

Transfer of Rolling Stock to Indonesia and Technical Support for Maintenance

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Introduction

Starting in September 2013, East Japan Railway Company (JR East) has transferred 180 carriages of the Series 205 used previously on the Saikyo Line to the Indonesian railway operator PT. KAI Commuter Jabodetabek (PT. KCJ). In November 2013, JR East also dispatched engineers to provide on-site technical support for maintaining these rolling stock. This was followed on 26 March 2014 with the signing of a memorandum of understanding between JR East and the Indonesian railway operator PT. Kereta Api Indonesia (PT. KAI) and PT. KCJ on mutual cooperation in areas such as railway operation. May this year saw the start of transfer of 176 carriages of the Series 205 used previously on the Yokohama Line.

This article outlines railways in Indonesia and JR East's efforts in rolling stock transfer and maintenance support.

Railways in Indonesia

Overview

Railways in Indonesia operate on the two islands of Java and Sumatra, with about 4500 km of 1067-mm gauge track. Most sections are single track and not electrified, but much of Jakarta and Jabodetabek (the urban area around Jakarta and named using the first letters of the cities Jakarta, Bogor, Depok, Tangerang, and Bekasi) is electrified (1500 Vdc) with double track. Double-tracking of trunk lines on Java is in progress in areas other than Jabodetabek. The government of Indonesia completed double-track development along the northern coast of Java, between Jakarta and Surabaya in June 2014.

PT. Kereta Api Indonesia

Intercity medium- and long-distance passenger train and freight operations

across Indonesia are handled by PT. KAI, which was established in 1999 by reorganization of Indonesia's Public Railway Corporation. Indonesia's railways have adopted a system of vertical separation of infrastructure and operations, with tracks and trackside equipment owned by the nation and PT. KAI commissioned to run trains, own rolling stock, and maintain trackside facilities and rolling stock.

PT. KAI Commuter Jabodetabek

The Series 205 cars are being transferred to PT. KCJ, which was established in 2009 as a subsidiary of PT. KAI. It operates the urban network in the Jabodetabek area around Jakarta.

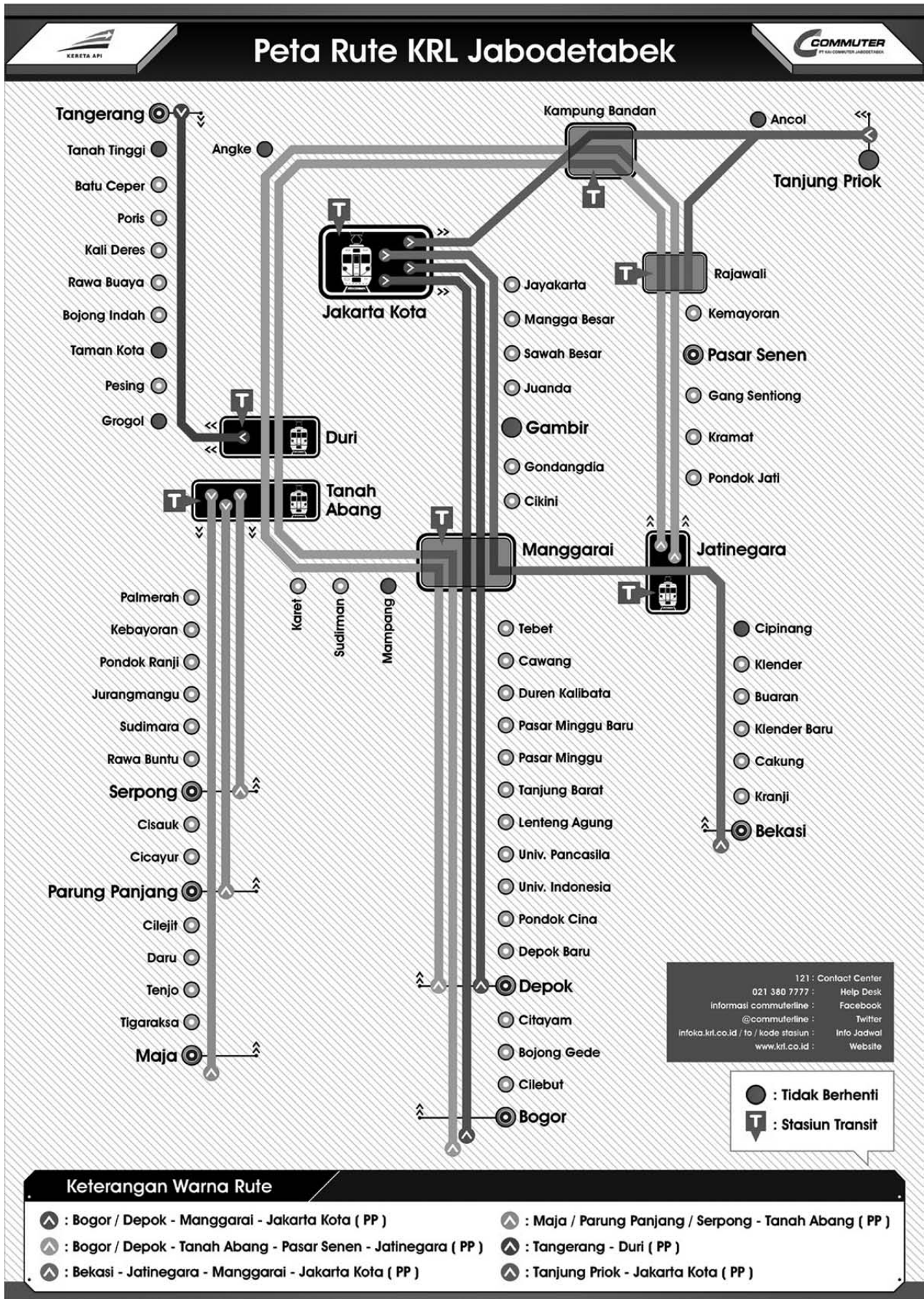
Figure 1 shows the route map for Jabodetabek. There are six lines serving some 669 daily operations; fares were cut in 2013 by provision of government subsidies, rapidly increasing the number of passengers and making



View of rice terraces from train window

(Authors)

Figure 1 Jakarta Urban Railway Network



Information from PT. KCI website



Medium- to long-distance train running from Gambir Station to Bandung Station

(Authors)

the railways an important means of commuter transport, carrying about 617,000 passengers daily.

PT. KCJ operates a great deal of pre-used rolling stock from Japan. As well as the Series 205 cars from JR East, it started with carriages transferred from the Tokyo Metropolitan Government that had been used previously on the Toei Mita Line. Most of the approximately 600 carriages in use are made in Japan.

Transfer of Series 205 Carriages

Due to the recent rapid increase in railway passengers in the Jakarta area, PT. KCJ requested transfer of used railway carriages in summer of 2013. At the same time, JR East had decided to transfer its older but still serviceable rolling stock to help contribute to international development in line with globalization efforts. Although the transfer of Series 205 carriages from the Saikyo Line extended past efforts, it still stands out for being packaged with technical support for rolling stock maintenance covered in more detail later in this article.

The transfer of 176 Series 205 carriages from the Yokohama Line started in May 2014. The interiors of the already transferred carriages remain in the original condition, but the external livery has been changed to the PT. KCJ corporate colours. The trackside is still very much under development but JR East and PT. KCJ are cooperating with efforts to create an environment where the rolling stock will continue in service for a long time.

Technical Support for Rolling Stock Maintenance

In line with the Series 205 transfer, three employees from the Omiya General Rolling Stock Center were dispatched to Jakarta in November 2013 to explain to PT. KCJ personnel how to rebuild the 10-car trainsets that had been loaded onto ships one-by-one, as well as items to check at test runs. Also, groups of three employees from the Kawagoe Rolling Stock Center were dispatched three times to Jakarta from January to March 2014 to explain the required periodic inspections (daily and regular).



Series 205 carriages at Jakarta Kota Station

(Authors)



Jakarta cityscape seen from Series 205 carriage

(Authors)



Classroom lecture

(Authors)



Series 205 car with PT. KCJ livery running in Jakarta

(Authors)

The employees dispatched to Jakarta from both rolling stock centres were mainly younger personnel with a high level of technical ability. Personnel from PT. KCJ receiving technical support totalled about 10 people from depot supervisor-class positions or involved in actual inspection and repair work. Communication was in English by Japanese and Indonesian interpreters. There were classroom lectures in the morning of the first day on safe operation and also on the format for further technical support.

The first dispatched team gave explanation on inspections of bogies, controllers, cabs and doors, as well as on insulation of electrical equipment.

The second team covered how to confirm operation of various equipment, replacement of consumables, such as pantograph contacts, inspection of under-floor and on-floor equipment, tests after powering-up the trainset, and sequence tests.

The third team checked that the explanation by the first and second teams had been fully understood by going through the processes of detailed and ordinary inspections.

The PT. KCJ personnel were very enthusiastic, asking many questions and demonstrating high motivation to acquire technical skills.

At the start, some parts were not fully understood or were not accurately conveyed, so efforts were made to make explanations easier to understand by illustrations using wiring diagrams drawn in chalk. Later, the JR East employees learned to communicate ideas in ways that were easier for the interpreters, so conveyed content was better understood.

PT. KCJ had stated they would like to learn more about preventive maintenance conducted by JR East, so these items were the focus of the technical support.

Conclusion

JR East started transferring Series 205 rolling stock to PT. KCJ in 2013 followed up for the first time by direct technical support by engineers who maintain those carriages. The memorandum of understanding between JR East and PT. KAI and PT. KCJ regarding mutual cooperation in areas such as railway operation will help the companies exchange information on operations, maintenance, and management, and deepen cooperative human interactions. ■

Reference

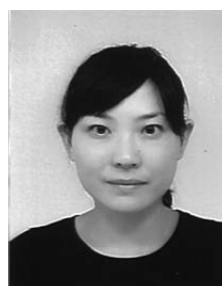
Information in the 'Overview' section was taken from: Circumstances of Railways in Indonesia, Kenji Kamite, Embassy of Japan in Indonesia, JARTS No. 223, 2014 (Japanese Document)

Information in the 'PT. KAI Commuter Jabodetabek' section was taken from: Past and Present of Railways in Jabodetabek Area of Indonesia, JARTS No. 223, 2014 (Japanese Document)



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