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The Supervising Role of the Apron Movement Control (AMC) Unit on Aviation Security and Safety at Pattimura Ambon International Airport

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Abstract
Security and safety are crucial factors in aviation activities, considering the sensitivity of air transportation that requires assurance of safety at all times. The success of the AMC unit's tasks and responsibilities is measured by their ability to optimize supervision, thus creating safe and secure conditions, in accordance with applicable regulations. This study aims to evaluate the role of the AMC unit in ensuring security and safety in the airside area of Pattimura Ambon International Airport and to identify obstacles in supervision in the area. The approach used in this study is descriptive qualitative. The data collected consists of primary and secondary data. Primary data is obtained through observation and interviews, while secondary data comes from literature studies and photographs related to the problem being studied. Data analysis techniques involve data reduction, data presentation, and drawing conclusions. To ensure the validity of the data, triangulation techniques are used. The research was conducted in March 2024. The results of the study indicate that the AMC unit at Pattimura Ambon International Airport has carried out supervision well in accordance with the standard operating procedures PM-IK (Quality Procedures and Work Instructions). Supervision covers four components of the work area: Airport Operation Control Center (AOCC), Data Entry, Field Inspection, and Aviobridge Operations. Supervision is carried out through inspections every two hours for FOD and fuel spills, supervision of aircraft movements and engine running up/idle, GSE vehicle speed, and worker compliance with the use of Personal Protective Equipment. The AMC unit strives to implement the 3S+1C principle (Safety, Security, Service, and Compliance). The obstacles faced include a shortage of personnel, which causes an increase in workload and less than optimal supervision, as well as violations by service users or workers in the airside area, which have the potential to cause accidents.
Keywords: AMC Unit, Surveillance Role, Aviation Safety and Security

INTRODUCTION

Air transportation is one of the best alternative choices for people today because of the time efficiency, price competition and security offered, compared to land and sea transportation. Air transportation is currently experiencing rapid growth following the development of the tourism industry in Indonesia. According to Law No. 1 of 2009 concerning Aviation, an Airport is a place that supports air transportation in terms of operations. Because it can connect areas that were previously difficult to reach by other transportation, but can now be reached by air transportation. Pattimura Ambon International Airport, located in the eastern part of Indonesia, is one of the main gateways to the economy of Maluku Province. Managed by PT. Angkasa Pura I (Persero), this airport has 10 parking stands to support flight activities. This airport serves domestic and international flights with a capacity of 700,000 domestic passengers and 100,000 international passengers per year. One of the operational units at the airport is the Apron Movement Control (AMC). According to the General Regulation of Air Transportation Number KP 038 of 2017, the AMC unit is responsible for implementing regulations, supervising aircraft movements, vehicle traffic, people and goods, and cleanliness

in the airside area. AMC also records flight data to ensure flight safety and security. In carrying out its duties, the AMC unit is supported by qualified human resources and adequate work support facilities.

The Apron Movement Control (AMC) operational system includes providing guidance and supervision to all vehicles and personnel who, due to their function, must operate in the aircraft movement area. In addition, it also includes providing assistance to aircraft heading to designated parking locations. It can be added that the AMC operation also prevents the possibility of unauthorized/careless vehicles entering the airside. The implementation of the AMC operational system is carried out by considering the harmony and operational integration factors between the units involved in regulating aircraft traffic on the apron. Especially with terminal traffic operations. The AMC unit has the task of being responsible for flight operation service activities, apron management and all interested parties in the airside area. In Airside Operations Management (AMC) coordination is carried out in services consisting of aircraft parking arrangements, Docking and De-Docking, VDGS and AVDGS, Push Back and Start Engine, marshalling, follow me car, vehicle supervision on the airside, issuance of operational vehicle permits and GSE, issuance of apron TIM, apron cleanliness, handling of fuel spillage. The purpose of AMC unit supervision is to ensure flight safety and security in the airside area. Flight safety is a condition that provides protection to flights from unlawful acts through the integrated use of human resources, facilities, and procedures. Meanwhile, flight safety is a condition that is realized from the smooth implementation of flights in accordance with operating procedures and technical eligibility requirements for flight facilities and infrastructure and their supporting facilities.

RESEARCH METHODS

The approach used in this study is descriptive qualitative. The data collected consists of primary and secondary data. Primary data is obtained through observation and interviews, while secondary data comes from literature studies and photographs related to the problem being studied. Data analysis techniques involve data reduction, data presentation, and drawing conclusions. To ensure the validity of the data, triangulation techniques are used. The research was conducted in March 2024.

RESEARCH RESULTS AND DISCUSSION

Based on the results of the study on the role of AMC officers in ensuring security and safety in the airside area, officers have carried out their duties in accordance with the Standard Operating Procedure (SOP) set out in the Work Instructions and Quality Procedures of PT. Angkasa Pura 1 Pattimura Ambon International Airport. The AMC unit operates with a shift system, namely morning and afternoon, with each shift consisting of 4 personnel. Overall, there are 6 AMC personnel at Pattimura Ambon Airport plus 1 Leader. The AMC unit at Pattimura Ambon International Airport supervises aircraft movements in order to avoid collisions between aircraft and between aircraft and obstacles periodically through CCTV monitoring or directly to the field to ensure the regularity of the placement of GSE equipment, free from FOD and no fuel spills in the aircraft movement area. Then coordinate with ATC regarding the provision of aircraft parking stand numbers and prepare aviobridges if there is a request from the airline. AMC officers supervise the movement of people and also the movement of vehicles to prevent collisions in accordance with SKEP/140/VI/1999 concerning Requirements and Procedures for Operating Vehicles on the Air Side, namely Access Road 40 km/h, Service Road 25 km/h, Make Up/Break Down Area 15 km/h, Apron 10 km/h. If there are any violations, they

will be given a direct warning or administrative sanctions. The AMC unit ensures the cleanliness of the apron by implementing and establishing a strict inspection program and pollution standards. Then conduct inspections 4 times a day every 2 hours starting in the morning before operational activities start until finished. The AMC unit controls discipline on the apron by issuing provisions/rules relating to drivers and vehicles operating on the apron so that the AMC unit issues driving permits for workers and GSE vehicle operating permits in the airside area. Then the AMC also carries out discipline by taking firm action against workers who violate existing provisions so that there is no potential danger that will continue to arise.

Discussion

The role of the Apron Movement Control (AMC) unit in ensuring safety and security in the Airside area of Pattimura Ambon International Airport.

The role of the AMC unit cannot be separated from several existing regulations and is a reference for AMC officers in carrying out their duties and responsibilities in the field. The main regulations that are the reference for the AMC unit at Pattimura Ambon Airport are 3S + 1C (Safety, Security, Service and Compliance).

1. Safety and Security. The role of the AMC unit in ensuring safety and security in the Airside area of Pattimura Ambon International Airport includes several important activities. The AMC unit conducts routine inspections according to SOP, namely four times a day every two hours, to ensure that the aircraft movement area is free from FOD (Foreign Object Debris) which can cause accidents. In addition, the inspection also aims to check for fuel spills on the apron and its surroundings, because high temperatures on the Airside can increase the risk of fire. If a fuel spill occurs, the responsible party must immediately clean it up, and if the cleaning is carried out by the AMC unit, the cost will be calculated based on the area of the spill per centimeter. AMC officers also monitor the movement of people and vehicles to prevent collisions, by following the speed limits set out in SKEP/140/VI/1999 concerning Requirements and Procedures for Operating Vehicles on the Airside: Access Road 40 km/hour, Service Road 25 km/hour, Make Up/Break Down Area 15 km/hour, and Apron 10 km/hour. Furthermore, the AMC unit also supervises the Engine Running Up/Idle process in the apron area to prevent accidents. This supervision includes direct monitoring by AMC officers during the testing process, so that officers can immediately handle any problems or anomalies that may occur. This supervision is in accordance with the provisions stipulated in KP 326 of 2019, which aims to ensure safety and reduce risks to people and goods around the apron area.
2. Service. The role of AMC unit services at Pattimura Ambon International Airport includes several important aspects, including:
   a. Provision of Plotting Parking Stand: The AMC unit is responsible for determining the location of aircraft parking according to the flight schedule provided by the airline the day before. Determination of the parking number is based on the type of aircraft and ground time to avoid accidents on the apron, such as collisions between aircraft wings or incompatibility between the aircraft body and the position of the Aviobridge (garbarata).
   b. Recording Flight Data: AMC records flight information including aircraft registration, block on/off time, aircraft type, and flight number. This data is entered into the computer system (SIOPSKOM Software) and displayed on the FIDS (Flight Information Display System) screen at the terminal, allowing service users to obtain flight information in real-time.
   c. Issuance of TIM and Stickers: The AMC unit also handles the issuance of Driving Licenses (TIM) for all users of Ground Support Equipment (GSE) vehicles operating in the Airside

area. In addition, AMC provides a logo or sticker as a sign of legality for GSE vehicles used in the area.

3. Compliance. The role of the AMC unit in optimizing compliance with regulations in the Airside area includes several important actions:
   a. Routine Patrol: AMC patrols every two hours to monitor and prevent potential accidents in the Airside area.
   b. Worker Supervision: AMC officers ensure that all workers comply with the rules by wearing mandatory Personal Protective Equipment (PPE), such as vests, safety shoes, and airmuffs.
   c. GSE Vehicle Supervision: AMC monitors the speed of GSE vehicles to ensure compliance with the established limits and checks that vehicles are parked in designated areas, so as not to interfere with aircraft movement.
   d. GSE Facility Audit: The AMC unit conducts audits of GSE facilities to identify and prevent potential hazards. This involves checking the physical condition, operational validity period, TIM, and vehicle licenses to ensure everything is in good condition and in accordance with operational standards.

Obstacles in monitoring the Apron Movement Control (AMC) unit in the Airside area of Pattimura International Airport, Ambon.

1. Lack of AMC personnel. The total number of AMC personnel is 6 people plus 1 Leader. The AMC unit's work area is divided into four main components: Airport Operation Control Center (AOCC), Data Entry, Field Inspection, and Aviobridge Operations. Each shift consists of 4 personnel, with each responsible for a specific work area. Lack of personnel can negatively impact the effectiveness of supervision and service, increasing the risk of technical problems and flight safety. The increased workload forces personnel to work harder and longer, which can result in fatigue and decreased work quality. This can affect the efficiency and accuracy in carrying out supervision and service tasks.
2. Service user violations. The airside area is a high-risk area because it involves operating aircraft and heavy equipment. At Pattimura Ambon Airport, there were several violations in the airside area, such as officers not wearing Personal Protective Equipment (PPE) according to procedure. In addition, there were also violations related to vehicle speeds that exceeded the maximum limit. Based on SKEP/140/VII/1999, the vehicle speed limit is 40 km/h on the access road, 25 km/h on the service road, 15 km/h in the make up/break down area, and 10 km/h on the apron. However, violations of this rule are still found in the field. The impact of these violations can increase the risk of accidents or incidents that endanger the safety of aircraft, passengers, and officers in the airside area.

CONCLUSION

The role of the AMC unit at Pattimura Ambon International Airport in ensuring safe and secure conditions has been implemented in accordance with the Standard Operating Procedure PM-IK (Quality Procedure and Work Instruction). The AMC unit consists of four work area components: Airport Operation Control Center (AOCC), Data Entry, Field Inspection, and Aviobridge Operation. Supervision includes inspections every two hours for FOD and fuel spills, monitoring aircraft movements and engine run up/idle, GSE vehicle speed, and worker compliance with the use of Personal Protective Equipment. The AMC unit strives to achieve the 3S+1C principle (Safety, Security, Service, and Compliance). However, the AMC unit faces obstacles in the form of a shortage of personnel, which increases the workload and has the

potential to reduce the effectiveness of supervision. As a result, violations still occur in the airside area which can increase the risk of accidents.

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