

Railways and Sugar in Cirebon

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Abstract. In the Dutch colonial era, sugar is one of the important products of Cirebon, but the abundant sugar production was not supported by good transportation means and infrastructure which hindered the distribution of the product. This problem was resolved by the construction of a railway line by the SCS company which connects Semarang – Cirebon. The problem that tries to solve this paper is the railway's role in transporting products in Cirebon during the colonial era. The paper uses a descriptive-analytical method with a spatial approach to answering the problem, using 2017, 2018, 2019, and 2020 data on archaeological research on the railway in Cirebon and the surroundings. The building of the Semarang Cirebon line, in the beginning, is mainly to accommodate the transportation of sugar production, the line reaches into the Port of Cirebon. Railways become the main transportation method for transporting goods and people between regions. Archaeological remains along the SCS line are witness to the use of trains in sugar production, one of which is lines that go to sugar factories.

Keywords: SCS · Tram · Sugar Factory · Port of Cirebon · Sugar

1 Introduction

Force cultivation policy successfully increased the volume of plantation harvest that can be sold in the international market, even when that policy ended it still gave a good result. Sadly, this success did not come with the increase of facilities and infrastructure for transporting goods to the ports, in the rainy season the road turns into mud, and this condition was worsened by the small number of transport animals that can be used due to death from diseases and slow rate of natural breeding [1]. The condition leads to the pile-up of good in warehouses which finally damage and rot.

To get over the lack of animal transport problem the Dutch colonial government issued a policy forbidding the slaughter of cattle and water buffalo and also imported camel and donkeys from Tenerife, West Africa to Java to be used as transport animals. This end as a disaster as all the imported animals dies [2].

The private sectors role in the liberation era in Dutch Indies ever increase after the Agrarian Law in 1870 was introduced, private sector replaces the government role, force labor replace with paid labor, and land are leased instead of taken by force [3]. Production volume increases as the liberation take effect in the plantation sector bringing about new

problems of transporting goods from the warehouses to the ports, traditional means of transportation such as animals and sampans can only take a small number of goods and the time it takes to transport to port are not feasible, especially in the rainy season. To solve the problems government improve road infrastructures and build more secondary roads, temporary warehouses were also built in certain areas, and also an increase in transporting animals number. The private sectors also pitch in means of transport and its animal transport [4]. For example, the coffee planters from Malang, East Java need a long time to transport the products to the port in Surabaya [5].

The transporting cost of goods from inland to ports was not economical, needed a new method of transporting goods to be profitable. A long debate ensues in Dutch Parliament as to will it needed to build a railways system in Dutch Indies, who will build it, and so on, in the end, the Dutch Colonial Government through Governor General Mr. L.A.J.W. Baron Sloet van den Beele (1861–1866) agree for a concession to build and operate a railway from the private sector. This concession was given in 1862 to a consortium of W. Poolman, A. Fraser, and E. H. Kol by Governor General decree No. 1, August 28, 1826 [1].

This concession is for a railway from Semarang to *Vorstenlanden*, with an additional track to Ambarawa by the request of Mr. Franses van De Putte, Minister of Dutch East Indies Colonial Affairs, this additional track from Kedungjati to Ambarawa is to accommodate troops transport to and from Willem I Fort in Ambarawa [2]. To build the railway, the consortium creates a company named Naamlooze Venootschap Nederlandsch-Indische Spoorweg-Maatschappij or NV. NISM for short led by Ir. J. P. de Bordes [1].

Semarang to *Vorstenlanden* track begin on June 7, 1864, in the Village of Kemijen with the groundbreaking by Dutch East Indies Governor General Mr. L. A. J. W. Baron Sloet van de Beele., using RG (rail gauge) 1.435 mm [6]. The construction of the Semarang (Kemijen) to Tanggung line (25 km) finishes after 3 years on August 10, 1867, and opened for the public, 6 years later on May 21, 1873, all the line in Semarang - Vorsenlanden to Yogyakarta was finished and open to the public, at the same time Kedungjati – Ambarawa line was also finished [6][2].

NISM also got a concession to build a railway line in West Java, between Batavia and Biutenzorg, 58,5 km long in 1864 using RG 1067 mm. Construction begin on October 15, 1869, and finished on January 31, 1873 [7, 2]. In 1875, the Dutch colonial government using the government railway company, Staatsspoorwegen (SS), also built its line between Surabaya – Pasuruan – Malang that operates on July 20, 1879 [2].

The success of NISM in operating the Semarang – *Vorstenlanden*, Batavia – Buitenzorg line and also SS in operating the Surabaya – Pasurian – Malang line makes other private companies build and operate their own railway lines (Table 1), one of the is Semarang – Chirebon Stoomtram Maatschappiij (SCS) with its 1893 concession to build and operate Semarang – Cirebon line [2] (see Fig. 1) [8].

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No	Railways Company	No	Railways company
1	NIS (Nederlandsch-Indische Spoorweg Maatschappij)	11	SCS (Semarang-Cheribon Stoomtram-Maatschappij)
2	SS (Staatsspoowegen)	12	PsSM (Pasoeroean Stoomtram Maatschappij)
3	SJS (Samarang-Joana Stoomtram-Maatschappij)	13	BSTM (Bataviasche Stoomtram Maatschappij)
4	JSM (Javasche Spoorweg Maatschappij)	14	PbSM (Probolinggo Stoomtram Maatschappij)
5	DSM (Deli Spoorweg Maatschappij)	15	KSM (Kediri Stoomtram-Maatschappij)
6	PGSM (Poerwodadi-Goendih Stoomtram Maatschappij)	16	MSM (Modjokerto Stoomtram Maatschappij)
7	BOS (Bataviasche Ooster Spoorweg-Maatschappij)	17	BDSM (Babat-Djombang Stoomtram Maatschappij)
8	OJS (Oost-Java Stoomtram Maatschappij)	18	MT (Madoera Stoomtram Maatschappij)
9	SoTM (Solosche Tramweg Maatschappij)	19	MS (Malang Stoomtram-Maatschappij)
10	SDS (Serajoedal Stoomtram-Maatschappij)		

Lable I. Runnays companies in Daten colonial er	Fable 1.	Railways c	ompanies	in Dutch	colonial er
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Source: Tim Telaga Bakti Nusantara 1997, 63-65

Sugar was one of the biggest exports from the Dutch East Indies, one of the big production areas for sugar is Cirebon. According to data from PT. PG. Rajawali II (Table 2) there are 10 sugar factories and 1 spirit factory before the beginning of World War II in Cirebon Residencies, and only 6 sugar factories and 1 spirit factory right after WW II [9]. In 1914 export value from Cirebon Port reach 12,698,400 guldens, 70,56% of which came from sugar [10]. Sugar is the biggest commodity from Cirebon.

Sugar transportation in Cirebon from its Factories to the Port of Cirebon, in the beginning, using traditional modes consisting of 1) cart pulled by animals, 2) sampans by the rivers, 3) hauled by men, 4) all those 3 together. These means of transportation are prone to difficulties mainly road conditions and the rainy season, all of which are solved when railways are opened.

Based on all data above, this paper tries to answer the question about what the roles of the railway in the transportation of commodities in Cirebon Residencies in the colonial era were. The paper was meant to expose the role of trains in transporting goods in Cirebon residencies during the colonial era. The object of this paper is railway facilities along the SCS lines and its connection with sugar factories in Cirebon.

No	Sugars Factory	Established	Location
1	Djatiwangi	1896	Madjalengka
2	Gempol	1847	Tjirebon
3	Khadipaten	1876	Madjalengka
4	Karangsoewoeng	1896	Tjirebon
5	Sindanglaoet	1896	Tjirebon
6	Niu Tersana	1937	Tjirebon
7	Leuweunggajah		Tjirebon
8	Ketanggoengan West	1911	Pekalongan
9	Gist & Spiritus Fabriek Palimanan	1883	Tjirebon
10	Ardjawinangoen		Tjirebon
11	Paroengdjaja		Tjirebon
12	Soerawinangun		Tjirebon

Table 2. Sugar factory in Cirebon residencies before WW II.

Source: Bagian Humas PT. PG Rajawali 2008



Fig. 1. SCS lines, 1901 (Source: Koninklijk Instituut voor de Tropen (KIT) http://hdl.handle.net/ 1887.1/item:2012839 [Accessed: 14-Mar-2023])

2 Rationale

Transportation is one of the important things for human interaction, one of the transportation modes is trains. The trains connect different regions in Nusantara, their large loads' capacities, far-reaching region, and fast travel time compared to other traditional means of transportation makes the train the ideal mean of transporting products from the production area to the distribution center and marketing areas. This also applied to people from one region to others.

Research on railways remain from the Dutch colonial era belongs to industrial archaeological studies, mainly the transportation facilities closely related to industry and the distribution of industrial goods [11]. The afore mention facilities include railways facilities and infrastructures, and their technologies.

Railways remain in Cirebon, especially in the SCS line are important material culture legacy of sugar industries in the region. The line was built to facilitate the transporting of sugar from the factories to the port for distribution. Data interpretation on railways remain in the line gave not only an illustration of the connection between railways and sugar factories but also between railway companies that have a concession in and around the Cirebon region.

3 Method

The method used to answer the question is descriptive analysis, all the data were descriptive and analyse using spatial and chronological approaches (Sumaatmadja 1988). The spatial approach is used to know the correlation between space connected by train transportation modes, which are the sugar factory location and the Port of Cirebon. A chronological approach is used to know the construction and operational process of the Semarang - Cirebon line.

All the data used in the paper comes from archaeological research on railways in Cirebon by Balai Arkeologi Jawa Barat in the years 2017, 2018, and 2019 and desk study research in 2020. The data was gathered by field observation, literature study including archives study and maps [7, 12, 13]. Archives used came from the Indonesian National Archives Office and PT Kereta Api Indonesia (Persero) (Indonesian Railways Company) which include Grondkart of SCS line. Field observation was held to get a clears views of the condition of the remains of the railways from the colonial era in Cirebon, mainly Prujakan Station and its connection to Port of Cirebon.

4 Data and Discussion

Construction of the railway line in Cirebon residency begins when NV. SCS took over the concession of the Semarang – Cirebon line from Javasche Spoorweg-Maatschappij (JSM) a subsidiary of Bataviasche OOster Spoorweg-Maatschappij (BOS) on September 16, 1896. JSM until 1896 managed to build and operate Tegal-Slawi- Balapulang (24 km) line. The company cannot get enough profit from the operation and experienced a loss of capital until it had to stop the operation [2]. After SCS got the concession for operating the Semarang – Cirebon line they proposed the change from Train to Tram or light train (3rd class train), the changes are made to depress construction costs and also expedite the construction process. The line was built to facilitate the transportation of sugar production from sugar factories along the Semarang – Cirebon line, by using the line the problems associated with transporting sugar from factories to the distribution port are resolved. SCS constructs and operate tram and light train that connect Semarang City with Cirebon City with all its connecting lines. The line goes through some of the cities in the North of Java such as Pekalongan dan Tegal. This line is also known as suikerlijn or sugar line because in 1905 it goes through 27 sugar factories along its line [14]. SCS has a 99 years concession beginning on May 4, 1895, railway infrastructures were built around and into the sugar factories to facilitate sugar transportation (Fig. 1) [8]. The line was constructed gradually beginning with Singdanglaut – Cirebon line on May 1, 1897 (Table 3), the line inauguration was marked with a load of sugar from the Sindanglaut factory to Port of Cirebon [15, 16].

Up until the inauguration of the Semarang – Cirebon line in 1897, SCS hasn't had a permit for its line inside Cirebon port so the terminus station for the SCS line is in Prujakan Station, about 1 km from Port of Cirebon. Sugar from Prujakan Station was then transported to the port using carts pulled by animals. Only by 1899 did SCS have the permit to construct a railway line inside the port, and it has its problem as the land the railway was supposed to build is SS concession land, SCS then built a temporary line from Prujakan Station to the port. After SS will not build a line to the port then SCS built a permanent line to Cirebon port [17]. After SS finished connecting Cikampek – Cirebon line in 1912, SS did not build the line to Cirebon port but instead made transportation cooperation with SCS, all the goods destined for Cirebon port are transferred from SS trains to SCS tram, this transfer due to the different type of train used by SS and SCS [18].

SCS tram connecting Semarang – Cirebon not only transports sugar and other goods but also passengers traveling to the cities between Semarang and Cirebon. After the line between Cikampek – Cirebon operational total number of passengers increases, they travel from Batavia to Cirebon and vice versa, some of the passengers continue their journey to cities along the Semarang – Cirebon line using SCS tram. SCS cooperating with SS in connecting passengers from Semarang to Batavia and vice versa in Prujakan station where the passengers are transferring between the SS train and SCS tram, this cooperation was realized by constructing a 1 km connecting line between Prujakan station (SCS) to Kejaksan station (SS), at the same time a 1 km connecting line is also

Route	Rail length (km)	Innaguration dates
Mundu – Cirebon	6	1 Mei 1897
Sindanglaut – Mundu	10	1 Mei 1897
Ciledug – Sindanglaut	18	1 Mei 1897
Losari – Ciledug	12	10 Oktober 1897
Losari – Mundu (SCS)	28	1 Mei 1915
Cirebon – Kadipaten	48	20 Desember 1901
Cirebon – Pelabuhan		1899

Table 3. Inauguration dates for railway in Cirebon

Source: Tim telaga Bakti Nusantara, 1997

constructed between Kejaksan station to Cirebon port. Both of the lines were inaugurated on 1914 in conjunction with the finished new Prujakan station, Cheirebon West station.

4.1 East Cirebon Railway Line

2 concessions were built and constructed rail lines in Cirebon, Semarang – Cirebon line by SCS and Batavia – Cikampek – Cirebon – Kroya by SS. The SCS built a tram line between Losari – Cirebon (Prujakan), this line goes through Sugar factories between Losari and Cirebon and is known as suikerlijn. It is pass through Losari – Ciledug – Sindanglaut – Mundu – Cirebon, and begins to operate in 1897 (Table 1), the line looping to the sugar factory caused a longer travel distance between Losari and Cirebon. Sugar factories along this line are Sugar Factory Karangsoewoeng, SF. Sindanglaoet, SF. Leuweunggajah, and SF Nieu Tersana, the line now a day are non-operational under Indonesian Railway Company Regional 3 Cirebon. The line between Bedilan – Waruduwur passes through 16 stoppage, halte, and stopplaats (Table 4) [16].

No	Station	Km	No	Station	Km
1	Bedilan	0.000	9	Cibogo	
2	Gubanggunung	3.2	10	Jatipiring	17.0
3	Cileduk Centeng	5.7	11	Karangsuwung	22.1
4	Cileduk	7.4	12	Karangsuwung	23.3
5	Jatiseeng	8.4	13	Sigong	24.5
6	Luwunggajah	8.8	14	Sindanglaut	25.8
7	Waled	10.3	15	Kanci	29.4
8	Pabuaran	11.7	16	Waruduwur	31.3

Table 4. Railway Stations on Losari - Mundu line, Bedilan - Waruduwur route.

Source: Hermawan, 2019



Fig. 2. SF Sindanglaoet Emplasement according SCS *Grondkaart*, 1925 (Source: *Grondkart* PT. KAI Daop 3 CN, with permission)



Fig. 3. SCS facilities at Sindanglaut factoryFasilitas Perkeretaapian SCS di Sindanglaut: (a) Gateway for lorry; (b) Abutment structure for railway bridge (Source: Balai Arkeologi Jawa Barat, 2018)

To facilitate the transportation of sugar from the Sindanglaoet factory a separate line was built from the main line, according to 1925 SCS grondkaart (Fig. 2), and an abutment structure found behind the factory (Fig. 3.) shows that the factory was facilitated by SCS to make transportation easy. The gate shown in pictures also functions as gateway for sugar cane lorry.

During the Japanese occupation east Cirebon tram line between Mundu – Losari was closed and some rail track was taken for the war effort, until today the line is still not operational. After Indonesian independence transportation for sugar was changed to the SS line, shown by a railway crossing between Sindanglaut station and Sindanglaut sugar factory, another railway crossing exist fromKarangsuwung station and Karangsuwung sugar factory, both station located on the Cirebon – Kroya line.

4.2 Cirebon – Kadipaten Line

Construction of the 48 km long Cirebon – Kadipaten line was made by SCS with February 9, 1895 concession, the actual construction itself only begin in 1900 after SCS received approval letter No. 1, March 31, 1900, from Governor General Willem Roseboom. The Cirebon – Kadipaten was finished and operational on December 29, 1901 [17], the line goes through 20 small stations[19] (Table 5) and is intended to transport sugar from sugar factories along the way. Sugar factories on this line are Soerawinangoen SF, Plumbon SF, Gempol SF, Paroengdjaja SF, Djatiwangi SF, Kadipaten SF, and Palimanan Spirit and Alcohol Factory [13].

Palimanan station is a small station constructed by SCS to facilitate sugar transportation from the Gempol SF and Palimanan Gist and Spirit factory, both owned by NV. Aments Suikerfabrieken and was built in 1847 and 1883. The line separation to Gempol SF located at Km 16^{+900} , still can be seen today by the mound of earth going along the paddy field to the train gate at Gempol SF. This line separation can also be seen on Jatiwangi Station going to Jatiwangi SF ended inside the factory, unfortunately, the Jatiwangi SF is now not operational but on the wall of the factory still can be seen an opening -now brick up for the train (Fig. 4).

The terminus for Cirebon – Kadipaten line located at Kadipaten subdistrict at Majalengka District in form of a Halte (Stoppage), according to Plattegroundteekening Emplasemen Kadipaten the Halte has 4 lines, 2 train barriers, a locomotive round table, crane and a separataion line to Kadipaten SF (Fig. 5).

No.	Nama Perhentian	Kelas	No.	Nama Perhentian	Kelas
1	Kadipaten	St	11	Kedungbunder	Ptl
2	Cideres	ptl	12	Palimanan	Ptl
3	Kasokandel		13	Jamblangpasar	ptl
4	Baturuyuk		14	Jamblang	st
5	Jatiwangi	St	15	Plumbon	ptl
6	Cibolerang		16	Pesalaran	pla
7	Palasah	ptl	17	Tengahtani	ptl
8	Bongas	ptl	18	Kedawung	
9	Prapatan	pla	19	Cirebon	St
10	Ciwaringin	ptl	20	Cirebon Prujakan	St

Table 5. Stations on Cirebon _ Kadipaten line, 1977.

Source: Lampiran Surat Penetapan Dirut PJKA Nomor: 69006/Sk/77 Tanggal 7 Desember 1977



Fig. 4. Jatiwangi SF now, Arrow marks the entrance for train. (Source: Balai Arkeologi Jawa Barat, 2017)

After losing competition with road-based transportation, the Cirebon – Kadipaten line was closed in 1982 by the Indonesian National Railway Company (PT KAI). All the land and infrastructure left along the line are still the property of PT KAI Operational Region 3 (DAOP 3) Cirebon but are now used for other purposes other than the railway line.

Based on all the data mentioned above, the railways' system built by SCS in Cirebon and Semarang is to facilitate transportation of sugar production, and later on for general passengers, this reflects on the use of trams instead of trains on the line. As it was known that trams are not for long-distance transportation but rather for short distances with a maximum speed of only 25 Kph. Most of the line was located near or alongside roads, as on Mundu – Losari and Cirebon – Kadipaten lines, now some of the tracks are even buried by the tarmac.



Fig. 5. *Plattegroundteekening* Emplasemen Kadipaten (Source: Grondkart PT. KAI Daop 3 CN with permission)

5 Conclusion

Sugar was one of the most important trade commodities for the Dutch East Indies government, high demand for the product from overseas makes it a very profitable trade good. Limitations of transportation infrastructure are common problems for the industry, it causes the accumulation of products in warehouses. Attempts to improve transportation are the priority for the sugar company with various results, mainly failure. The opening of the NISM Semarang – *Vorstenlanden* line encourages other companies to build it on railway lines, including SCS which built Semarang – Cirebon line.

This SCS line accommodates the transportation of sugar from the factory to the Cirebon port, later on, the line also accommodates traveling passengers. SCS's cooperation with SS made traveling from Batavia to Semarang back and from easy and convenient.

References

- 1. S. A. Reitsma, *Korte Geschiedenis der Nederlansch-Indische Spoor en Tramwegen*. Weltevreden Batavia: G. Kool, 1928.
- Tim Telaga Bakti Nusantara, Sejarah Perkeretaapian Indonesia Jilid 1. Bandung: Angkasa, 1997.
- 3. S. Kartodirdjo and D. Suryo, *Sejarah Perkebunan di Indonesia: Kajian Sosial Ekonomi.* YOGYAKARTA: Aditya Media, 1991.
- 4. R. Susatya, Pengaruh Perkeretaapian Di Jawa Barat Pada Masa Kolonial. Bandung, 2008.
- R. Hudiyanto, "Kopi dan Gula: Perkebunan di Kawasan Regentschap Malang 1832–1942," Sej. DAN BUDAYA J. Sejarah, Budaya, dan pengajarannya, vol. 9, no. 1, pp. 96–115, 2015.
- 6. I. Subarkah, 125 Tahun Kereta Api Kita, 1867–1992. Bandung: Yayasan Pusaka, 1992.
- 7. I. Hermawan *et al.*, "Laporan Penelitian Desk Study Arkeologi: Pembangunan Perkeretaapian di Jawa barat pada masa Kolonial Belanda dan Potensi Pendukungnya," Bandung, 2020.
- "Semarang-Cheribon stoom-tram maatschappij | Digital Collections," 1901. [Online]. Available: https://digitalcollections.universiteitleiden.nl/view/item/2012839?solr_nav% 5Bid%5D=1a5cffa67a126ff49839&solr_nav%5Bpage%5D=0&solr_nav%5Boffset%5D=1. [Accessed: 14-Mar-2023].

- Bagian Humas PT. PG Rajawali II, Kronologis Berdirinya PT. PG Rajawali II. Cirebon: PT. PG Rajawali II, 2008.
- 10. S. Zuhdi, *Cilacap (1830–1942): Bangkit dan Runtuhnya Suatu pelabuhan di Jawa.* Yogyakarta: Penerbit Ombak, 2016.
- 11. M. Palmer and P. Neaverson, *Industrial Archaeology: Principles and Practice*. London and New York: Routledge, 1998.
- I. Hermawan, "Laporan Penelitian Arkeologi: Keterkaitan Antara Transportasi Kereta Api dengan Perkembangan Wilayah Pada Masa Kolonial Di Kabupaten Cirebon dan Indramayu , Jawa Barat," Bandung, 2018.
- I. Hermawan, "Laporan Penelitian Arkeologi: Kereta Api Jalur Cirebon Kadipaten: Aksesibilitas Antar-Wilayah di Cirebon dan Sekitarnya pada Awal Abad XX," Bandung, 2017.
- 14. O. J. Raap, Sepoer Oeap Djawa Tempo Doeloe. Jakarta: Kepustakaan Populer Gramedia, 2017.
- I. Hermawan, "Laporan Penelitian Arkeologi: Kereta Api dan tata Ruang Kota Cirebon, Jawa Barat," Bandung, 2019.
- 16. I. Hermawan and R. Mainaki, "Pemetaan Jalur dan Tinggalan Perkeretaapian Masa Kolonial Belanda di Wilayah cirebon Timur," *Sosioteknologi*, vol. 18, no. 3, pp. 560–577, 2019.
- D. Marihandono, H. Juwono, L. S. Budi, and D. Iswari, *Sejarah Kereta Api Cirebon -*Semarang, Dari Konsesi ke Nasionalisasi. Bandung: Aset Non Railway, Direktorat Aset Tanah dan Bangunan PT. Kereta Api Indonesia (Persero), 2016.
- I. Hermawan, "Kereta Api SCS: Angkutan Gula di Cirebon," *Patanjala J. Penelit. Sej. dan Budaya*, vol. 12, no. 2, p. 195, Oct. 2020.
- Lampiran Surat Penetapan Dirut PJKA Nomor: 69006/Sk/77 Tanggal 7 Desember 1977. 1977.

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