Analysis of Monitoring Performance by AMC Officers at Juwata Tarakan International Airport, North Kalimantan

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Abstract

Every airport operator is required to provide facilities that meet the requirements for aviation safety and security. In order for airport facilities to function properly, the operator is required to carry out supervision within a predetermined period of time. Each airport is required to provide a Follow Me Car and provide parking stand supervision by AMC according to the applicable SOP. The purpose of this study was to determine and analyze the performance of supervision by AMC officers at Juwata Tarakan International Airport, North Kalimantan.

The research used a qualitative descriptive approach, the research was conducted from September to October 2023 by conducting structured interviews with 3 informants, namely the person in charge of the unit, senior and junior AMC by using a data validity test. Secondary data in the form of documents, books, journals and SOPs as supporting and complementary data for writing this research, data analysis techniques used in this study, namely data reduction, data presentation, drawing conclusions and verification, researchers used technical triangulation so that the data in this study proved its validity. The obstacles faced by AMC unit officers are the lack of AMC officers, the lack of coordination between AMC officers and ground handling officers, and the absence of CCTV facilities in the parking stand area.

Keywords: AMC, Supervision, SOP

INTRODUCTION

According to the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 77 of 2015 concerning Standardization and Certification of Airport Facilities, an airport is an area on land and/or waters with certain boundaries that is used as a place for aircraft to land and take off, board passengers, unload, loading of goods, and places for intra and intermodal transportation, which are equipped with aviation safety and security facilities, as well as basic facilities and other supporting facilities. As a parking space, take-off and landing of aircraft, the airport provides airside area facilities. This area is called the airside where as a place to work or operate aircraft.

Airside, namely an area that starts from the apron, taxiway, runway and the placement of aircraft parking in parking stands. Aviation activities carried out on the Airside are used for aircraft parking, raising and lowering passengers, cargo and mail, refueling and light maintenance of an aircraft. One part of Airside which is a vital part of flight activity is the apron. Apron is part of an airport that is used as an aircraft parking lot. In addition to parking, aircraft aprons are used for refueling, dropping off passengers, and filling up airplane passengers.

The aircraft apron is on the Air Side which directly intersects with the terminal building, and is also connected to the highway (Taxiway) leading to the Runway. The apron must be capable of supporting the aircraft's weight at full load with slow motion or a stop. Apron construction should use rigid pavement construction (concrete plate) with consideration that concrete slabs are resistant to fuel and oil spills. Based on references from the website...
As a parking space, take-off and landing of aircraft, the airport provides airside area facilities. This area is called the air side where as a place to work or operate aircraft. Air side, namely an area that begins with an apron, taxiway, runway and the placement of aircraft parking in parking stands.

One part of the apron is the Parking Stand which has a parking sign in the form of yellow letters and numbers on a black background which has the function of indicating the number where the aircraft is parked. A parking stand is a place at an airport used for the placement of aircraft parking. The large number of aircraft landing and taking off causes activities on the airside, especially on the Apron, to require more attention. Apron is an area or place at an airport that has been determined, whose function is to place aircraft, disembark and pick up passengers, cargo, mail, refueling, and carry out maintenance and maintenance of aircraft. In the Decree of the Director General of Civil Aviation number SKEP/100/XI/1985, dated 12 November 1985, concerning Airport Rules and Regulations, Chapter I, article (3) explains that a parking stand is an area on an apron used for aircraft parking. So, a parking stand is a place at an airport that is used for aircraft parking. According to the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 77 of 2015 concerning Standardization and Certification of Airport Facilities, the air side is part of the airport and all its supporting facilities which are non-public areas where everyone, goods and vehicles that will enter must go through a security check and/or have a special permit. Even though the parking stand area has been marked as a sign for aircraft parking, good supervision is still needed to minimize accidents in the parking stand area.

Apron Movement Control (AMC) is the unit that regulates the movement of aircraft when on the apron which has a license and rating. In operational activities, AMC is a central unit. The AMC unit has duties in airside operational activities. In addition to having the main duties, the AMC unit has authority in accordance with the competencies it has. The duties of the AMC unit in question are monitoring the movement of aircraft and vehicles on the air side, monitoring and coordinating air side cleaning, monitoring of fuel and fuel spillages, monitoring and coordinating air side facilities, aircraft piloting services experiencing an emergency, the raid activities on the air side in question are in the apron area. As well as finally the input of flight data, recording, reporting of log book data, and reporting on the implementation of tasks. Following are the functions of AMC in monitoring parking stands, preparing aircraft parking stand allocations in advance, to facilitate parking and handling of the aircraft concerned, making arrangements for Engine Run Up, Aircraft Towing, monitoring start up clearance given by the control tower to increase and transmit traffic on the apron, preparing Marshalling and Follow Me Service, providing/delivering information to operators regarding matters relating to the existence of an ongoing activity and affecting operational activities on the apron.

Juwata Tarakan International Airport is an international airport managed by the Directorate General of Civil Aviation. The AMC Unit has a very important role in providing safe and secure operational services for every service user engaged in air transportation services at Juwata Tarakan International Airport. The airport besides providing facilities also serves scheduled and non-scheduled flight activities. Non-scheduled flight services at Juwata Tarakan International Airport are generally for charter flights, both for passenger transportation and/or goods/cargo transportation. Aircraft movement is regulated by airport personnel in the AMC section who have a license and rating to carry out oversight of order.

Based on the researchers' observations while carrying out the OJT, the researchers saw damage in several parts of the apron so that the AMC officers supervised the parking stands by using the Follow Me Car Service for the aircraft. AMC's task is indeed not difficult or
complicated, but if this is not properly paid attention to, it will cause things that are not desirable. Because as the full responsibility for the apron area, you must always focus so that unwanted things don't happen, and cause a decrease in the performance results. Seeing the current conditions in which the AMC Unit has one of the tasks is supervision.

The aims of the authors in conducting this research are as follows: To find out the performance of AMC officers in supervising parking stands at Juwata Tarakan International Airport, North Kalimantan. Knowing what obstacles need to be faced by AMC officers in supervising parking stands at Juwata Tarakan International Airport, North Kalimantan in handling aircraft. Knowing the efforts of AMC officers to overcome obstacles in monitoring parking stands at Juwata Tarakan International Airport, North Kalimantan.

**Theoretical basis**

**Airport**

According to Annex 14 of the International Civil Aviation Organization, an airport is a certain area located on land or in waters that can be used for the arrival, departure and movement of aircraft. This area can be used in its entirety or only part of it. Facilities include buildings, installations and aviation equipment. Meanwhile, the definition of an airport according to the Angkasa Pura website is "airfield, including all buildings and equipment which are the minimum equipment to ensure the availability of facilities for air transportation for the public". An airport is defined as an area on land and/or waters with certain boundaries which is used as a place for aircraft to land and take off, take off passengers, load and unload goods, and places for intra and intermodal transportation, which are equipped with aviation safety and security facilities, as well as basic facilities and other supporting facilities. In conclusion, an airport is an area on land and/or waters with certain boundaries that is used as a place for aircraft to land and take off, take off passengers, load and unload goods, and place for intra and intermodal transportation, which is equipped with safety and security facilities. aviation security, as well as basic facilities and other supporting facilities.

**Aprons**

Apron is part of the ground motion of an airport which functions to raise and lower passengers and cargo, refuel, park and prepare aircraft before continuing the flight. The apron consists of aircraft parking lots (aircraft gates, aircraft stands, or ramps) and special lanes for aircraft circulation entering/exiting the parking lot (taxilanes). The size of the apron depends on the following factors: The number of Aircraft Gates, The size of the gate, The area required for the aircraft to maneuver the aircraft at the gate, The system and type of aircraft parking. The size and location of the gate must be planned by taking into account the characteristics of the aircraft using the gate such as the wingspan, length and turning radius of the aircraft. and also the area required by the vehicles providing service for the aircraft while at the gate. To ensure aircraft safety on the ground, ICAO and FAA also stipulate minimum distance requirements between aircraft parked on the apron from one another, to buildings or other fixed objects on the apron based on the aircraft’s wing distance/wing tip clearance.

**Parking Stands**

A parking stand is a certain place at an airport used for aircraft parking. The parking stand sign on the apron is in the form of yellow letters and numbers on a black background which has the function of indicating the number where the aircraft parking is located. Aircraft that will enter or leave the parking lot, either with the ability of the aircraft itself (self-maneuvering), or by using a pull tool (tractor assisted). The types of aircraft parking configurations are nose-in
parking, angled nose-in parking, angled nose-out parking, nose-out parking, with the following explanation: Nose-in Parking. The definition of nose-in parking is that the aircraft is parked perpendicular to the building, the terminal and the front of the aircraft face directly, and are close to the terminal building; Angled Nose-in Parking. The definition of angled nose-in parking is that the aircraft is parked at an angle towards the terminal and the front of the aircraft is facing directly, and is close to the terminal building; Angled Nose-out Parking. The definition of angled nose-out parking is that the aircraft is parked at an angle towards the terminal, but the front of the aircraft is facing away from the terminal building; Nose-out Parking. The definition of nose-out parking is that the aircraft is parked perpendicular to the terminal building and the front of the aircraft is facing away from the terminal building.

**Apron Movement Control**

Hermawan (2021) states that aircraft movement control personnel or AMC are airport personnel who have a license and rating to carry out supervision of order, safety of traffic movement on the apron and the determination of aircraft parking. According to the Regulation of the Director General of Civil Aviation Number: KP 22 of 2015 Duties and functions of AMC: Supervise and regulate traffic movement on the Apron. Perform aircraft parking arrangements on the apron. Ensure cleanliness on the apron. Ensure the facilities on the apron are in good condition. Ensure the safe movement of people, equipment and aircraft across the apron. Supervise and regulate traffic movement on the Apron. Perform aircraft parking arrangements on the apron. Ensure cleanliness on the apron. Ensure the facilities on the apron are in good condition. Ensure the safe movement of people, equipment and aircraft across the apron. Analyze all activities and facilities on the apron. Plan aircraft parking arrangements in an emergency. Evaluating and coordinating operational activities on the apron.

**Supervision**

The concept of the Big Indonesian Dictionary defines the term supervision as coming from the word "watch" which means to pay close attention, in the sense of looking at something carefully and thoroughly, there is no activity except giving a report based on the actual facts of what is being watched. In the opinion of several experts as follows: Winardi in Riska Saiful’s thesis writer (2020), Supervision is an activity carried out by the manager in ensuring that actual results are in accordance with planned results. Komaruddin, Supervision relates to the comparison between the actual control of the plan, and the beginning for corrective steps against significant deviations and plans. From several definitions of supervision described by experts,

**Performance**

Moeheriono (2012) explains that performance is a description of the level of achievement of the implementation of an activity program or policy in realizing the goals, objectives, vision and mission of the organization as outlined in an organization’s strategic planning. Performance Indicators according to Robbins (2016) are tools to measure the extent to which employee performance is achieved. The following are several indicators for measuring employee performance: Quality of Work. Quality of work is a result that can be measured by the effectiveness and efficiency of a job performed by human resources or other resources in achieving company goals or objectives properly and efficiently; Quantity Quantity is the quantity produced, expressed in terms such as number of units, the number of activity cycles completed by employees, and the number of activities generated; Timeliness, Timeliness is an utilization of information by decision makers before the information loses its capacity to make
decisions; Effectiveness, effectiveness is an element to achieve predetermined goals; Independence Independence is one of the goals to be achieved in every process of life. Factors affecting performance: Career Path, Work Environment, Workload, Individual Ability, Company Facilities and Bonuses. Timeliness is an utilization of information by decision makers before the information loses its capacity to make decisions; Effectiveness, effectiveness is an element to achieve predetermined goals; Independence Independence is one of the goals to be achieved in every process of life. Factors affecting performance: Career Path, Work Environment, Workload, Individual Ability, Company Facilities and Bonuses. Timeliness is an utilization of information by decision makers before the information loses its capacity to make decisions; Effectiveness, effectiveness is an element to achieve predetermined goals; Independence Independence is one of the goals to be achieved in every process of life. Factors affecting performance: Career Path, Work Environment, Workload, Individual Ability, Company Facilities and Bonuses.

Relevant Research

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<tr>
<th>Name</th>
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<tr>
<td>Fadjar Billyawan</td>
<td>2020</td>
<td>Monitoring Analysis of the Amc Unit (Apron Movement Control) on 2019 Hajj Charter Flights at Syamsudin Noor Airport, Banjarmasin</td>
<td>Interview with AMC Syamsudin Noor in this regard, the AMC unit will allocate parking stands during Hajj flights because the capacity of parking stands at Syamsudin Noor Airport will be reduced due to hajj planes using two parking stands. During the Hajj flight, the operation of Syamsudin Noor Airport in Banjarmasin became 24 hours, in handling hajj flights the AMC unit became the workload of the AMC unit, namely changing the airport’s operating hours from 05.00 WITA to 23.00 WITA /last flight to 24 hours with the number of AMC unit personnel only 3 people per shift either on regular flights or during Hajj charter flights.</td>
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<td>Kurnia Bekty</td>
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<td>Doni Faturrahman</td>
<td>2020</td>
<td>Analysis of Airside Facility Development at Syamsudin Noor Airport, Banjarmasin South Kalimantan</td>
<td>Shows the development of airside facilities at Syamsudin Noor Airport, Banjarmasin, including the development of an apron, which was previously only one, now there are two. Parking stands have also experienced development, before they only had 8, now they have 14, besides that there are also the addition of more and more CCTV. Factors hindering the increase in the status of domestic airports to international airports are GSE equipment that is not in accordance with PM 77 of 2015 Article 6 which has been amended in PM 92 of 2016 Article 7 paragraph (3) airside infrastructure related to airside facilities. The obstacle faced in the construction of airside facilities from domestic airports to Syamsudin Noor International Airport is the unpreparedness of immigration and customs.</td>
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<td>Abram Valentino Pattiasina</td>
<td>2019</td>
<td>Analysis of Making a Helipad to Optimizing Services for the Apron Movement Control Unit (Amc) at</td>
<td>For the service of the Apron Movement Control unit in handling helicopter flights it is considered optimal and in accordance with the Standard Operation Procedure (SOP) in the form of Work Instructions (IK) that apply at Syamsudin Noor International Airport Banjarmasin, however for service</td>
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RESEARCH METHODS

Research Design
This study used a qualitative approach, this approach was chosen based on the research objective, namely to analyze the performance of AMC officers in the supervision of the Juwata Tarakan International Airport apron. Sugiyono (2018) suggests that the qualitative research method is a research method used to examine natural object conditions, where the researcher is a key instrument, data collection techniques are carried out in a triangulation (combined) manner, data analysis is inductive, and qualitative research results emphasize meaning rather than generalization. The natural object referred to by Sugiyono (2018) is an object that is as it is, not manipulated by the researcher so that the conditions when the researcher enters the object, after being in the object and after leaving the object are relatively unchanged.

Research Subjects and Objects
1. Research subject. Moleong (2018) describes research subjects as informa, which means people who are used to provide information about the situation and conditions of the research site. The subjects in this study were AMC juniors, AMC seniors and the head of the AMC unit at Juwata Tarakan International Airport.
2. Object of research. In the Big Indonesian Dictionary, the object is the thing, matter, or person that is the subject of discussion. In other words, the object of research is something that is the focus of a research, the object of this research will be peeled and analyzed by researchers based on theories that are in accordance with the object of research. The research object used as a source in this research is Juwata Tarakan International Airport.

Data Types and Sources
1. Data Type. Sugiyono (2018). Qualitative data is data in the form of words, schemes, and pictures. The qualitative data of this research are the names and addresses of the research objects.
2. Data source
   a. Primary Data Source. Sugiyono (2018), Primary Data Source is data that is directly obtained from the source and given to data collectors or researchers. There is also an opinion according to Sugiyono, the primary data source is interviews with research subjects either by observation or direct observation.
   b. Secondary Data Sources. Sugiyono (2018). Secondary data are data sources that do not directly provide data to data collectors, for example through other people or through documents. In this research, the source of secondary data is in accordance with the Labor Law, books, journals, articles related to the research topic regarding internal control systems over payroll systems and procedures in an effort to support labor cost efficiency.

Data Collection Technique
1. Observation Method. Observation is an activity that is carried out by making direct observations in the field, so that it can be known immediately what is happening in the field regarding the performance of AMC officers in monitoring the apron of Juwata Tarakan International Airport. The researcher conducted participant observation where the
researcher came to the research location and became one of the people who carried out the activity being studied, thus the researcher got direct experience of the activity being studied, thus the researcher got direct experience from the activity. For example, researchers participate during working hours of AMC officers in monitoring the apron of Juwata Tarakan International Airport. The instrument used is the observation sheet.

2. Interview. An interview is a meeting of two people to exchange information and ideas through questions and answers, so that meaning can be contributed to a topic (Sugiyono, 2017). The interview used in this study was a structured interview, the aim was to find out more about the problem and the researcher recorded what the informant said. The instrument used is interviews. The observed aspects are based on performance indicators and supervisory SOPs.

3. Documentation. Documentation is one method of collecting qualitative data by viewing or analyzing documents made by the subject himself or by other people about the subject. A large number of facts and data are stored in materials in the form of documentation. The instrument used is to load the category of data sought and a check-list containing a list of variables for which data will be collected.

4. Library Studies. Literature study is a way of obtaining information and data from references related to the issues being discussed by the authors of this proposal, including scientific journals, articles and other documents related to research titles. The data needed include primary and secondary data needed in this study.

RESEARCH RESULTS AND DISCUSSION

Performance of AMC Officers in Monitoring Parking Stands

Based on the results of interviews with AMC officers and direct observations when carrying out OJT, the AMC unit is one of the units under the responsibility of the Airport Engineering and Operations Field at Juwata Tarakan International Airport. The AMC unit is divided into several work sections, namely communication data officer and admin officer, apron safety officer, avionics officer. The AMC unit also communicates with several units, such as the ATC unit, runway unit, avsec unit, information unit, and PKPPK unit, with the aim of working together in providing services in their respective units and in relation to parking stand supervision. Based on the results of the interview with the person in charge, he said that the tower officer must communicate with the ground handling operator and be supervised to the parking stand by AMC, if not supervised there could be chaos in the apron area. The performance of parking stand supervision carried out by the AMC unit refers to the standard operating procedure (SOP) whose job is to regulate and supervise all activities on the apron, one of which is checking every 3 hours for the cleanliness of the parking stand, checking the parking stand for trash and foreign objects. debris (FOD) prior to use by aircraft for parking. Based on the results of interviews with senior AMC, he said parking stand monitoring was carried out visually, namely using binoculars (binocular), going to the field (apron ramp check), carrying out routines every 3 hours by using a follow me car to the apron area to monitor and maintain the cleanliness of the apron. from the foreign object demit. Supervision is carried out by changing shifts according to the schedule and time provisions that have been set. Supervision carried out by the unit must also coordinate with other units related to parking stand supervision.

Based on the results of interviews with several officers and persons in charge of the AMC unit as well as observations made directly by the researchers, it was found that so far they had carried out supervision properly in accordance with the applicable SOPs and coordinated among other unit officers if there were any problems when carrying out parking stand
monitoring. Parking stand supervision is carried out by providing a parking stand that has been coordinated with the ATC unit and then the ATC unit forwards the information provided by the AMC unit to the pilot, checks the apron to avoid dangerous goods, provides aircraft parking services to flight operators or ground handling, provide an estimate time of arrival (ETA) to the assigned marshaller who must be at the designated parking stand 15 minutes before the plane lands and provide a follow me car service according to the pilot's request. Based on the results of interviews with junior AMC, he said that AMC must also arrange the allocation of aircraft parking as best as possible with the distance between aircraft, with the terminal building as close as possible. For the optimal process of aircraft handling, loading and unloading activities and apron utilization. After supervising the duties of the AMC unit, it also makes reports such as recording aircraft movements on the apron, making reports regarding any incidents on the apron submitted by the marshaller and the apron safety officer. Before conducting parking stand inspection,

Obstacles Faced by AMC Unit Officers in Supervising Parking Stands

From the results of interviews with the person in charge and several AMC unit officers, there were several obstacles that occurred during parking stand supervision, namely the limited number of personnel, lack of good communication between ground handling officers and AMC unit officers and there was no CCTV available in the parking stand area so AMC officers had to routinely carry out ramp check aprons by using motorized vehicles such as follow me cars, non motorized vehicles such as bicycles and also the limited availability of parking stands. Based on the results of an interview with the person in charge of AMC, he said that the constraints might be the limited number of personnel. Junior AMC also said that for the obstacles themselves there was still a lack of coordination between employees and limited office support facilities. If there are problems that are not reported, it will have an impact on aviation safety, for example, if there is damage to the apron that is not reported or not carrying out a ramp check on the apron, it can result in hindering traffic going in or out of the apron. Therefore the AMC officer must immediately report any problems to the person in charge of AMC and related units such as the ATC unit, runway unit and other related units.

How AMC Officers Overcome Obstacles in Monitoring Parking Stands

From the results of interviews with several AMC officers and observations made by researchers, Eslan Diru as a junior AMC said that there was still a lack of coordination between employees and ground handling officers. Riyono as the person in charge of AMC said that the current obstacle is the lack of personnel but we still prioritize safety on the apron and coordinate with each other. The way to overcome obstacles when supervising parking stands is in several ways, namely AMC officers must communicate with ATC officers, must communicate with ATC officers, ground handling officers and several related units in order to avoid mistakes in carrying out supervision,

CONCLUSION

The results of the discussion can be concluded that supervision of parking stands is an important thing to do, this affects the service of an airport to passengers or service users. The parking stand monitoring system by the AMC unit refers to the applicable SOP. The AMC unit officer is tasked with carrying out a ramp check of the apron every 3 hours for the cleanliness of the parking stand to avoid trash and foreign object debris (FOD) dangerous goods, giving an estimate time of arrival (ETA) to the assigned marshaller who must be in the designated parking stand. determined 15 minutes before the plane landed and provided a follow me car
service according to the pilot's request.

Based on the assessment of the results of interviews with the person in charge and the AMC unit officer regarding parking stand supervision by the AMC unit at Juwata Tarakan International Airport it was good and according to the results of observations it was in accordance with the applicable SOP so it had to be maintained and improved further in the future. For the constraints when monitoring parking stands by the AMC unit, as has been described, there is still a lack of coordination and communication among AMC officers and incomplete supporting facilities. in parking stands can be implemented effectively and efficiently.

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