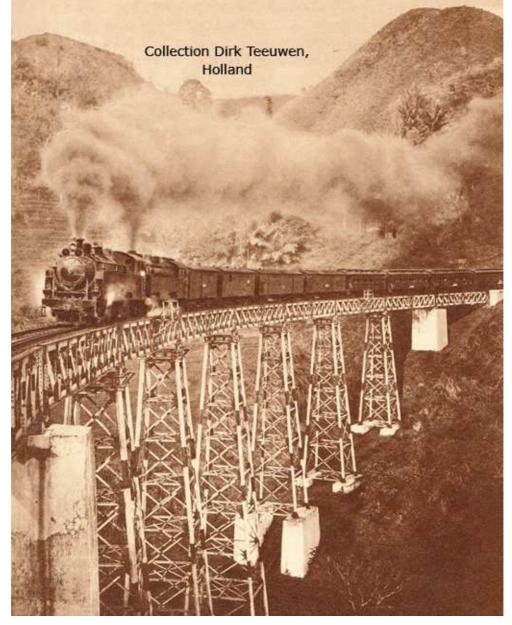
Manpower, steam tractions and contact wires

The fascination of thundering trains in The Dutch East Indies An introduction to the history of the Dutch colonial railroads By drs (Msc) Dirk Teeuwen, The Netherlands

Because of the summarizing character of the text in this article there is no arrangement in chapters and paragraphs. Account of sources regarding text and pictures as well as a set-up of this article could be found on page 2.



Mark!! The author has no knowledge whatsoever of locomotives, coaches and gauges. © drs (Msc) D. Teeuwen – Rendez-vous-Batavia.nl – The Netherlands 2010 *Title page picture, page 1: colonial "thundering" from Batavia (Jakarta) to Bandoeng (Bandung) through the Java Preanger mountains in the year 1924*

Set-up of this article

a. Text, a short history of the Dutch colonial railways: page 4 and 5 b. On page 1 up to and including page 16: a selection of pictures in relation to the colonial railways in The Dutch East-Indies

c. On page 1 up to and including page 9: a selection of four surveys in figures illustrating the historical development and the importance of the Dutch colonial railways in The Dutch East-Indies (from 2, see below)

d. On page 16 up to and including page 21: eight maps showing railways on Java, Sumatra and Celebes – Sulawesi in The Dutch East-Indies (from 6, see below)

e. On page 22 up to and including page 30: ten very detailed statistics of the historical development of the Dutch colonial railways in The Dutch East-Indies (from 3, see below)

Sources of the pictures

1. Picture-postcard collection Dirk Teeuwen, Holland

2. Reitsma, S. A.: Gedenkboek der staatsspoor- en tramwegen in Nederlandsch-Indië 1875-1925; Batavia (Jakarta) – Weltevreden 1925

3. Reitsma, S. A.: Korte geschiedenis der Nederlandsch-Indische spoor- en tramwegen; Batavia (Jakarta) – Weltevreden 1928

4. Samarang-Joana Stoomtram-Maatschappij: Tramwegen op Java, gedenkboek ter gelegenheid van het vijfentwintigjarig bestaan; Den Haag Holland 1907 5. A. Neijtzell de Wilde and others: Holland's colonial call; The Hague Holland 1930

6. Knol, K.G.: Eerste atlas van Nederlandsch-Indië; Batavia (Jakarta) 1940



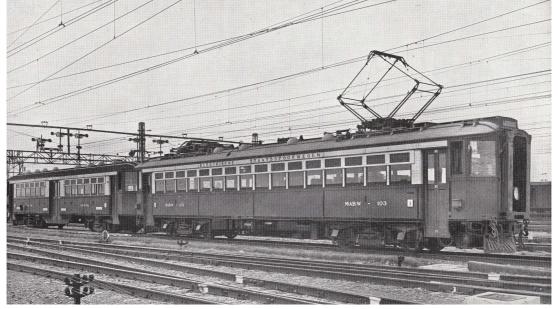
Picture 1 Office of the State Railways in The Dutch East-Indies, Semarang 1904



P.2 Dutch colonial mountain locomotive 1920; an old one below (1890), P.3



P.4 Train, State Railways of The Dutch East Indies, Batavia – Jakarta 1925



About 1850 the means of transportation in Java, in The Dutch East-Indies, were primitive and, consequently the conveyance of products from the interior was a complicated matter. In Central Java especially, conditions began to become critical: the draught-cattle-stock in the Principalities, the area around Yokyakarta and Solo / Surakarta, was overburdened, causing it to dwindle away visibly. As a result the costs of transportation were continually increasing. In spite of these circumstances it took some length of time before it was possible to start the construction of a railway net, whereas it was not until the year 1862 that the first concession was granted to a private concern. Thus the Netherlands Indian Railway Company could be established, although in the early years this company had to face severe financial difficulties. It was mainly due to this circumstance that, in spite of government support, the construction of the Central Java lines (from Semarang to the Principalities) could only progress by very slow degrees, while it was only completed in the year 1873. In this very year the line Bogor / Buitenzorg - Jakarta / Batavia, for which likewise a concession was granted, could be opened to traffic.

Companies	Gauge			open to tr er 31st. 192	
Companies	m	Java & Madura	Sumatra	Celebes	Total
			E a ai		
State Rail- and Tramways				*	
standard gauge	1.067	2,802	284	i i i i i i i i i i i i i i i i i i i	3,086
narrow "	0.600	· I 20			· I 20
tramways	(1.067 ¹)		530	47	577
viulii vajo	(0.75 ⁰²)	<u> </u>	520		520
Total		2,922	1,334	47	4,303
Netherlands Indian		a			· .
Railway Company			a (0	
railways	1.435	205	-		205
tramways	§ 1.435	56		-	56
tianiways	1.067	602		-	602
Total		863	. —		863
Deli Railway Company			N. J		
rail- and tramways	1.067	-	439		439
Tramway Companies		8			
tuomourou	1.067	1,656		<u> </u>	1,656
tramways) 1.188	32		· · · · · · · · · · · · · · · · · · ·	32
Total		1,688	-		1,688
Grand total 1928		5,473	1,773	47	7,293
1927	· · · ·	5,452	1,773	47	7,272
1926		5,426	1,694	47	7,167
1920	(x	5,051	1,428		6,479
1910		4,148	922		5,070
1900		3,302	357		3,659

Survey 1

The total net of rail- and tramways in The Dutch East-Indies, 1928

The ill-luck, however, which had pursued the Netherlands Indian Railway Company, inevitably resulted in shaking the confidence of capitalists in the success of the enterprise. Neither did this company, nor other private persons, feel the slightest enthusiasm to continue the work of railway construction in Java. Whereas private persons failed to take the initiative, there was no other alternative but for the colonial government to take the lead in constructing the indispensable railway net. Since the year 1875 this task was energetically carried out. In the year 1884 the East Java lines were connected to the Central Java net; in the year 1894 the Java West-Coast could be reached at Anjer and from there in the year 1903 Banjuwangi, situated on the East-Coast. The accomplishment of this last feat marked the first period in the history of the railway-enterprise in Java, which was the construction of the trunk, primary, lines throughout the island.

In the meantime the construction of secondary lines, interlocal trains (called tramways), had been taken in hand. For this side of the question more interest was displayed from private persons Consequently the tramway lines, which adapt themselves excellently to local conditions, were almost entirely in the hands of private concerns. The first tramway, the line Semarang – Demak, was opened in the year 1883; after the year 1915 a net of over 2.500 km, mainly situated in Central and East Java and Madura, was open to traffic.

On the 31st of December of the year 1928 the total length of the rail- and tramway system in Java measured 5.473 km, of which 2.802 km railways of standard gauge (1,067 m); 205 km of broad gauge (1,435 m); 120 km with narrow gauge (0,6 m) and 2.258 km of tramways with a gauge of 1,067 m (with one single exception: municipal trams). Whereas by far the greater part of the net was constructed according to standard gauge, the differences in gauges were no serious impediment, necessitating no more than 4% of total goods-traffic in Java to be trans-shipped from "narrow gauge to standard gauge" in those days.

Besides these rail- and tramways, open to general traffic, Dutch East-Indian Forest Service as well as large cultural enterprises (viz. the sugar industry), constructed elaborate nets of field railways, the total length measuring 7.000 km. Sugar estates only were responsible for 6.500 km of field railways.

On Sumatra the several separate lines, which were each connected to a different port, never have been mutually connected before 1942 (the year of the Japanese invasion). The authorities were very busy studying a scheme for the construction of a net in Central Sumatra, eventually connected to the South Sumatra lines and to the government railways on the Sumatra West Coast as well as the rail- and tramway system of the Deli Railway Company on the Sumatra East Coast. But the Japanese arrived and that was not by invitation.

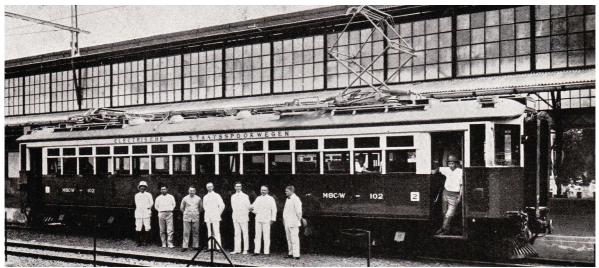
In South Sumatra the Government tramways (the Lampung line and the Palembang line) were connected in 1927. The connection between the Aceh tramway and the Deli Railway Company was established also.

Celebes – Sulawesi disposed of one insignificant State tramway line, connecting Makassar – Ujung Pandang to Takalar (1922).

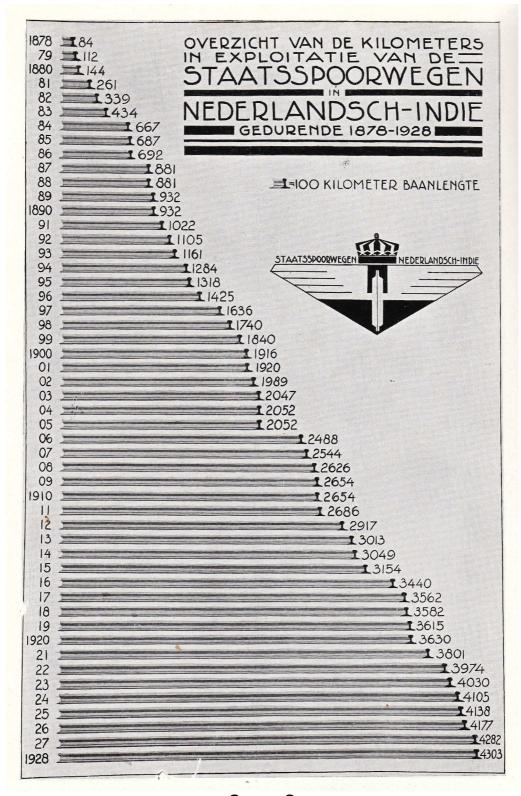
	Length	Surface in	ित्र स्वतः स्व स्वतः स्वतः स्व स्वतः स्वतः स्व		th in km per
Countries	of net in km	km ²	Population	100 km²	10,000 inhabi- tants
Europe	384,420	10,922,600	472 894,000	3.5	8.1
America	601,136	41,288,700	214,556,000	1.5	28.0
Africa	60,320	24,471,100	112,382,000	0.2	5.4
Japan, Korea, Formosa, Kwantung	22,582	679,700	84,567,000	3.2	2.7
China	12,020	11,320,000	441,200,000	0.1	0.3
British-India	62,074	4,901,900	319,647,000	1.3	· I.9
Ceylon	1,179	65,600	4,505,000	1.8	2.6
Siam	2,490	518,200	9,724,000	0.5	2.6
Cochinchina, Cambodja, Annam and Tonkin	2,398	700,800	19,844,000	0.3	1.2
Federated Malay States	1,872	132,100	2,448,000	I.4	7.6
N. E. Indies (total)	7,243*)	1,900,300	52,825,000	0.4	1.4
Java and Madura	5,423*)	131,600	37,434,000	4. I	1.5
Philippine Islands	1,303	297,900	11,414,000	0.4	1.1
Australia	48,457	8,008,500	7,695,000	0.6	63.0

Survey 2

Comparison between the rail- and tramway net in The Dutch East-Indies and railway systems existent in other countries, 1928



Picture 5 A new passenger coach of the State Railways of The Dutch East-Indies, Batavia – Jakarta 1928



Survey 3 Kilometres in exploitation of the State Railways in The Dutch East-Indies, 1928

Companies	Passengers (×1000)	Luggage 1000 kg	Parcels 1000 kg	Express and carriage transport 1000 kg
State Rail- and Tramways N. I. Railway Company	58,995 14,792	34,687 5,105	35,911 9,492	9,777,593 3,272,698
Deli Railway Company	6,910	3,788	2,546	1,029,694
Tramway Companies	63,643	1,762	1,255	3,962,721
Total 1928	144,540	45,342	49,204	18,042,706
1927	141,167	50,149	48,920	16,577 205
1926	136,093	57,028	54,270	14,862,025
1920	178,859	67,078	74,281	14,073,631
1910	69,876	35,186	14,684	7,367,865
1900	36,703	19,658	7,247	3,476,165

Survey 4

Illustration of the development of the railway system in The Dutch East-Indies, 1928



Picture 6 Tanjung Priok Railway Station, Batavia - Jakarta 1930



Picture 7 Batavia Terminus Railway Station of the State Railways, Old Batavia – Jakarta Kota 1928



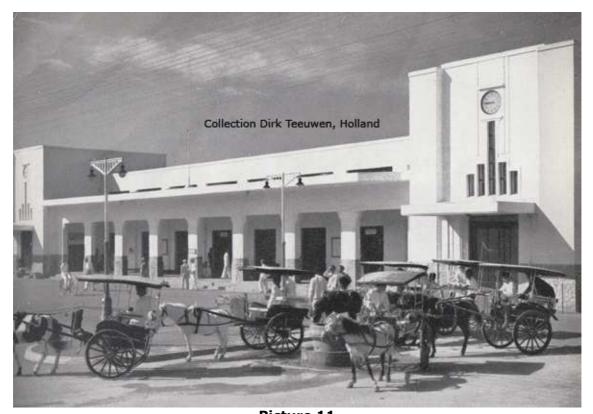
Picture 8 Hall of the Batavia Terminus Railway Station, Old Batavia – Jakarta Kota 1930



Picture 9 Batavia Terminus Railway Station at night, Old Batavia – Jakarta Kota 1930



Picture 10 Arrival at Batavia Terminus Railway Station, Old Batavia – Jakarta Kota !930



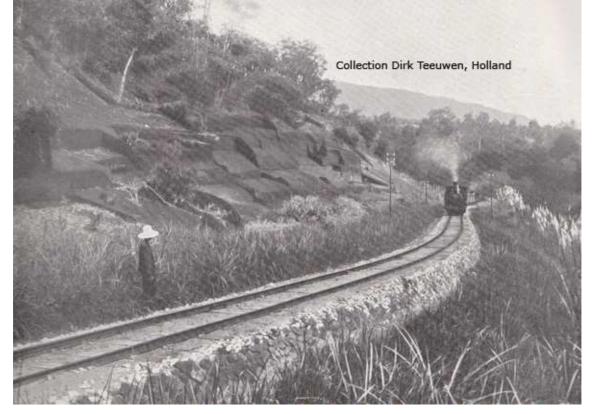
Picture 11 Station Koningsplein Weltevreden, now Stasiun Gambir, Batavia – Jakarta 1932



Picture 12 Deli Railways: yard near the Medan Deli Railway Station, Sumatra 1928 © drs (Msc) D. Teeuwen – Rendez-vous-Batavia.nl – The Netherlands 2010



Picture 13 and 14 below Railway through Preanger Mountains, Java 1926



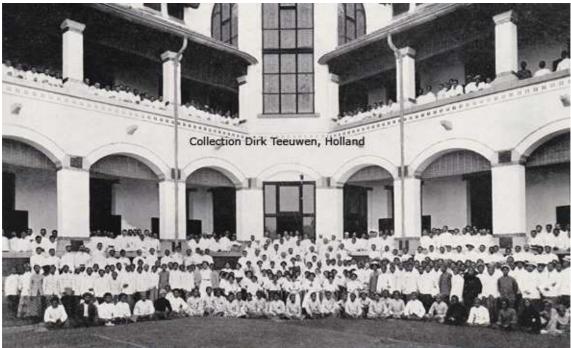


Picture 15 and 16 below, Central Java 1930 Around Maos railway station, railway bridge across River Serayu near Maos





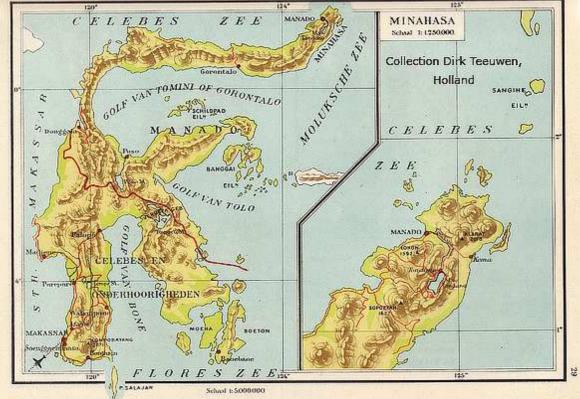
Picture 17 Head office of the State Railways in The Dutch East Indies, Semarang 1902



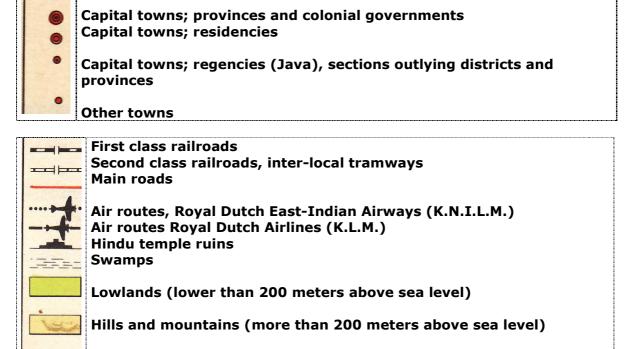
Picture 18 Staff of the head office of the State Railways in The Dutch East Indies, Semarang 1921



Picture 19 The opening, inauguration, of the interlocal tramway Makassar (Ujung Pandang) – Takalar, Celebes – Sulawesi 1922



Map 1 The interlocal tramway: 50 km (to the south) from and to Makassar (Ujung Pandang) following the red line (road), Celebes – Sulawesi 1940



On the maps!



Explanation on behalf of all maps

Map 2 West Java 1940

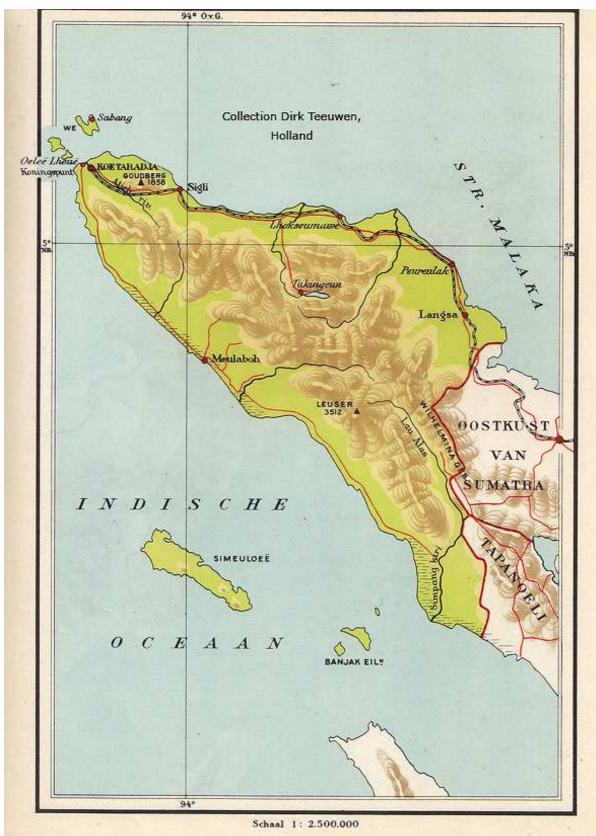


Map 3 Central Java 1940



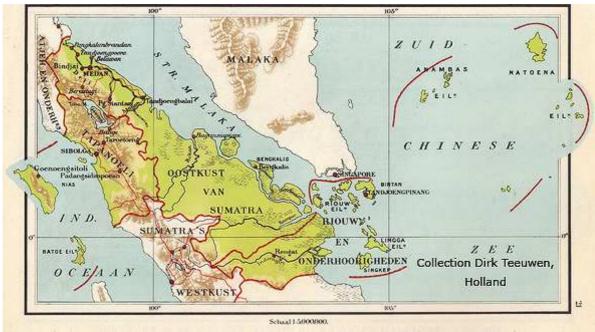
Map 4 East Java 1940

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Map 5 Aceh and dependencies, Sumatra 1940





Map 6 Tapanuli, Riouw and dependencies, east coast Sumatra 1940



Map 7 Jambi, Palembang, Lampung and dependencies, south Sumatra 1940



Map 8 Padang and dependencies, west coast Sumatra 1940

Onderneming.	Lijn.	Lengte in'K.M.	Datum en jaar der opening.	
Staatsspoor- en	Soerabaja—Pasoeroean.	63	16 Mei	1878
Tramwegen op	Bangil—Sengon.	21	1 Nov.	1878
Java.	Sengon—Lawang.	10	1 Mei	1879
a. Oosterlijnen	Lawang-Malang.	18	20 Juli	1879
	Sidhoardjo-Modjokerto.	32	16 Oct.	1880
	Modjokerto-Semboeng.	32	27 Febr.	1881
	Semboeng-Kertosono.	7	25 Juni	1881
	Kertosono-Kediri.	29	13 Aug.	1881
ALE MALLING STREET	Kertosono-Ngandjoek.	22	1 Oct.	1881
	Ngandjoek—Madioen.	47	1 Juli	1882 1883
	Kediri-Toeloengagoeng.	30 26	2 Juni 2 Juli	1883
	Madioen—Paron.	42	1 Maart	1884
and the second second	Paron-Modjosragen.	40	3 Mei	1884
	Pasoeroean—Probolinggo. Modjosragen—Soerakarta.	29	24 Mei	1884
	Toeloengagoeng—Blitar.	34	16 Juni	1884
	Soerabaja—Kalimas.	5	1 Jan.	1886
	Probolinggo-Klakah.	34	1 Juli	1895
	Malang-Kepandjen.	19	5 Jan.	1896
	Blitar-Wlingi.	19	10 Jan.	1896
	Klakah—Pasirian. (1)	36	16 Mei	1896
1000年1月1日日本	Kepandjen-Wlingi.	36	30 Jan.	1897
	Klakah—Djember.	62	1 Juni	1897 1897
	Tarik—Sepandjang.	23	1 Juli 1 Oct.	1897
	Djember-Panaroekan.	89	1 Oct.	1897
	Soemberkolak-Sitoebondo (1).	7	1 Dec.	1898
	Sepandjang—Wonokromo.	4	1 Juli	1901
	Goebeng – Kalimas. Kalisat—Mrawan.	30	10 Sept.	1902
	Mrawan—Banjoewangi.	58	2 Febr.	1903
	Madioen—Millir (1).	23	15 Mei	1907
	Mlilir—Ponorogo (1).	9	1 Sept,	1907
	Ponorogo-Balong (1).	17	1 Nov.	1907
	Ponorogo-Soemoroto (1).	7	1 Dec.	1907
	Sitoebondo—Pandji (1).	3	1 Mei	1908
	Krian—Gempolkerep (1).	26	1 Mei	1912
A Statements	Djombang—Dolok (1).	9	16 Aug.	1899(2)
	Dolok—Plosso (1)		24 Dec. 1 Jan.	1899(2) 1900(2)
	Plosso—Kaboek (1).	6	1 Jan. 17 Mei	1900(2)
	Kaboek—Ngimbang (1).		18 Juni	1901(2)
	Ngimbang—Bloeboek (1).	9	1 Jan.	1902(2)
	Bloeboek—Dradah (1).	17	17 Aug.	1902(2)
	Dradah—Babat (1).			

LENGTE der Spoor- en tramwegen in Ned.-Indië met datum van opening voor exploitatie der baanvakken (einde 1927).

Schedule 1. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

Onderneming.	Baanvak.	Lengte in K.M.	Datum en j opening		
	Hoofdlijn—Ponen (1) (1). DjombangS.S.—DjombangKotta(1). Djombang Kotta—Djombang Pa- sar (1)	$ \begin{array}{c} 1 \frac{1}{2} \\ 2 \\ 1 \end{array} $	1 Maart 1 Jani 13 Juli	1913(²) 1898(⁴) 1899(⁴)	
	Toeloengagoeng—Tjampoerdarat(1). Gempolkerep—Plosso (1). Rogodjampi—Srono. Rambipoedji—Poeger met zijtak	14 20 13 40	15 Juli 1 Sept. 26 Oct. 3 Mei	1921 1921 1921 1921 1913	
	Balong—Amboeloe (5). Tjampoerdarat—Trenggalek (7). Balong—Slahoeng (1). Soemoroto—Badegan (1). Srono—Bentjoeloek (1).	25 9 10 5	1 Juli 1 Aug. Idem. 1 Nov.	1922 1922 1922	
	Trenggalek—Toegoe (1). Loemadjang—Kentjarang—Balong.	9 42	3 Januari	1923	
. Westerlijnen.	Batavia—Weltevreden. Weltevreden—Meester Cornelis. Meester Cornelis—Buitenzorg. Buitenzorg—Tjitjoeroeg. Tjitjoeroeg—Soekaboemi. Soekaboemi—Tjiandjoer. Tjiandjoer—Bandoeng. Bandoeng—Tjitjalengka. Batavia—Priok.	6 6 44 27 31 39 60 27 9	15 Sept. 16 Juni 31 Jan. 5 Oct. 21 Maart 10 Mei 17 Mei 10 Sept. 2 Nov.	1871(6) 1872(6) 1873(6) 1881 1882 1883 1884 1884 1884 1885	
	Djocja—Tjilatjap. Koetoardjo—Poerworedjo. Tjitjalengka—Garoet. Tjibatoe—Tasikmalaja. Tasikmalaja—Kesoegihan. Batavia—Bekassie. Bekassie—Tjikarang.	$ \begin{array}{r} 176 \\ 12 \\ 51 \\ 56 \\ 118 \\ 27 \\ 17 \\ 17 \end{array} $	20 Juli Idem. 14 Aug. 16 Sept. 1 Nov. 31 Maart 14 Aug.	1887 1889 1893 1894 1887(7) 1890(7)	
	Tjikarang—Kedoeng Gedeh. Kedoeng Gedeh—Krawang. Batavia—Doeri—Tangerang. Doeri—Rangkasbetoeng. Rangkasbetoeng—Serang. Serang—Anjer Kidoel. Krawang—Poerwakarta.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	14 Aug. 21 Juni 20 Maart 2 Jan. 1 Oct. 1 Juli 20 Dec. 27 Dec.	1890(1) 1891(7) 1898(7) 1899 1899 1900 1900 1900	
 (2) Overgen (3) Alleen v (4) Overgen (5) Smalspor 	Kemajoran—Antjol. sporige tramwegen. omen 1 December 1916 van de Babat oor goederenvervoer. omen 1 November 1918 van de Kediri S rige tramwegen (spoorwijdte 0.6 M.). omen 1 November 1913 van de Nederl.	4 -Djombang Stoomtram	1 Maart Stoomtram <i>N</i> Maatschappij.	1904 Iaatschapj	

Schedule 2. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1921 lem. t 1921 t 1922 1922
i 18 Juni i 1 Juni i 1 Juni i 15 Juni i 15 Juni i 15 Sept. i 15 Sept. i 15 Sept. i 15 Dec. i 15 Juni 5 9 Febr. 9 13 Febr. 2 Ico Ico 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1906 1909 1911 1912 1912 1912 1914 1916 1916 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
i 18 Juni i 1 Juni i 1 Juni i 15 Juni i 15 Juni i 15 Sept. i 15 Sept. i 15 Sept. i 15 Dec. i 15 Juni 5 9 Febr. 9 13 Febr. 2 Ico Ico 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1906 1909 1911 1912 1912 1912 1914 1916 1916 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
1 Juli 1 Juni 3 Juni 5 15 6 15 7 3 6 15 9 15 10 15 11 Juli 12 1 13 Febr. 9 13 14 Juni 5 9 13 Febr. 9 13 14 Juni 5 9 15 Juni 5 9 13 Febr. 9 1 14 Juni 5 9 13 Febr. 14 Juni 15 Juni 14 Juni 15 Juni 14 Juni 15 Juni 14 Juni 15 Juni 16 Juni 17 Juni 18	1909 1911 1912 1912 1912 1914 1916 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
1 Juni 3 Juni 3 Juni 5 15 6 1 7 3 7 15 9 15 10 15 11 15 12 1 13 Febr. 9 13 14 Juni 15 9 13 Febr. 14 Juni 15 9 14 14 15 14 15 15 16 1 17 14 18 14 19 14 10 15 11 15 12 14	1911 1912 1912 1912 1914 1916 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
3 Juni 15 Juni 15 Sept. 15 Sept. 15 Lec. 1 Idem. 3 15 2 1 1 15 2 1 1 15 5 9 13 Febr. 2 Idem. 3 Area 4 12	1912 1912 1914 1916 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
9 15 Šept. 1 Dec. 5 1 5 1 6 1 1 Idem. 3 15 2 1 1 15 9 13 9 13 9 1	1912 1914 1916 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
1 Dec. 1 Juli 1 Idem. 3 15 2 1 1 15 2 1 3 15 4 12 5 9 13 Febr. 2 Id 4 12	1914 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
5 1 Juli 1 Idem. 3 15 Dec. 1 15 Juni 5 9 Febr. 9 13 Febr. 2 Idem. Idem. 9 13 Febr. 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1916 1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
Idem. 3 15 Dec. 2 1 Jan. 1 15 Juni 5 9 Febr. 9 13 Febr. 2 Ic 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1916 1917 1919 1920 1921 lem. 1921 t 1922 1922
3 15 Dec. 2 1 Jan. 1 15 Juni 5 9 Febr. 9 13 Febr. 2 Ic 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1917 1919 1920 1921 lem. 1921 t 1922 1922
2 1 Jan. 1 15 Juni 5 9 Febr. 9 13 Febr. 2 Id 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1917 1919 1920 1921 lem. 1921 t 1922 1922
1 15 Juni 5 9 Febr. 9 13 Febr. 2 Ic 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1920 1921 lem. t 1921 t 1922 1922
9 13 Febr. 2 Ic 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	1921 lem. t 1921 t 1922 1922
2 Ic 9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	lem. 1921 t 1922 1922
9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	t 1921 t 1922 1922
9 1 Juni 8 3 Maar 6 1 Aug. 4 12 Sept.	t 1921 t 1922 1922
8 3 Maar 6 1 Aug. 4 12 Sept.	t 1922 1922
6 1 Aug. 4 12 Sept.	1922
4 12 Sept.	
2 17 Juni	1924
1 1 111	1891
	1892
1 Oct.	1892
CARACTERISTIC DATABASED AND A COMPLEX PROVIDED AND	
	TALL STREET, ST
22 1 Nov	. 1915
	3 1 Oct. 7 Idem. 4 1 Jan. 3 15 Sept. 21 9 Dec. 4 1 Jan. 20 19 Juni

Schedule 3. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

Onderneming.	Baanvak.	Lengte in K.M.	Datum en jaar der opening.	
	Tegineneng—Hadjipemangilan. Hadjipemangilan—Blambangan. Blambangan—Koetaboemi. Telokbetong—Garoentang. Koetaboemi—Tjempaka. Tjempaka—Martapoera. Kertapati—Prabamoelih. Prabamoelih—Goenoeng Megang. Goenoeng Megang—Moeara Enim. Moeara Enim—Tandjoeng. Praboemoelih—Penindjawan. Penindjawan—Batoeradja. Batoeradja—Martapoera.	24 14 20 4 8 78 44 29 13 56 38 33	1 Febr. 1 Febr. 2 Jan. 27 Mei 1 Juni 1 Nov. 1 Dec. 2 April 1 Sept. 15 Sept. 1 Juli 16 Nov.	1917 1918 1921 1921 1923 1915 1916 1917 1919 1922 1923 1925
	Lahat — Tebing Tinggi — Moeara Saling naar een punt in den weg van Kepala Tjoeroep naar Moeara Bliti.	\$ 120	in aanleg	
Atjehstaatsstoom- tram (I)	Oelee Lheue—Kotta Radja. Kotta Radja—Lambaroe.	4 7	12 Nov.	1876 1885 1897
	Lambaroe—Seulimeum.	34	1 ,,	1898
	Segli—Gedeh Breue.	17	Nov.	1899
	Seulimeum—Gedeh Breue. Gedeh Breue—Beureunoen.	61	1 April 15 Jan.	1908 1906
	Beureunoen—Lam Meulö. Beureunoen—Lho Seumawéh. Lho Seumawéh—Idi. Idi—Langsa. Langsa—Koeala Langsa. Langsa—Koeala Simpang. Koeala Simpang—Semadam.	6 145 98 65 9 32 13	15 Juni Idem Idem Idem 2 Sept. 15 Juli	1906 1912 1914
	Semadam—Besitang. Besitang—Pangkalan Soesoe.	27 10	2 April	1917
Staatstramwegen op Celebes. Staatstramwegen in Zuid-West Celebes.	Pasarboetoeng—Takalar.	47	1 Juli	1922
	met een spoorwijdte van 0,75 M.;	Le de la		

Schedule 4. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

Onderneming.	Baanvak.	Lengte in K.M.	Datum en jaar der opening	
ledInd. Spoor-	Semarang Goederenstation-Tan-	25	10 Aug.	1867
weg Mij.	goeng. Tangoeng—Kedoeng Djati. Semarang Goederenstation—Oost-	9 2	19 Juli 20 Juli	1868 1868
n fabra saint	zijde Havenkanaal (1). Kedoeng Djati—Solo.	74	10 Febr.	1870
	Solo—Djokja.	58	10 Juni	1872
	Kedoeng Djati—Willem I.	37	21 Mei	1873
	Djokja S/V—Djokja Toegoe.	1	7 Juli	1887
	Semarang Goederenstation—West- zijde Havenkanaal (1).	3	16 Sept.	1913
	Semarang Goederenstation—Prau- wenhaven.	2	1 Jan.	1924
	Semarang Tawang—Semarang Goe- derenstation.	1	25 Mei	1914
	Djokja—Srandakan (2).	23	21 Mei	1895
	Srandakan—Brossot.	2	1 April	1915
	Brossot-Sewoegaloer.	3	1 April	1916
	Ngabean—Pasar Gedeh.	6	15 Dec.	1917 1919
	Pasar Gedeh—Poendoeng.	21	15 Jan.	1898
	Djokja-Magelang.	47	1 Juli 15 Mei	1903
	Magelang—Setjang.	10 27	1 Febr.	1905
	Setjang—Willem I.	14	3 Jan.	1907
	Setjang—Temanggoeng.	13	1 Juli	1907
	Temanggoeng—Parakan.	41	1 April	1900
	Lamongan—Soerabaja.	28	15 Aug.	1900
	Babat—Lamongan. Goendih—Kradenan.	37	15 Oct.	1900
	Kradenan—Tjepoe.	52	1 Maart	1902
	Bodjonegoro—Babat.	36	Idem.	A. A. Z. S. GAL
	Soemari—Grisee.	14	1 Juni	1902
	Kandangan—Grisee.	13	3 Jan.	1924
	Tjepoe—Bodjonegoro.	36	1 Febr.	1903
	Grisee—Grisee (station).	1	Idem.	
	Tjepoe—Ngareng (1).	3	1 Jan.	1914
	Kapoean—Solorivier (1).	1	Idem.	1 - 10 - 11
	Bodjonegoro-Djatirogo.	49	1 Mei	1919
and the second second	Babat-Merak Oerak.	47	1 Aug.	1920
	K.M. 1 + 944 - Bojolali.	27	1 Mei	1908(3)
	K.M. $1 + 944$ Station Solo-Kotta.	1	1 Juni	1920
	Solo-Kotta—Wonogiri.	32	1 April	1922
	Wonogiri-Batoeretno.	19	1 Oct.	1923
	Broemboeng-Goeboeg.	17	1 Sept.	1922
States and States	Semarang Tawang—Broemboeng.	14	3 Jan.	1924
	Goeboeg-Gambringan.	29	Idem.	ALC: SHO

(2) Onderstaande lijnen der N.I.S. worden als trainweg geexplotteerd.
 (3) Overgenomen op 1 Januari 1911 van de Solosche Trainweg Maatschappij.

Schedule 5. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

Onderneming.		Lengte in K.M.	Datum en jaar der opening.		
li Spoorweg Mii	Laboean—Medan (1).	17	25 Juli	1886	
en shoor weg will.	Medan—Timbang Langkat (1)	21	1 Mei	1887	
	Laboean-Belawan (1).	6	16 Febr.	1888	
	Medan—Serdang (1).	20	1 Juli	1889	
	Serdang-Perbaoengan (1).	18	7 Febr	1890	
	Perbaoengan-Bamban (1)	1	(11 April	1902	
产品 经股份 化化化	Bamban-Rantau Laban (1)	2 141	2 Maart 6 Aug.	1903 1915	
	Rantau Laban-Tandjoeng Balei(1)	North	1 Febr.	1913	
	Tandjoeng Balei—Telok Niboeng. Tebing Tinggi—Dolok Merangir (1).	A COLOR	(1 1 1 01.	1910	
	Dolok Merangir—Pematang Sian- tar (1).	48	5 Mei	1916	
	Medan—Deli Toewa (²) (³).	14	§ 4 Sept.	1887	
	Deli Toewa – Batoe (³).	1	1 Dec.	1915	
	Timbang Langkat—Seleseh (4).	21	§ 19 Dec.	1890	
	Seleseh—Koeala.	1	1 5 Nov.	1902 1903	
	Timbang Langkat—Stabat.	1)	30 Juni 1 Aug.	1903	
	Stabat—Tandjoeng Poera. Tandjoeng Poera—Pangkalan Bran-	81	15 Dec.	1904	
	dan. Pangkalan Brandan—Besitang.		29 Dec.	1919	
	Besitang—Pangkalan Soesoe (*).	10	1 Dec.	1921	
	Loeboek Pakam—Bangoen Poerba.	28	10 April	1904	
18、1875年1月4月25日	Kampoeng Baroe—Arnhemia.	15	1 Oct.	1907	
	Kisaran naar het Zuiden (Koealoe- rivier).		nog niet in ex	ploitatie	
Ol and	Semarang West-Kaliwoengoe.	19	2 Mei	1897	
emarang-Cheri- bon Stoomtram	Kalibodri—Weleri.	9	1 Nov.	1897	
Mij.	Weleri—Pekalongan.	49	1 Dec.	1898	
mil.	Kaliwoengoe—Kalibodri.	12	1 Jan.	1914	
	Pemalang—Tegal.	29	23 Juni	1898	
	Pekalongan—Pemalang.	34	1 Febr.	1899	
	Tegal-Brebes.	12	15 Nov. 1 Mei	1897 1897	
	Moendoe-Cheribon station.	6 28	8 Mei	1898	
	Brebes—Losari. Losari—Moendoe.	28	1 Mei	1915	
	Losali-Moendoe.				
in Wordt als	spoorweg geëxploiteerd. tramweg geëxploiteerd.				
(3) Van af 1	uli 1918 als tramweg geëxploiteerd (G	.B. van 26	Oct. 1917 No.	. 56).	
(A) Ocamanant	elijke spoorweg. was door de Atjehtram aangelegd; op				

Schedule 6. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

K W P K T S B L L T S S	Caliwoengoe—Kendal. Cendal—Kalibodri. Veliri—Besokor. Pekalongan—Kedoengwoeni. Cedoengwoeni—Wonopringgo. Yegal—Slawi. Iawi—Balapoelang. Balapoelang—Proepoek. Josari—Tjiledoek. Yjiledoek—Sindanglaoet.	8 9 4 9 3 14 10 15 12	2 Mei 1 Nov. 1 April 7 Febr. 1 Dec. 25 Aug. 17 Nov. 1 Mei	1897 1897 1901 1916 1916 1885(1
W P K T S B L L T S	Veliri—Besokor. Pekalongan—Kedoengwoeni. (edoengwoeni—Wonopringgo. Yegal—Slawi. lawi—Balapoelang. Balapoelang— Proepoek. Josari—Tjiledoek. Sjiledoek—Sindanglaoet.	4 9 3 14 10 15	1 April 7 Febr. 1 Dec. 25 Aug. 17 Nov.	1901 1916 1916
P K T S B L T S	ekalongan—Kedoengwoeni. (edoengwoeni—Wonopringgo. 'egal—Slawi. lawi—Balapoelang. Balapoelang— Proepoek. .osari—Tjiledoek. `jiledoek—Sindanglaoet.	9 3 14 10 15	1 Dec. 25 Aug. 17 Nov.	1916
T S B L T S	egal—Slawi. lawi—Balapoelang. salapoelang— Proepoek. .osari—Tjiledoek. `jiledoek—Sindanglaoet.	14 10 15	25 Aug. 17 Nov.	
S B L T S	lawi—Balapoelang. Balapoelang— Proepoek. .osari—Tjiledoek. `jiledoek—Sindanglaoet.	10 15	17 Nov.	
B L T S	Balapoelang— Proepoek. .osari—Tjiledoek. Sjiledoek—Sindanglaoet.	15		1886(1
L T S	.osari—Tjiledoek. Jjiledoek—Sindanglaoet.	12	I ATAVI	1918
T	jiledoek—Sindanglaoet.		10 Oct.	1897
		18	8 Juli	1897
and the second state of th	Sindanglaoet—Moendoe.	10 47	1 Mei 29 Dec.	1897 1901
	Cheribon Station—Kadipaten. (langenan—Goenoeng Giwoer.	5	1 Juli	1922
	/erbindingsspoor met S. J. S. te	And States		
	Semarang.	1	2 Mei	1897
	Havenlijn—Semarang.	5 5 3 3	Idem 1 Febr.	1899
A STREET SHE	Pakhuislijnen te Pekalongan. Haven en pakhuissporen te Tegal.	3	16 Sept.	1895
And a set a shake was set at the	Chariban	3	1 Mei	1899
A STATE OF A	Verbindingsspoor met S.S. te Cheri-	1	1 Nov.	1914
the second s	bon. Verbindingsspoor met Cheribon haven.		Idem.	
emarang—Joana Stoomtram Mij.	Semarang—Djomblang. Semarang—Boeloe.	4 3	1 Dec. 12 Maart	1882 1883
	Boeloe—Bandjirkanaal.	[[A] []] [] [] [] [] [] [] [] [] [] [] [] [4 Nov.	1899
5	Semarang—Station N.I.S.	13	12 Maart	1883
Strength Frankling	Semarang—Kleine Boom.	3	2 Juli Idem.	1883
	Semarang—Genoek. Genoek—Demak.	18	27 Sept.	1883
	Demak—Koedoes.	26	15 Maart	1884
	Koedoes-Pati.	23	19 April	1884
	Pati—Joana.	14	Idem. 1 Mei	1900
	Joana—Lasem.	34 10	1 Juni	1914
	Lasem—Pamotan. Pamotan—Djatirogo.	24	20 Febr.	1919
	Joana-Boeloemanis.	16	15 Aug.	1899
	Boeloemanis—Tajoe.	9	1 Mei	1900 1887
	Koedoes—Majong.	13	6 Sept. 5 Mei	1895
and the second second	Majong—Petjanggaän.			No. Contract
		and the	A Stranger	
and the second				
	and the second secon		and a name of the second	
	en 16 September 1895 van de Javasc		A Carlot and the Same	e sur te

Schedule 7. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

Onderneming.	Baanvak.	Lengte In K.M.	Datum en jaar der opening.	
	Majong—Welahan. Demak—Godong. Godong—Poerwodadi. Poerwodadi—Wirosari. Wirosari—Koendoeran. Koendoeran—Ngawen. Ngawen—Blora. Poerwodadi—Goendih. Wirosari—Kradenan. Rembang—Blora. Blora—Tjepoe. Verbindingsspoor Tjepoe. Haven- en pakhuisspoor te Sema- rang. Haven- en pakhuisspoor te Joana. Haven- en pakhuisspoor te Rembang. Semarang Goederenstation—Prau- wenhaven.	$\begin{array}{c} 6\\ 21\\ 17\\ 22\\ 18\\ 10\\ 15\\ 17\\ 8\\ 37\\ 33\\ 2\\ 4\\ 2\\ 1\\ 4\\ 2\\ 1\\ 4\end{array}$	10 Nov. 15 Nov. 1 April 1 Oct. 16 Sept. 22 Maart 13 Sept. 28 Nov. 1 Nov. 1 Nov. 15 Juni 1 Nov. 1 Febr. 2 Juli 19 April 2 Mei 1 Nov.	1900 1888 1889 1889 1893 1894 1894 1894 1884(1) 1898 1902 1901 1903 1883 1894 1900 1923
Serajoedal Stoom- tram Mij.	Maos—Poerwokerto. Poerwokerto—Soekaradja. Soekaradja—Poerworedjo. Poerworedjo—Bandjarnegara. Verlenging te Bandjarnegara. Bandjarsari—Poerbolinggo. Bandjarnegara—Selokromo. Selokromo—Wonosobo.	29 9 16 30 2 7 19 14	16 Juli 5 Dec. 2 Juli 18 Mei 1 Mei 1 Juli 1 Mei 7 Juni	1896 1896 1897 1898 1916 1900 1916 1917
tram Mij. Stoomtramlijnen.	Oedjong—Fort Prins Hendrik. Fort Prins Hendrik—Station S.S. Station S.S.—Regentstraat. Regentstraat—Pasar Toeri—Wono- kromo. Wonokromo—Sepandjang. Sepandjang—Krian. Regentstraat—Tandjoeng Perak (²). Modjokerto Kali—Modjoagoeng. Modjoagoeng—Ngoro. Gemekan—Dinoyo. Modjokerto Kali—Wates.	3 2 1 7 7 16 17 17 8 3	10 Dec. 17 Dec. 15 April 2 Maart 27 Sept. 14 Febr. 1 Aug. 1 Oct. 1 Jan. 5 Maart 1 April	1889 1890 1890 1916 1898 1920 1889 1890 1889 1890 1892 1909
(1) Overgenon	nen 1 Januari 1892 van de Poerwodadi- van 25 Nov. 1915 No. 56 is vergun ven (Tandjoeng Perak) electrische tract	-Goendih :	Stoomtram Ma	atschappi

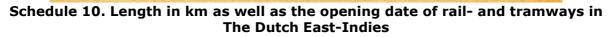
Schedule 8. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

Onderneming.	Baanvak.	Lengte in K.M.	Datum en jaar der opening.	
A Martin Stanson	Wonokromo—Willemsplein.	8	15 Mei	1923
Jost-Java Stoom- tram Mij. Elec-	Kajoon—Hoek Palmenlaan.	1 I	16 Mei	1923
trische lijnen	Sawahan—Toendjoengan.		Idem.	
Soerabaja.	Willemsplein—Tandjoeng Perak.	3 5 2	12 Juli	1923
	Kajoon—Goebangboulevard—Zijtak naar Goebeng S.S.	2	11 Febr.	1924
Cediri Stoomtram-	Djombang S.S.—Kediri.	50	7 Jan.	1897
Mij.	Pesantren-Wates.	14	8 Mei	1897
	Pelem—Papar.	14	8 Mei	1897
一、最后之外的多数的	Paree—Kepoeng.	12	30 Aug.	1898
	Semanding—Kentjong.	5	1 Juni 16 Mei	1898 1899
	Kentjong-Koonto.	4	7 Dec.	1898
	Poeloredjo—Ngoro.	4 6 7	19 Dec.	1899
	Ngoro—Kandangan. Goerah—Kawarassan.	9	1 Juni	1899
	Brenggolo—Plosso Klaten.	Ĭ.	15 Jan.	1900
Malang Stoom-	Malang-Boeloelawang.	11	14 Nov.	1897
tram Mij.	Boeloelawang—Gondanglegi.	12	4 Febr.	1898
train mij.	Gondanglegi—Talok.	7	9 Sept.	1898
	Talok—Dampit.	8 17	14 Jan. 10 Juni	1899 1900
	Gondanglegi—Kepandjen.	23	27 April	1901
	Toempang—Singosari.	6	15 Febr.	1903
	Malang—Blimbing. Sidajoe—Toeren.	1 1	25 Sept.	1908
Modjokerto Stoom-	Porrong—Modjokerto. (1).	38	1 Nov.	1898
tram Mij.	Djapanan—Pandaän.	11	Idem.	1000
and the second second second	Pandaän-Bangil.	10	18 Sept.	1899 1919
and the second second	Pandaän-Bangil (gew. tracé).	13	1 Aug. 18 Sept.	1899
	Bangsal—Pohdjedjer. Bangsal—Pohdjedjer (gew. tracé).	15	4 Mei	1907
Pasoeroean Stoom-	Pasoeroean-Waroengdowo.	6	21 Mei	1896
tram Mij.	" Boom.	2	27 Dec.	1896
	Waroengdowo-Bekasi.	10	26 Maart	1897
		11	17 Maart 7 Juni	1899 1897
	Wonoredjo-Bakalan.	4 4	7 Juni 8 Mei	1900
	Bakalan—Passer Alkmaar. Pasoeroean—Linkeroever Gem-	3	27 Maart	1912
	bongrivier. Waroengdowo—Ngempit.	5	1 Dec.	1912
		10	21 April	1897
Probolinggo Stoom tram Mij.	Djati—Gending. Gending—Djaboeng.	10 - 19	21 April 1 Mei	1897

(1) Van Porrong tot Gempol (1440 K.M.) heeft de Modjokerto Stoomtram Maatschappij het medegebruik van de lijn naar Bangil der Staatsspoorwegen.

Schedule 9. Length in km as well as the opening date of rail- and tramways in The Dutch East-Indies

Onderneming.	Baanvak. Probolinggo—Djatti.	Lengte in K.M.	Datum en jaar der opening.	
			22 Juni	-1897
	Probolinggo – Haven.		28 Sept.	1897
	Djaboeng—Phaëton.	3 5 2	22 Juni	1898
	Gending—S.f. Gending.	2		1899
	Sporen-Oostzijde haven Probo-	and a start		
	linggo		29 Aug.	1900
	Probolinggo—Oemboel—Soember- kareng	3	6 Aug.	1912
Madoera Stoom- tram Mij.	Kamal–Bangkalan.	18	8 Dec.	1898
	Bangkalan—Toendjoeng.	5	15 Maart	1899
	Toendjoeng—Kwanjar.	22	26 Febr.	1900
	Tandjoeng—Kapedi. Kapedi—Tambangan.	45	20 Sept.	1900
	Tambangan—Kalianget.	$\begin{array}{c c} 24\\ 20 \end{array}$	21 Jan. 17 Febr.	1900
	Kwanjar—Balega,	33	11 Maart	1899 1901
	Tandjoeng—Sampang,	15	Idem	1901
	Balega-Sampang.	26	1 Juli	1901
	Kamal—Kwanjar.	17	1 Sept.	1913
	Toendjoeng—Kwanjar.	23	26 Febr.	1900
	Tandjoeng—Kapedi.	45	20 Sept.	1900
	Kapedi—Tambangan.	21	21 Jan.	1900
	Tambangan—Kalianget.	20	17 Febr.	1899
	Kwanjar—Balega. Tandjoeng - Sampang.	33 18	11 Maart	1901
	Balega—Sampang.	24	Idem	1901
	Kamal—Kwanjar.	16	1 Juli 1 Sept.	1901
NedInd Tramweg Mij. (1).	Batavia—Harmonie.	4	1 Juli	1883
	Harmonie—Kramat. Kramat—Meester Cornelis.	4	5 Aug.	1883
	Mr. Cornelis—Kampong Melajoe.	4	15 Sept. 28 Febr.	1884 1891
	Harmonie—Dierentuin.	5	10 April	1899
	Dierentuin-Cipayersweg.	5 2	29 April	1900
	Cipayersweg—Batavia.	5	1 Juli	1900
	Kalibesar Oost—poort Batavia.	1	15 Febr.	1907
	Menteng—Koningsplein Oost—Har- monie.	3	16 Oct.	1912
	Koningsplein-Vrijmetselaarsweg.	2	2 Jan.	1913
Course Card		Constant State		



End of this article