year amounted to some Rs. 75,000. If the canal authorities do not insist upon the whole length being taken up it will be possible by blasting along the side of the hill to still reach the river bank where all the boats and carts assemble. Otherwise it will be necessary to put in an entirely new alignment starting from Tadepalli and skirting round the other side of the hills on the canal bank. As this will be an entirely new project and land would have to be taken up it would be as well if the matter were taken up at once. If by December 31st the new alignment is not ready the traffic will take to carts again, and the trouble that the traffic officers have taken to induce the traders to use the Railway will be thrown away.

68. **Land.** All the land along this section has been demarcated with boundary stones.

69. **Main line, Guntakal to frontier, 234½ miles.**—From Guntakal to Bellary the line has been converted from the broad gauge and consists of broad gauge rails on pot sleepers, the latter having been shifted on the tie bars to form the new gauge; from Bellary to Gadag the permanent-way is of 11½-lb. steel rails on steel sleepers, the sleepers being a mixture of the old and new patterns; from Gadag to mile 97 the sleepers are steel of the old pattern, and teak from there to Castle Rock; from Castle Rock to the frontier the rails are 60-lb. and the sleepers teak of special heavy section. The section is fully ballasted except between *Annigeri* and *Dandur*, where more ballast is required. The road is in excellent running order throughout.

70. The bridges, stations and station machinery are in good order.

71. *Kudatani*.—Nothing has yet been done as regards providing a store room and Assistant Station Master's quarters.

72. *Toranagullu*.—A dead end has been sanctioned.

73. *Gadiganur*.—Assistant Station Master's quarters have been built.

74. *Papinikanahalli*.—A booking office and waiting shed have been provided and estimates have been submitted for a latrine.

75. *Munirabad*.—It was mentioned in the last report that nothing had yet been done by the officials of the Nizam's Government towards strengthening the insecure bund of the canal, which in the rains threatens the railway bank. The bund was still in the same state when I passed through.

76. *Gadag*.—The extension of the goods shed is in hand; the lamp room is finished; a lean-to has been provided to the engine shed. The medical officers consider that more latrines to the staff quarters are not required.

77. *Annigeri*.—The Assistant Station Master's quarters are finished.

78. *Hubli*.—The re-arrangement of the yard and the provision of an overbridge are still under consideration.

79. *Dharwar*.—An extra room is required to deal with and sort out the large amount of service letters that come in for the head-quarters offices. An estimate is being got out for covering the platform.

80. *Alwar*.—Estimates are being got out for a goods shed and additional sidings. The Assistant Station Master's quarters have been completed.

81. *Castle Rock*.—Owing to an early monsoon the work on the salt shed had to be stopped and cannot be begun again until the rains are over.

82. The land on this section has all been demarcated. Zinc plates for the numbering of the telegraph post have been indented for.

83. **Poona Branch, Londa to Poona, 278 miles.**—The rails throughout are 11½-lb. steel, the sleepers are wood as far as Belgaum (33rd mile), steel mostly of the new pattern to the 40th mile, wood from thence to the 66th mile, and then steel to Poona with exception of the two ghats, where wood is used. The line is fully ballasted throughout with the exception of a few miles between Belgaum and Sulebhavi, for which ballast has been collected and will shortly be

spread. Between the 27th and 29th miles the bank has suffered from heavy rain and a caution order was in force; however the road appeared in good condition when I passed over it and I was informed that the restriction would shortly be removed. Between the 33rd and 40th miles where steel sleepers have just been put in and have not yet had time to settle properly, and from there to the 66th mile where there are wood sleepers in course of removal, the line is not quite in such good running order as the rest, otherwise it is in excellent running order. The high banks on the Rajewadi ghat which have given considerable trouble in former years have been built up with stone, but it is a question whether they should not be widened to the full width of 16 ft. though it would be an expensive job.

84. The heavy flood of last year showed that a considerable amount of extra bridging is required on this section; estimates have gone forward for the following: mileage 194/17, addition of one 20-foot arch, mileage 243 raising line, protection wall and double 3-foot culvert.

Providing pucca wings to bridges at mileages 245/21 and 247/19 and 18-inch open drain at mileage 264½; mileages 241/1 and 261½ protection works; 245/2 raising banks and bridges; 245/7 one 10-foot girder; 246/21 conversion of one 20-foot girder into two 20-foot girders.

85. Twenty miles of fencing have been put up during the half year. Arrangements are being made to repaint the numbering on the telegraph posts. The land has all been demarcated. The bridges, stations and station machinery are all in good order.

86. *Khanapur*.—The Assistant Station Master's quarters are completed; the goods shed and sidings are in hand.

87. *Belgaum*.—The extension of the goods shed and platform have been sanctioned. The locomotive foreman's bungalow has been completed. The platform latrines were in a filthy state.

88. *Pachhapur*.—The conclusion has been come to that it would be more satisfactory to obtain water from the Marhkandi nalla than to try to purify the well water by some softening process, and I understand that estimates for this will be submitted in due course.

89. *Dhupdhal*.—The goods shed and sidings are in hand. Estimates for altering the sidings so as to convert this station into one where trains can cross, are under preparation.

90. *Shedbal*.—The extension of the goods shed and sidings have been sanctioned.

91. *Miraj*.—One of the locomotive units has been allotted as a reading room. Additions and alterations to single and married drivers' quarters, lamp room and latrines for Station and Assistant Station Masters' quarters have been completed.

92. *Ashta Road*.—The Permanent-way Inspector's bungalow is completed.

93. *Tukari*.—A road is required to Islampur, a large trade centre about eight miles distant; I understand that the local authorities are anxious to make the road, but are unable to do so without some assistance from Government. A waiting shed is required at this station.

94. *Shenoli*.—A shed is required as a shelter both for passengers and goods.

95. *Karad*.—Another siding is required here. There is no bath-room to the first class waiting room; it should be supplied.

96. *Koregaon*.—The guards' running room is being extended. Considerable difficulty with buildings is experienced at this station owing to black cotton soil founds.

97. *Satara Road*.—A road connecting the station with the Government road is being constructed by the Railway Company.

98. *Nira*.—An estimate has been submitted for providing a permanent station here.

99. *Ghorpuri*.—Plans and estimates for an engine-shed and locomotive sidings are in hand. The Locomotive Foreman's bungalow has been completed, and also the 3-foot culvert near the south end of the station.

100. *Poona*.—The cross-over road, loop siding, dead end and siding extensions have been completed.

101. **Kolhapur State Railway, Miraj to Kolhapur, 29½ miles.** The road consists of 41½-lb. steel rails on steel sleepers, new pattern, is fully ballasted and is in excellent running order throughout. The land has been demarcated. The bridges, stations and station machinery are all in good order.

102. The pitching at the Kistna river is in hand. The project for protecting the road near Oodgaum will be taken in hand as soon as the rains are over.

R. C. DYSON, F.C.II., Assoc.M.Inst.C.E.,  
Government Inspector.

Bombay, August 23rd, 1893.

*Note by the Senior Government Inspector.*

103. The state of this line as reported on in paragraphs 2, 14, 24, 42, 45, 52, 69 and 101 is very satisfactory, and doubtless the section referred to in paragraphs 19 and 83 will receive careful attention. I concur with the remarks that have been made about fencing, condemning live hedges as useless and expensive, and recommending the use of the Company's old rails which might be cut up and slit down the web, as is so successfully done on the B. B. and C. I. Railway.

104. I understand from the Agent that he has submitted, unofficially, to the Examiner of Guaranteed Railway Accounts, Bombay, a scheme drawn up in full detail for the stoppage of the irregularities referred to. This, if approved of, ought to be brought into operation as speedily as possible. The cash safes invented and made by Mr. Phipps, the Locomotive Superintendent of the Madras Railway, effectually prevent the abstraction of cash bags in transit.

105. I concur in the remarks made in paragraphs 11 and 12 about the advisability of some of the Locomotive Assistants being located away from headquarters to see after the running.

106. The fact referred to in paragraph 41 would indicate the advisability of the Mysore Government or some other agency extending the Nanjangud line to Gundlupet and even beyond to the forests, as suggested in a recent communication from the Board of the Southern Mahratta Railway to their Agent.

107. The Agent's attention is invited to the suggestion made in paragraph 45, and also to the several minor matters throughout the report that are noted on as requiring attention.

108. The diversion between Tadepalli and Kistna Canal is now, I believe, in use. I don't think that the canal terminus will be of much use once the metre-gauge trains cross into Bezwada. But if there is any river traffic of importance, in addition to that which now crosses the river from Bezwada above the anicut, it can easily be accommodated, even if the Canal Department give the Railway notice to quit their present location, by taking the line outside the canal altogether, to a certain creek, which is not difficult of access for the rails, and which even in the highest floods is used freely by the boats.

109. The report on the whole exhibits a good healthy condition of things, and considering the very differing conditions on this very straggling system of railway, the state of things generally is, I consider, very creditable to the Company's officers.

F. J. E. SPRING, M.Inst.C.E.,  
Senior Government Inspector.

9th September 1893.

# APPENDIX A.

## SOUTHERN MAHRATTA RAILWAY.

*Statement showing miles of Rails received during the half year ended 30th June 1893.*

| Divisions.                | Iron.                                    |                                  |        | STEEL.                                  |                                   |        | Total Iron and Steel. |
|---------------------------|------------------------------------------|----------------------------------|--------|-----------------------------------------|-----------------------------------|--------|-----------------------|
|                           | Double-headed weighing 75 lbs. per yard. | Iron weighing 41½ lbs. per yard. | Total. | Flat-headed weighing 41½ lbs. per yard. | Steel weighing 41½ lbs. per yard. | Total. |                       |
|                           | Miles.                                   | Miles.                           | Miles. | Miles.                                  | Miles.                            | Miles. | Miles.                |
| Hubli Division            | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Poona Division            | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Bellary Division          | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Kistna Division           | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Mysore State Railway      | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Nanjangud Extension       | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Guntakal-Hindupur Section | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Kolhapur Branch           | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |
| Total                     | ...                                      | ...                              | ...    | ...                                     | ...                               | ...    | ...                   |

(a) 6 miles of iron rails have been replaced by steel ones.

P. SCOTT,  
Chief Engineer.

# APPENDIX B.

## SOUTHERN MAHARATTA RAILWAY.

Statement showing number of Sleepers removed during the half year ended 30th June 1893.

| Division.                 | Wood.                           |                    |                               |           | Iron.          |         |                       |            |
|---------------------------|---------------------------------|--------------------|-------------------------------|-----------|----------------|---------|-----------------------|------------|
|                           | Teak Sleepers of various sizes. | Crossing Sleepers. | Crenosoted pine 6" x 8" x 5". | Total.    | Bowl sleepers. |         | Wrought Iron Sub-way. | Steel.     |
|                           |                                 |                    |                               |           | Oval.          | Round.  |                       |            |
| Hubli Division            | No. 1,223                       | No. ... 12         | No. ...                       | No. 1,235 | No. ...        | No. ... | No. ...               | No. 163    |
| Poona Division            | No. ... 12                      | No. (6) 218        | No. ...                       | No. 230   | No. ...        | No. ... | No. ...               | No. 10,817 |
| Bellary Division          | No. ... 81                      | No. 2              | No. 33                        | No. 113   | No. ...        | No. ... | No. ...               | No. 922    |
| Kistna Division           | No. (1) 2,055                   | No. ...            | No. ...                       | No. 9,055 | No. ...        | No. ... | No. ...               | No. 8      |
| Mysore State Railway      | No. ...                         | No. ...            | No. ...                       | No. ...   | No. ...        | No. ... | No. ...               | No. ...    |
| Nanjangud Extension       | No. ...                         | No. ...            | No. ...                       | No. ...   | No. ...        | No. ... | No. ...               | No. ...    |
| Guntakal-Hindupur Section | No. ...                         | No. ...            | No. ...                       | No. ...   | No. ...        | No. ... | No. ...               | No. ...    |
| Kollapur Branch           | No. ...                         | No. ...            | No. ...                       | No. ...   | No. ...        | No. ... | No. ...               | No. ...    |
| Total                     | 10,379                          | 262                | 33                            | 10,674    | ...            | ...     | ...                   | 11,916     |

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(a) Laid in place of 11,750 teak sleepers removed ... 10,753  
To in place of 24 Australian " ... 24

10,817

(b) Included 238 sleepers laid in place of crenosoted pine ones.

(c) Included 162 sleepers laid in place of wooden ones.

(d) Included in place of 8,705 crenosoted pine measuring 6" x 8" x 5" and 134 teak sleepers.

P. SCOTT,  
Chief Engineer.

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# APPENDIX C.

## SOUTHERN MAHARATTA RAILWAY.

Statement showing the Quantity of Ballast collected and spread during the half year ended 30th June 1893.

| Division.      | QUANTITY.  |           | REMARKS. |
|----------------|------------|-----------|----------|
|                | Collected. | Spread.   |          |
| Hubli Division | 136,523    | 239,550   |          |
| Bellary do.    | 288,326    | 327,094   |          |
| Poona do.      | 278,175    | 88,652    |          |
| Kistna do.     | 310,069    | 601,292   |          |
| Mysore do.     | 386,170    | 749,833   |          |
| Total          | ...        | 2,005,421 |          |

P. SCOTT,  
Chief Engineer.

*Spec. of London*

*25.2.68/1*  
*8/10/86/112/1*

Southern Mahratta Railway. } *Inspection Report*  
Mysore Railway. } *for the 1st half*  
Kolhapur Railway. } *of 1893.*  
Bellary-Kistna Railway.

No. 2107 of 1893.

P. W. Department,  
Railway.

Bombay Castle,  
7th October 1893.

From the Senior Government Inspector, dated 23rd September 1893.  
Submits the Inspection Report of the Southern Mahratta Railway (including the  
Mysore, Kolhapur and Bellary-Kistna State Railways) for the 1st half of 1893.

RESOLUTION.—To be forwarded to the Government of India.

R. C. DYSON,  
Acting Under Secretary to Government.

- To
- The Government of India.  
(By letter No. 2108.)
  - The Government of Madras.  
(By endorsement No. 2109). (With copies of Report.)
  - The Resident at Hyderabad.  
(By endorsement No. 2110). (With copies of Report.)
  - The Resident in Mysore.  
(By endorsement No. 2111). (With copies of Report.)
  - The Political Agent, Kolhapur and Southern Mahratta Country.  
(With copies of Report.)
  - The Consulting Engineer for Railways.
  - The Agent, Southern Mahratta Railway Company.  
(With copies of Report.)

No. of 1893.

Copy forwarded to the