ABSTRACT

To facilitate people who commute between Yogyakarta *and* Palur *cities,* PT. KAI *introduced a new service called* Yogyakarta-Palur *Commuter Line Electric Multiple-Unit Train (*KRL*) as a replacement for the previously operated, Prambanan Ekspres Train. The* Yogyakarta-Palur *KRL serves up to 13 stations and is considered a relatively new facility as it started operating in February* 2021*. Certainly, the train needs continuous evaluation to improve its service.*

Using a quantitative approach, this research aims to analyze the operational performance of the Yogyakarta-Palur KRL*. There are several parameters used to analyze operational performance including travel time, operational speed, punctuality, service frequency, seating comfort, and load factor. This study required primary and secondary data. The primary data was obtained from field surveys and the secondary data was obtained from* PT. KAI DAOP 6 Yogyakarta *and* PT. KCI Region 6 Yogyakarta*. The collected data was analyzed to determine its compliance with the standard service indicators set by the Directorate General of Railway.*

Yogyakarta-Solo-Palur KRL *operates over a total distance of* 65,46 *kilometers. The* KRL *consists of four types of train sets, each with* 2 *train sets per composition equipped with economy class passenger compartments. The* KRL *began operations in* Indonesia *in February* 2021 *and departs daily with a total of* 20 *compositions on weekdays and* 24 *compositions on weekends. The results of the research analysis showed that the average static load factor values on the four KRL routes exceed 150% with values of* 219,30% *for the* Yogyakarta-Solo Balapan *route,* 234,42% *for the* Yogyakarta-Palur *route,* 221,43% *for the* Solo Balapan-Yogyakarta *route, and* 207,79 *for the* Palur-Yogyakarta *respectively. The static load factor values do not consider changes in passenger volume inside the train due to passenger movements at each station. The average dynamic load factor values for* Yogyakarta-Solo*,* Yogyakarta-Palur, Solo Balapan-Yogyakarta*, and* Palur-Yogyakarta *routes are* 168,34%, 157,16%, 171,80%, *and* 151,72% *respectively. The required maximum value for the urban trains dynamic load factor is* 150%*, indicating that the average dynamic load factor values for these four routes do not meet the required standard. The operational performance analysis including travel time, delay, operational speed, and seating comfort meets the applicable standards.*

Keywords: *Electric Multiple-Unit Train, Operational Performance, Static Load factor, Dynamic Load factor, Railway Station*