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MADRAS RECORD OFFICE.

Government of Madras.

Public-ork. DEPARTMENT.

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62-72

Dated 14-10-1871.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 14th October 1871.

No. 242. Read the following letter from the Assistant Secretary to the Government of India, Public Works Department, (Railway,) to the Secretary to the Government of Madras, Public Works Department, (Railway,) dated Simla, 25th September 1871, No. 1,807-R. :—

THE narrow or metre gauge having been adopted, as you were informed by my telegram of the 9th instant, for the extension of the Great Southern of India and for the Carnatic Railways, I am directed to forward, for the guidance of the Engineers on those lines, a memorandum of the provisional standard dimensions to be followed in the construction of Indian narrow gauge Railways, and to request that they may be followed for the present by all Engineers engaged in preparing projects, and that no deviation may be permitted without previous reference to the Government of India.

2. The precise dimensions of the rolling stock are now under consideration and will be decided in England. Some of the dimensions are, therefore, only provisional, but it is not expected that any considerable variation from them will be necessary.

PROVISIONAL

DIMENSIONS TO BE FOLLOWED IN THE CONSTRUCTION OF INDIAN NARROW GAUGE RAILWAYS.

Gauge 1 *Metre.*

Single Line.

		Metres.	Ft.	In.	Rolling load on each girder.	
	Formation.					
1	Minimum width of formation in bank *(a)* ...	3·60	11	9·7		
2	Minimum width of formation in cutting *(b)* ...	4·30	14	1·3		
3	Standard widths of do. *(b)*	4·30	14	1·3		
		4·50	14	9·2		
		5·00	16	4·9		
		5·50	18	0·5		
4	Minimum radius of curves	100·00	328	1·0		
5	Maximum exterior width of masonry under bridges from face to face	3·60	11	9·7		
	Girder bridges.	Kilos.	Tons per foot.			
6	Rolling load per metre of track to be assumed in calculations for strength of girders :—					
	Openings 2 metres to 4 metres in the clear ...	6,600	1·971			
	Do. 4 ,, to 6 ,, ,, ,, ,, ...	5,000	1·493			
	Do. 6 ,, to 15 ,, ,, ,, ,, ...	3,300	0·985			
	Additional load per metre of track for each metre of clear opening above 15 metres *(c)*	2,000	0·597			
7	Openings spanned by girders are to be of one of the following dimensions of clear span only *(d)* :—	Metres.	Ft.	In.	Kilos.	Tons.
	(Rolled Beams.)	2·00	6	6·7	13,200	12·94
	Do.	3·00	9	10·1	19,800	19·40
	Do.	4·00	13	1·5	26,400	25·87
	Do.	6·00	19	8·2	30,000	29·40
	(Plate Girders.)	12·00	39	4·4	39,600	38·81
	Do.					

(a) Side-slopes according to soil and climate.

(b) Side-slopes and width of side drains to vary with circumstances.

(c) Thus 20 metre girders for a single track should be calculated for a rolling load of 15 × 3,300 × 5 × 2,000 = 59,500 kilos.

(d) Type girders for these dimensions will be kept in stock. All bridges with spans greater than 40 metres will be of special design.

Dimensions to be followed in the construction of, etc.—(Concluded).

		Metres.	Ft.	In.	Rolling load on each girder. Kilos.	Rolling load on each girder. Tons.
	(Lattice or Warren Girders)	18·00	59	0·7	55,500	54·39
	Do.)	25·00	82	0·3	69,500	68·11
	Do.)	30·00	98	5·1	79,500	77·91
	Do.)	40·00	131	2·8	99,500	97·51
	Ballast.					
8	Minimum depth of ballast below sleeper	0 15	0	5·9		
9	Maximum width of ,, at top	2·15	7	0·6		
10	Do. of ,, at bottom	3·00	9	10·1		
	Transverse wooden sleepers.					
11	Standard length of transverse wooden sleepers	1·85	6	0·8		
12	Standard width of base of transverse wooden sleepers	·20	0	7·9		
13	Minimum width of base of do. ...	·18	0	7·1		
14	Do. depth of do. do. ...	·10	0	3·9		
15	Do. width of heart wood at rail seat...	·10	0	3·9		
		Sq. centimetres.	Sq. In.			
16	Do. area of heart wood in cross section ...	170	26·35			
		No.	No. per mile.			
17	Ordinary number of standard sleepers to kilometre of track *(e)*	1,250	20	12		
	Rails.	Kilos.	lbs. per yard.			
18	Flat-footed rail without chairs, but with shoes to give the cant; joints fished; fastenings bolts or spikes; ordinary weight per lineal metre	18 or 20	36·3 or 40·3			
	Level crossings, stations, and fixed structures over line.	Metres.	Ft.	In.		
19	Minimum distance from centre to centre of tracks in stations or sheds	3·60	11	9·7		
20	Minimum distance from centre to centre of tracks in open line	3·00	9	10·1		
21	Minimum horizontal distance from centre of track to edge of platform	1·40	4	7·1		
22	Minimum horizontal distance from centre of track to any structure other than platform *(f)*	2·00	6	6·7		
23	Maximum height above rail-level of passenger platform	·08	0	3·1		
24	Do. do. do. of goods platform.	·25	0	9·8		
25	Minimum height above rail-level of over bridges and similar structures at centre of track ...	3·60	11	9·7		
26	Do. do. do. of do. at a horizontal distance of 2·00 metres from centre of track	2·50	8	2·4		
27	Minimum width of doorways of engine-sheds, carriage-sheds, or goods-sheds	3·00	9	10·		

(e) Number to increase proportionately to diminution of width of ba... ...e of sleepers used.

(f) No switches, signal wires, or structure of any kind to be ere... ...ected within this minimum distance.

NOTE.—When the precise dimensions of the rolling stock ... ...are decided such alterations in this table that may be called for will be notified, and it will be supplem... ...nted with the dimensions of the stock adopted. It is not, however, expected that any considerable var... ...iation from the dimensions of this table will be necessary.

No. 243. ORDER THEREON, 14th October 1871, No. 2,624.

RAILWAY, No. 34.

COMMUNICATED to the Consulting Engineer for Railways for adoption.

(True Extract.)

Captain, R.E.,

Offg. Joint Secretary to Government.

Sir,

I am directed to inform you that the narrow or metre gauge has been adopted, as you were informed by my Telegram of the 9th Instant, for the extension of the Great Southern of India and for the Carnatic Railways, I am directed to forward for the guidance of the Engineers on those lines, a Memorandum of the provisional standard dimensions to be followed in the construction of Indian narrow gauge Railways, and to request that they may be followed for the present by all Engineers engaged in preparing projects, and that no deviation may

12	Standard width of base of transverse wooden sleepers	metres	ft	in.
13	Minimum width of base of Do	.20	0	7.9
14	" depth of Do	.18	0	7.1
15	" width of heart wood at rail seat	.10	0	3.9
16	" area of heart wood in cross section	.10 sq. metres	0	3.9 sq. inches 26.35
17	Ordinary number of standard sleepers to kilometre of track (2)	1,250	No. 20	lbs per mile 12

(2) Number to increase proportionately to diminution of width of base of sleepers used.

Rails

18	Flat footed rail without chairs but with shoes to give the cant: jointsfished: fastenings bolts & spikes: ordinary weight per lineal metre	Kilos 18 or 20	lbs per yard 36.3 or 40.3

Level Crossings stations & fixed structures over line

19	Minimum distance from centre to centre of tracks in Stations or sheds	metres	ft	in.
20	Minimum distance from centre to centre of tracks in open line	3.60	11	9.7
21	Minimum horizontal distance from centre of track to edge of platform	3.00	9	10.1
22	Minimum horizontal distance from centre of track to any structure other than platform (f)	1.40	4	7.1
23	Maximum height above rail-level of passenger platform	2.00	6	6.7
24	Maximum height above rail-level of Goods platform	.08	0	3.1
25	Minimum height above rail-level of overbridges and similar structures at centre of track	.25	0	9.8
26	Minimum height above rail-level of Do at a horizontal distance of 2.00 metres from centre of track	3.60	11	9.7
27	Minimum width of doorways of Engine sheds Carriage sheds or Goods sheds	2.50	8	2.4
		3.00	9	10.1

(f) No switches signal wires or structure of any kind to be erected within this minimum distance

Note.

When the precise dimensions of the rolling stock are decided such alterations in this table that may be called for will be notified, and it will be supplemented with the dimensions of the stock adopted. It is not however expected that any considerable variation from the dimensions of this table will be necessary.—

Public Works 1871 Department

No. 1709

From

The Government of India

Dated 25th September

Received 3rd October 1871

Quebec: Ans 8th 1807 R.

Forwarding a Memo: of the provisional standard dimensions to be followed in the construction of Indian narrow guage Railways, and requesting that they may be observed by Engineers engaged in preparing projects.

No. 1709 of 1871

Communicated to the Consulting Engineer for Railways.

Copy forwarded for adoption.

[illegible]

C-No. 4709.

Govt. of Madras.

PUBLIC WORKS.

To

Hon. Secretary Govt. Madras

for Railways

Dated.

Recd. 1881

G. O. 14th Rev. No. 2624.

Nos. 212-213

Engineers engaged in preparing projects.

Indian Branch Junction Railway

Communicating to the Secretary Govt. Madras for Railways a memo of the proposed classification of dimensions to be followed in the construction of Indian Branch Junction Railway and requesting that they may be followed as nearly as