ARRIVAL AND DEPARTURE ANALYSIS OF AIRCRAFT ON DAILY DAY AND HOLIDAY PERIOD USING M / G / 1 QUEUE MODEL

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ABSTRACT

The incoming aircraft takes a few minutes to hours to depart or take off. The flight intensity at the Adi Sutjipto airport in Yogyakarta caused a queue of planes, coupled with only one air runway causing the aircraft to queue up to take off. So it is necessary to know the correct queuing model to describe the queue system of aircraft landing and take off, and to know the aircraft queue performance performance at Adisutjipto airport. Appropriate queuing model (M/M/1) : (FCFS $/\infty/\infty$) for arriving and departing aircraft on normal day or holiday period. The results of the analysis show that from the queue model is obtained a value indicating that the queue is not quite effective because the value of W_q, W_s, L_q and L_s whose value is high. The L_s value indicates that there are 2 to 6 aircraft per hour in the queuing system whereas the L_q value is 1 to 5 planes queuing per hour. W_s and W_q values range from more than 0.2 hours to the highest of 0.6 hours.

Keywords: Queue, Aircraft Fly, Arrival and Departure.