STUDY OF APRON OPTIMIZATION BASED ON THE CHARACTERISTICS OF AIRCRAFT IN NGURAH RAI INTERNATIONAL AIRPORT – BALI

Student Name : Ayu Aprilischa
NRP : 3105 100 064
Department : Civil Engineering
Supervisor : Ir. Hera Widiastuti, MT

Abstract
Along with population growth, national economy, industry and tourism in Indonesia, particularly in eastern Indonesia today, there is also increasing demand for air transportation. These demands also influence the Province of Bali, especially the Ngurah Rai International Airport of Bali. Needs of a growing air transport, will be influenced by the movement of aircraft. This relates to the use of aircraft activity on the apron. Apron is a part of the Airport, which serves to park aircraft, raising or lowering passengers and goods, small repairs and refueling.

With aircraft movements increase, demanding the airport to arrange such a way the existence of an apron. For that we must know beforehand how much time an aircraft while in the apron, how many aircraft movements that occur in one day and the number of gate capacity to accommodate the number of aircraft movements.

From the results of this final calculation, it is known that the condition of five years for parking stand capacity still able to accommodate the volume of aircraft movements will use the apron. But 10 years on the condition of parking capacity of the existing stand is not capable to accommodate the increasing volume of aircraft movements will use the apron. To state the next five years the volume of aircraft movements that occur for 37 aircraft and for the next 10 years the condition of the volume of
aerial movements that occur for 42 aircraft. Optimization is done to condition the next five years to add the usage of alternative parking apron by changing the position of a stand in accordance with the required volume of aircraft movements. While for the next 10 years the condition that the optimization is conducted by the expansion of the apron expansion at A and apron apron D.

**Keyword**: Apron Optimization, Parking Stand, Ngurah Rai Airport.