

The Role Of The Apron Movement Control Unit In Ground Handling Operations

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Abstract

Kalimarau Airport is a Class 1 Airport Service Unit located in Berau Regency, East Kalimantan Province. Is an airport that provides air flight services. To meet the needs of services on the land side and on the air side, the airport cooperates with other parties. Observers conducted research at this airport using observational. To find out the role of the Apron Movement Control (AMC) unit in ground handling operations at Kalimarau Berau Airport. It is hoped that observers will know the use of Ground Support Equipment (GSE) by ground handling officers at Kalimarau Airport. This study uses research methods using qualitative methods and data collection methods, namely using descriptive qualitative methods, namely describing the conditions that occur in the research object. Data obtained from direct observation, literature study, descriptive and interviews. Monitoring the orderliness of ground handling officers is part of Apron Movement Control (AMC) duties. There are markings on the apron that are not yet available at Kalimarau Airport, namely staging area markings that have a function as a place for Ground Support Equipment (GSE) while waiting or standing by on the apron. Some things that can be optimized are increasing awareness of orders among ground handling officers in the use of Ground Support Equipment (GSE). In order to create a safe and orderly Kalimarau airport environment. Some things that can be optimized are increasing awareness of orders among ground handling officers in the use of Ground Support Equipment (GSE). In order to create a safe and orderly Kalimarau airport environment. Some things that can be optimized are increasing awareness of orders among ground handling officers in the use of Ground Support Equipment (GSE). So that the movement of vehicles on the air side can be more directed and safe.

Keywords: Apron Movement Control, Ground Handling, Ground Support Equipment

Introduction

Improvement of an activity such as comparing and analyzing the results of activities is needed to improve the quality of service to passengers. According to previous research [1] [2] [3] evaluation is a process or tool to measure the level of success that has been achieved by students in the lesson or material that has been given. Thus, evaluation helps determine learning objectives accurately and convincingly. Based on previous research [4] [5] aircraft parking stand is aircraft parking on the apron for conducting ground services activities, accommodates more than one aircraft, performs manoeuvrability safely and sets through the configuration model. It depends on the size of the area and the number of aircraft being served. According to previous research [6] Airport surface operations, such as off-block control, taxi routing, and runway sequencing, are typically confined to a fixed network topology with given origin–destination (OD) pairs for departures and arrivals.

According to previous research [7] [8] [9] excellent airport service will be a reflection of service tourism, bearing in mind that the airport is no longer a mere passenger entry and exit gate but also a means of recreation, entertainment, and tourism information service center. Services provided by Kalimarau Berau Airport to meet the service needs of passengers. There are 2 types of services, namely the land side and the air side, the airport cooperates with other parties. According to previous research [10] [11] [12] all activities carried out by ground handling officers are supervised by Apron Movement Control (AMC) officers. The Apron Movement Control (AMC) Unit has the duties of supervising aircraft movements, being in charge of flight operational services, vehicle traffic, people and cleanliness in the airside area and recording flight data.

According to previous research [13] regarding airport business activities ground handling is related services to support aircraft operational service activities at airports. The role of the Apron Movement Control (AMC) unit in supporting the aviation security and safety system at Kalimarau Berau Airport is to carry out

inspections in the runway, taxiway and apron areas and to control on the air side by issuing provisions relating to the operation of vehicles on the air side and Supervise violations committed by ground handling units that do not use airport passes, expired driving license signs, licenses and irregular placement of Ground Support Equipment (GSE).

According to previous research [14] concerning the requirements and procedures for operating vehicles on the air side regarding traffic rules in the movement area in article 28 which reads that every driver is prohibited from parking a vehicle on or near the movement area in the vehicle's cross lane. Based on previous research [15] [16] [17] aircraft ground handling is an essential part of an air operation and determines its punctuality and safety. Ground support equipment vehicles (GSE) are used in most of the handling tasks.

In accordance with the applicable regulations, namely the Standard Operating Procedure (SOP) for Kalimarau Airport, Berau, action should be taken on the basis of the responsibility of the airport management to take strict action against any violations. Even though there has been a Standard Operating Procedure (SOP) in force to serve as a reference for the implementation of security and order on the air side, irregularities have still been found. From the results of observations made by the author there are several deviations that occur, such as:

1. *Ground Support Equipment* (GSE) that is placed in the wrong place
2. Nothere is an Equipment Staging Area (ESA) marking on the apron
3. Lack of supervision by Apron Movement Control (AMC)

Based on previous research [18] [19] [20] to improve this key area of aviation safety, it is necessary to identify the causal factors that underlie accidents and incidents and to understand their impacts. According to previous research [21] Airport personnel license states that Apron Movement Control (AMC) aircraft control personnel are airport personnel who have a license and rating to carry out supervision of order, safety of traffic movement on the apron and aircraft parking placement. According to [22] airport personnel namely competence development of airport personnel carried out in the form of education or training, refreshment and outreach.

To fulfill the objectives of this research, this question is asked what is the role of the Apron Movement Control (AMC) unit in ground handling operations at Kalimarau Berau Airport?

Methods

Research design

The steps taken by the author to determine the research design must be based on the problems and research objectives. There are several stages or steps taken in conducting research. According to previous research [23] There are three main stages in qualitative research, namely:

1. Description stage or orientation stage

Do a description of what the author saw, heard, and felt

2. reduction stage

Researchers reduce all the information gathered in the first stage so they can concentrate on a particular problem

3. Selection stage

After providing a more detailed description of the focus you have set, consider the focus of the problem as a whole. The result is new knowledge, hypotheses, or even theories created from the collected data

The following is the author's research design:

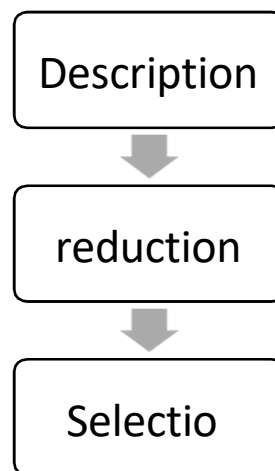


Figure 1. Stages of Research Implementation [24]

Data collection technique

Observation

According to previous research [25] [26] [27] in qualitative research, the basic technique that can be used is observation. The purpose of observation is to describe what was learned, the activities that took place, the people involved, and the meaning of events from their perspective.

Library Studies

According to the opinion of [28] After formulating the problem, the next step is to look for theories, concepts or generalizations that can be used as a theoretical basis for the research being carried out. Literature study conducted by the author includes rules and requirements for reviewing things that are considered to cause problems, guidelines and references for understanding involved in problem discussions, and elaboration of problem titles.

Interview

Interviews were conducted face-to-face or without face-to-face to obtain further information about the problem or information being studied. Interviews are conversations between informants, who are considered to have and will provide important information about something, and researchers, who hope to get information.


Documentation




Documentation is a data collection technique in the form of a collection of notes, transcripts, books, journals, papers, videos, photos, minutes, etc. that are approved for use in an observation or research and can be used as a theoretical basis or main guideline for conducting a research. One of the secondary data sources needed in a research is documentation.


Results and Discussion

Research Result

Table 1. Research result

No	Observation / Field study	Analysis
1	 <p>Source: Author, 2023</p>	<p>The placement of Baggage Towing Tractor (BTT) and carts when they are not in use is not neatly arranged due to the lack of awareness of ground handling personnel in placing Ground Support Equipment (GSE). After using Ground Support Equipment (GSE) it is not rearranged as before and can block road access for other service activities</p>

2	 <p>Source: Author, 2023</p>	<p>The carts are not neatly arranged and parked haphazardly due to the absence of an Equipment Staging Area (ESA) and a lack of supervision by Apron Movement Control (AMC). Ground handling officers After using the Ground Support Equipment (GSE) they are not rearranged to their original place because they are on stand by waiting to serve the next aircraft</p>
3	 <p>Source: Author, 2023</p>	<p>Wheelbarrows that are not propped up in the apron area due lack of oversight by Apron Movement Control (AMC) when present <i>loadinggoods</i> from plane to cart</p>
4	 <p>Source: Author, 2023</p>	<p><i>Push back car</i> which is placed on the service road so that it can</p>

		interfere with other activities that require the use of the service road route due to a lack of supervision so that the push back car is parked on the service road which is not in accordance with its function
5	 <p>Source: Author, 2023</p>	<p><i>Baggage Towing Tractor (BTT)</i> is used by 2 people which should not be done because only the operator can drive the Baggage Towing Tractor (BTT) due to the lack of supervision of the use of the Baggage Towing Tractor (BTT) and the lack of awareness possessed by the Baggage Towing Tractor (BTT) operator, the violation like this often happens</p>

Data collection

Apron Movement Control (AMC) personnel have a duty to supervise ground handling officers and ensure that ground handling officers carry out their duties in accordance with predetermined Standard Operating Procedures (SOP). If a ground handling officer performs

duties not in accordance with the Standard Operating Procedure (SOP), the Apron Movement Control (AMC) officer has the authority to take action against the ground handling officer. Apron Movement Control (AMC) oversees the performance of ground handling officers by conducting direct supervision. This is due to the absence of supporting facilities such as Closed Circuit Television (CCTV) to monitor ground handling activities from within the Apron Movement Control (AMC) room.

Kalimarau Airport does not have an Equipment Staging Area marking (ESA) in the apron area because the apron design is less organized from the start. There is a plan to develop apron markings regarding Marking Equipment Staging Area (ESA) but still in process at the Kalimarau Airport administration office. This process takes a long time because it is necessary to make adjustments to the conditions and situation of the apron. This was done by Apron Movement Control (AMC) personnel before give sanctions to ground handling officers who do violations, namely seeing what violations or mistakes were made the ground handling officer. The imposition of these sanctions is in accordance with the violations committed, such as the violation is still relatively light, so only a warning is given to the officer, but if the violation is serious, the officer will be detained with a Driving License (TIM) and get a ban from being directly involved in the activity.

To increase the awareness of ground handling officers can be done in various ways, namely reprimanding directly, holding impromptu inspections, and conducting socialization regarding the ramp safety campaign. With flight traffic that is not busy, 5 Apron Movement Control (AMC) personnel are sufficient without requiring additional personnel. Because 5 Apron Movement Control (AMC) personnel are sufficient, things that need to be improved are from aspects of facilities such as addition of Closed Circuit Television (CCTV). The addition of Closed Circuit Television (CCTV) will greatly assist Apron Movement Control (AMC) personnel in conducting surveillance. The role of Closed Circuit Television (CCTV) is very useful because it can monitor in all directions and if an event or incident occurs at the airside it can be recorded and makes it easier to carry out an investigation. So that the supervision carried out by Apron Movement Control (AMC) can be maximized. Places that require Closed Circuit Television (CCTV) installation, namely parking stand areas, make up areas, and break down areas.

Based on interviews that have been conducted, Apron Movement Control (AMC) personnel have a duty to supervise ground handling officers and ensure that ground handling officers carry out their duties in accordance with predetermined Standard Operating Procedures (SOP). The supervised ground handling officers are Ground Support Equipment (GSE) operators. Supervision is carried out by Apron Movement Control (AMC) by directly supervising it. The system is implemented if a ground handling officer performs his/her duties not in accordance with the Standard Operating Procedure (SOP), then the Apron Movement

Control (AMC) officer has the authority to take action against the ground handling officer. Apron Movement Control (AMC) in managing the apron, namely paying attention to safety, security, order and smoothness of aircraft parking and other traffic on the apron. Supervision of the management of the apron is carried out by the Kalimarau Airport Office and the Kalimarau Airport Apron Movement Control Unit (AMC). So all activities related to movement activities in the apron area are the responsibility of Apron Movement Control (AMC).

Violations committed, namely:

1. The ground handling operator is placing the Ground Support Equipment (GSE) carelessly or out of place
2. The ground handling officer who served as the operator drove the Baggage Towing Tractor (BTT) the violation committed was that only the operator should be able to drive the Baggage Towing Tractor (BTT) but there were other officers involved in driving
3. It often happens that the ground support equipment (GSE) laying apron is not suitable
4. *Ground handling* usually put a push back car on a service road where nothing should be blocking the road
5. When loading and unloading goods without placing a wedge on the cart it may cause an incident

If the ground handling officer commits a violation, they will be given sanctions by Apron Movement Control (AMC) against the ground handling officer depending on the violation committed by the officer. If the violation is still relatively light, then only a warning will be given to the officer. Like giving a warning letter first. However, if the violation is serious, the officer is prohibited from being directly involved in the activity. If the violation is considered a serious violation, the ground handling officer is no longer given access to the airport, which means that the officer is no longer able to work.

Discussion of Research Results

Based on interviews conducted by Apron Movement Control (AMC) personnel has the task of supervising ground handling officers and ensure that ground handling officers carry out their duties in accordance with Predetermined Standard Operating Procedures (SOP). Ground officer handling supervised namely Ground Support Equipment (GSE) operators. Supervision is carried out by Apron Movement Control (AMC) by means of watch him directly. The system that is implemented when there is a ground officer handling that performs its duties not in accordance with the Operational Standards Procedure (SOP) then Apron Movement Control (AMC) officers have authority to take action against ground handling officers. Apron Movement Control (AMC) in the management of the apron namely pay attention to safety, security, order and smoothness of aircraft parking air and other traffic on the apron. Supervision of apron management carried out by the Kalimarau Airport Office and the Apron Movement

Unit Control (AMC) Kalimarau Airport. Then all related activities with the movement of activities in the apron area is the responsibility of Apron Movement Control (AMC). Violations committed, namely:

1. The ground handling operator is placing Ground Support Equipment (GSE) haphazard or out of place
2. Ground handling officers who serve as driving operators. Baggage Towing Tractor (BTT) violations committed only the operator should be able to drive the Baggage Towing Tractor (BTT) but there are other officers who ride along
3. It often happens that the ground support equipment (GSE) laying apron does not in accordance
4. Ground handling usually puts a push back car on a service road that is nothing should get in the way
5. When loading and unloading goods, there are no obstacles on the cart it could lead to an incident

If the ground handling officer commits a violation then they will be given sanctions given Apron Movement Control (AMC) against ground handling officer depending on the violation committed by the officer. If the violation is still relatively light, then only a warning is given to that officer. Like giving a warning letter first. But if the violation is serious then the officer gets a ban to be directly involved in the activity if a violation is committed after being considered as a serious violation then the ground officer handling is not given access to enter the airport anymore This means that the employee is no longer able to work.

Measuring the performance of ground handling officers is by:

1. Ground handling officers in carrying out their duties apply the Standards. The applicable Operational Procedure (SOP) that has been determined by Apron Movement Control (AMC)
2. Aircraft service activities have no problems such as no delays caused by delays caused by the performance of officers ground handling
3. Passengers do not experience problems in obtaining services and no loss

In imposing sanctions, Apron Movement Control (AMC) classifies violations that have been mentioned in the picture above. This sanction classified into serious violations and minor violations. After that you can determine what sanctions are appropriate to be given to officers who commit them violation.

Based on the description that the author put forward above, the results of the study are Apron Movement Control (AMC) personnel having various duties and authorities including duties in supervising ground handling officers and ensuring all movement activities in aircraft services can run smoothly and safely. In carrying out their supervisory duties, Apron Movement Control (AMC) personnel have a role to take action against ground handling officers if there is a violation in carrying out their duties. If a violation occurs, Apron Movement Control (AMC) personnel can take several actions. Starting from mild sanctions, namely giving warnings to officers who make mistakes,

up to severe sanctions, namely holding a driver's license (TIM).

Optimization of Apron Movement Control (AMC) can be done by adding facilities for monitoring. The addition of Closed Circuit Television (CCTV) is needed to help Apron Movement Control (AMC) supervise activities on the apron, find out if there is Foreign Object Damage (FOD) and supervise the use of Ground Support Equipment (GSE) by ground handling officers. Closed Circuit Television (CCTV) placement can be placed in parking stands, make up areas, and break down areas that require more supervision due to the large number of activities taking place in those areas. Still lack of awareness of ground handling officers regarding safety in carrying out their task activities.

So Apron Movement Control (AMC) officers have an important role in raising safety awareness in carrying out ground handling activities. One way is by holding a ramp safety campaign. If the awareness of ground handling officers regarding safety in carrying out activities has increased, it can reduce the violations that often occur on the ramp.

Conclusion

Based on the results of observations and discussions that have been described by the author in the previous chapter, it can be concluded that the important role of the Apron Movement Control unit is in ground handling operations. Apron Movement Control (AMC) can maximize its 5 personnel by adding an agreement with the ground handling company to provide additional clauses or articles in the Memorandum Of Understanding (MOU) or memorandum of understanding agreed upon by both parties which discusses the rules for ground handling officers in carrying out their duties, especially in the use of Ground Support Equipment (GSE) to maintain order and safety together. Can additional Closed Circuit Television (CCTV) facilities be added. There is a monitor in the office *Apron Movement Control*(AMC) in order to facilitate monitoring of activities.

Based on the results of the discussion and conclusions that have been described in the chapter above, the suggestions that the author can give are as follows:

1. Requires additional facilities such as Closed Circuit Television (CCTV) which functions to supervise activities on the apron, find out if there is Foreign Object Damage (FOD), supervise the use of Ground Support Equipment (GSE), supervise the performance of ground handling officers, if an incident occurs have an overview visualization of events
2. Holding a Ramp Safety Campaign on a regular basis as well as coaching personnel and service provider operators on the apron so as to raise awareness about the importance of working according to procedures. Such as when supervised or not supervised by Apron

Movement Control (AMC), so as to create security and safety.

3. Added Equipment Staging Area (ESA) markings to the apron to increase compliance with the use of Ground Support Equipment (GSE).

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