

## **Analysis of Security Examination Facilities in Supporting Aviation Safety at Tunggul Wulung Cilacap Airport**

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### **Abstract**

Various kinds of phenomena that occur at the Tunggul Wulung Cilacap Airport which are managed by the Directorate General of Civil Aviation related to the equipment in the AVSEC unit often experience problems. One of the employees at the unit said that not all of the equipment at the airport was in good condition. This will hinder the passenger inspection process, and can threaten flight safety at the airport itself, therefore this study aims to determine the condition of the equipment in the AVSEC unit, determine the impact caused by the condition of the security inspection equipment that works well on safety. flights and knowing the role of AVSEC officers in overcoming the limitations of flight security inspection equipment at Tunggul Wulung Cilacap Airport. The method used in this study which is based on post-positivism philosophy with data collection techniques using triangulation and data analysis is qualitative induction. The research tool is in the form of interviews with each of the senior, junior and basic officers in the Aviation Security (AVSEC) unit. The results of this study can be shown by the results of the researchers' observations that the duties and roles of AVSEC personnel are very good and according to the applicable SOPs but in inadequate conditions the existing inspection facilities will be handled.

**Keywords:** Security Check Facility, Aviation Safety, Aviation Security



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### **INTRODUCTION**

The airport is a node in the air transportation network. The airport functions as a gateway for national and international economic activities. In addition, the airport is a facility for air transportation services, where at the airport there are various kinds of facilities both for aircraft services and for services to passengers and goods (Government Regulation Number 70 of 2001 concerning Airports). By looking at the function of an airport which is so important and very strategic, it is only natural that the safety aspect is the main concern of the airport operator and regulator. Airports in Indonesia generally consist of groups with categories of aircraft and passenger density levels as well as the level of airport facilities owned, namely pioneer airports, regional airports, and international airports. The airport is also the main gate for the entry and exit of passengers or people, goods and cargo from within and outside the country. All of these flights must pass through strict inspection procedures.

The inspection process for passengers or goods is carried out to prevent prohibited items such as sharp weapons, firearms, explosives, and other dangerous goods from entering the departure lounge or onto the plane. The process of inspecting passengers or goods can be done using the equipment available at the aviation security unit or it can be done manually. The increasing public demand for air transportation services, the level of security services must also be increased. In accordance with Government Regulation Number 3 of 2001 article 52 concerning Aviation Security and Safety, where every person, goods, vehicle entering the airside must go through a security check. Many crimes were found at airports when checking goods and passengers, such as finding sharp weapons or smuggling of illegal drugs. This has a disruptive

impact on the security of civil aviation operations at airports. To create conducive conditions and anticipate unlawful acts, it is necessary to supervise the Aviation Security work unit, hereinafter referred to as AVSEC. In an airline company, AVSEC is expected to provide a sense of security and comfort to passengers at the airport and avoid actions that are against the law.

Aviation Security or AVSEC is a work unit formed to comply with international and national regulations as a manager and provider of airport security services must have the license required according to the position. Security is a fundamental factor that must be fulfilled by an airport. Factors to achieve security, must be met in terms of both the number and quality of personnel and aviation security equipment. To anticipate this, it is necessary to conduct a study of the need for aviation security equipment at the Tunggal Wulung Cilacap Airport. One of the most important aspects of an airport is security and safety, which is the responsibility of the AVSEC Unit. The AVSEC unit itself consists of three components, namely personnel, equipment and Standard Operating Procedures (SOP). One that plays a role is the equipment in the AVSEC unit. Examples include X-ray machines, Walk Through Metal Detectors, Airport Closed Circuit Television (CCTV), and Hand Held Metal Detectors. In addition, airport managers must carry out inspection and supervision of all people and their luggage that will enter the restricted area of the airport without exception.

Various kinds of phenomena that occur at the airport studied, namely at Tunggal Wulung Cilacap Airport which is managed by the Directorate General of Civil Aviation related to the equipment in the AVSEC unit often experience problems. One of the employees at the unit said that not all of the equipment at the airport was in good condition. Problems that often occur, such as a Walk Trough Metal Detector that doesn't work properly, then X-Ray which often has problems. These things will hinder the passenger inspection process, and can threaten flight security at the airport itself. Tunggal Wulung Airport is a pioneer airport that must pay attention to security and the equipment used and the performance of AVSEC must comply with procedures during the inspection process.

The objectives of the research on the Analysis of Security Inspection Facilities on Aviation Security and Safety at the Tunggal Wulung Cilacap Airport are as follows. Knowing the condition of the equipment at the AVSEC unit at Tunggal Wulung Cilacap Airport. Knowing the impact caused by the condition of security check equipment that works well on flight safety. Knowing the role of AVSEC officers in overcoming the limitations of flight security inspection equipment at Tunggal Wulung Cilacap Airport.

## **Theoretical Basis**

### **Airport**

According to Law No. 1 of 2009, an airport is an area on land or waters which, within certain limits, is used as a place for aircraft to land and take off, board passengers, load and unload goods, and place for intra and intermodal transportation, equipped with with aviation safety and security facilities as well as basic facilities and other supporting facilities. According to the Big Indonesian Language Dictionary, an airport or airport is a facility where airplanes can take off and land. The simplest airports have at least one runway, but large airports usually have other facilities, both for flight service operators and for their users.

### **Tunggal Wulung Airport**

Tunggal Wulung Cilacap Airport was built by Pertamina in 1974 and completed in 1977. This airport was only used and inaugurated on September 19, 1977. with IATA code: CXP, ICAO: WIHL. Airport with a runway length of 1,400 m x 30 m. It is a class III airport managed by the UPT Directorate General of Civil Aviation. The airlines that have operated at Tunggal Wulung Cilacap Airport are Wings air with De Haviland Dash 7, Merpati Nusantara Airline with CN2335,

Susi Air. But the airline is no longer operating at the Tunggul Wulung Cilacap Airport. Currently, the airline operating at Tunggul Wulung Cilacap Airport is Pelita Air which serves Cilacap-Jakarta flights via Halim Perdanakusuma International Airport using ATR 72-50 type aircraft with a travel time of 1 hour. At Tunggul Wulung Airport, Cilacap, there are also pilot schools managed by the private sector and the state, such as Perkasa Flight School, Ganesha Flight Academy.

### **Aviation Security (AVSEC)**

Aviation security (AVSEC) are aviation security personnel who already have a license or certificate of competence for an officer (STKP) who are assigned officers and are responsible for aviation security. In accordance with the Regulation of the Director General of Civil Aviation Number: SKEP/27/2765/XII/2010 Chapter I point 9). The main objective of aviation security is the safety of passengers, flight crew, officers and the general public against acts against the law by preventing the transportation of goods that can endanger flights. Aviation security is regulated in Annex 17 concerning security, ICAO DOC 8973, SKEP/2765, XII/2010 concerning procedures for checking the security of passengers, flight crew and luggage to be transported by aircraft and individuals, Decree of the Minister of Transportation number 14 of 1989 concerning control passengers, goods and cargo transported by civil aircraft. Aviation security in Indonesia itself is airport security (Aviation Security) is a work unit formed by PT. Angkasa Pura I / II in fulfilling international and national regulations as a manager and provider of airport security services.

### **Security Check**

Security checks (security controls) is the application of a technique or action to prevent the infiltration of prohibited items (prohibited items) that can be used for unlawful acts. (PM 127 of 2015). Security check is the application of a technique or other method to identify or detect prohibited items that may be used to commit illegal acts. (PM 51 of 2020).

### **Security Checkpoint**

According to SKEP 2765/XII/2010, a security check point (SCP) is a security check point for passengers, people, aircraft personnel and goods that will enter the restricted security area and/or waiting room at the airport terminal building. . Inspection lane is a security check queue line for passengers, aircraft personnel and luggage transported by aircraft and individuals at the security check point (SCP) before entering the restricted security area and/or waiting room at the airport terminal building air.

### **Security and Safety**

Aviation security and safety according to PP 3 of 2001 concerning aviation security and safety is a condition for making flights carried out safely and safely in accordance with the flight plan. Aviation security is a condition that is realized from the operation of flights that are free from disturbances and/or actions that violate the law. Aviation safety is a condition that is realized from the smooth operation of flights in accordance with operational procedures and technical feasibility requirements for aviation facilities and infrastructure and their supports.

### **Relevant Research**

**Table 1. Relevant Research**

No.	Name	Year	Title	Research Result
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1	Surya Aji Santosa	2020	The influence of the workload of Avsec officers in carrying out security and service duties on passenger comfort at centralized Sultan Aji Muhammad Sulaiman Balikpapan airport.	Passengers at Balikpapan Airport have increased from 2017-2019. The large number of passengers will add to the burden for avsec officers in carrying out service and security duties. To prevent the accumulation of the burden on Avsec officers which will affect their performance in dealing with crowded passenger queues. So it is necessary to plan additional inspection lines and junior avsec personnel to balance the increase in passengers at Centralize.
2	Dian Artanti Arubusman	2019	Supervision of the first security checkpoint on the implementation of aviation security.	The results of the research variable on the supervision of the first security checkpoint (x) of the respondents' answers were 1684 with an average answer of 4.1. This means that the supervision of the first security checkpoint is good. Based on the analysis of aviation security implementation variables (Y), the respondents' answers were 1,723 with an average answer of 4.10. This means that the implementation of aviation security at the country's Husein Sastra Airport is already good. The results of the hypothesis test show that $t_{count} > t_{table}$ , namely $(5.729 > 1.701)$ . Then $H_0$ is rejected $H_a$ is accepted and the hypothesis is proven correct. This means that there is a positive influence between the variable of supervision of the first security checkpoint (X) on the variable of implementation of aviation security (Y).
3	Djoko Widagdo	2019	Analysis of the quality of aviation security officers (avsec) security services on passenger satisfaction at Adi Soemarmo International Airport, Surakarta.	The aviation security system has been carried out well with the title of "very satisfactory" criteria for the security work area at the check-in counter entrance, first inspection (random inspection), inspection in second place (cabin baggage inspection) international inspection. The level of readiness of the Avsec unit personnel and their equipment is stated to be very ready because the number of personnel and the amount of equipment used is very good if there is a security disturbance at the airport and aircraft which is stated as follows: the number of Avsec officers at Adi Soemarmo Surakarta International Airport is 10 people, There are 4 squad leaders, 11 officers from Angkasapura staff, 1 person, 23 officers with Angkasa Pura status, 10 officers from TNI-AU and the rest are in charge of outsourcing. The types of equipment available at Adi Soemarmo Surakarta airport include x-ray machines, walk-through metal detectors (WTMD), metal detectors, explosive detectors, hand held metal detectors (HHMD), closed circuit television (CCTV) rooms, telephones, handi talky (HT), perimeter, golf car (patrol car). The work shift process at Adi Soemarmo Surakarta International Airport changes positions every 4 hours and is divided into 4 groups in which each team consists of 24-26 people.

## **RESEARCH METHODS**

### **Research Design**

This study uses qualitative research. According to Sugiyono (2011), the qualitative research method is a research method based on post-positivism philosophy, by using research methods it will be known that there is a significant relationship between the data in the field studied so that conclusions will clarify the description of the object under study, data collection techniques using triangulation, data analysis is qualitative induction. In this qualitative research process, the most important thing is that the results of this research must be agreed upon by the researcher and the subjects studied from the research, such as fellow avsec officers in the field. This research will explain the impact that will be caused by the condition of security equipment at Tunggul Wulung Cilacap Airport, while also discussing the role of avsec officers in overcoming the limitations of flight security inspection procedures in supporting flight security and safety. The function of qualitative researchers as human instruments is to determine research focus, select informants as data sources, collect data, assess data quality, analyze data, interpret data and make findings on it (Sugiyono 2016). The main objective of qualitative research is to understand and explore the main phenomena of the object under study, so as to gain a deep understanding and find something unique (Sugiyono 2017).

### **Research Place**

This research was conducted at Tunggul Wulung Cilacap Airport, this research was conducted for approximately 2 weeks from December 5 2022 to December 19 2022. This research was carried out at the Aviation security unit (AVSEC) at Tunggul Wulung Cilacap Airport.

### **Data Collection Technique**

1. Interview Method. An interview is a conversation or communication between two or more people that takes place between the source and the interviewer. The purpose of the interview is to get the right information from a reliable source (Sugiyono 2017). At this stage the authors chose to conduct structured interviews with one senior, junior, basic officer in the Aviation Security (AVSEC) unit each who was considered most knowledgeable about the duties and responsibilities of AVSEC at Tunggul Wulung Cilacap Airport as a resource person with the aim of obtaining relevant data. needed completely.
2. Observation Method. Observation allows researchers to gain direct experience, thus enabling researchers to use an inductive approach, so they are not influenced by previous concepts or views. The inductive approach opens the possibility of making discoveries (Nasution 1988 through Sugiyono 2016). The observation method used in this observation uses the participatory method by making direct observations of various things being observed, so that researchers get a clear picture of what is being observed. At this stage the author made direct observations in the field, namely the condition of the inspection facilities in the field and the passenger inspection procedures carried out by Aviation Security (AVSEC) officers at Tunggul Wulung Cilacap Airport.
3. Documentation Method. Documentation is a method used to provide documents using accurate evidence from recording specific sources of information from essays or writings, testaments, books, laws, and so on. In a general sense, documentation is a search, investigation, collection, preservation, control, use and provision of documents. This documentation is used to obtain information and information, knowledge and evidence. This includes the use of library and bibliography archives. According to experts, the

documentation method is a data collection technique by collecting and analyzing written and electronic documents (Sukmadinata, 2012).

## **RESEARCH RESULTS AND DISCUSSION**

In this study, researchers found several problems that hindered the performance of avsec officers in carrying out flight security inspection activities at Tunggul Wulung Cilacap Airport. The researcher found several problems after observing and interviewing three avsec officers, including: Mr. Ari Wibowo as the head of the avsec unit at Tunggul Wulung Cilacap Airport with a junior avsec license. Mr. Abdul Ghofur Syakur as deputy head of the aviation security unit at the stump wulung airport in Cilacap with a senior avsec license. Mr. Eka Sugihastomo as the aviation security officer at the stump wulung airport in Cilacap with a basic avsec license.

### **Condition of Aviation Security Unit Security Examination Equipment at Tunggul Wulung Cilacap Airport**

Completeness of a facility can support an activity so that it can run smoothly, as well as facilities at an airport. Airport facilities play an important role in the smooth running of a flight, one of which is the security inspection facility contained in the aviation security unit. The aviation security unit plays an important role in carrying out security checks at an airport, in carrying out security inspection activities the avsec unit is assisted by several supporting facilities that are used to carry out checks on passengers and passengers' luggage that will enter the aircraft. In carrying out the inspection, the Avsec officer must carry out according to the applicable standard operating procedures.

Based on KM 9 of 2010 in Chapter VIII concerning aviation security facilities, it states that airport management units and airport management bodies in carrying out security checks using equipment must meet the needs of security facilities in accordance with applicable regulations. The types of security inspection facilities used to provide security inspection services and goods include: Explosives detection equipment; Equipment for detecting organic and non-organic materials; metal detection apparatus; Nuclear, biological, chemical and radioactive material detection equipment; Equipment for monitoring the traffic of people, cargo, post, vehicles and aircraft at airports; Emergency operation center equipment, aviation security patrol vehicles; access control equipment; Perimeter fencing intruder equipment; Security personnel communication equipment.

The following is the condition of the security check facilities used at the Aviation security unit at Tunggul Wulung Cilacap Airport. Based on the results of observations made by researchers.

1. X-Ray. Detector equipment used to visually detect all luggage belonging to prospective aircraft passengers which can endanger flights quickly without opening the packaging of these items. X-ray equipment that is usually found at airports can be classified according to function and capacity, namely: X-Ray Cabin, X-Ray Baggage, X-Ray Cargo. There are 2 x-ray cabin units with the Fiscan and Smiths brands and 1 x-ray baggage unit with the Astrophysics brand. Based on the results of observations and observations made by researchers on the condition of the X-ray equipment at Tunggul Wulung Cilacap Airport, there was 1 x-ray cabin that was damaged with the Fiscan brand because the OPS cable was cut. 1 x-ray cabin with the Smiths brand can be used normally, but problems often occur such as an unstable electric current. There is 1 unit of x-ray baggage with the Astrophysics brand in a damaged condition and cannot be used because OPS is disconnected. In dealing with the damaged x-ray, Avsec has coordinated with the airport electronics department (ELBAN) and has tried to repair the damaged x-ray, but limited equipment has made the repair process very long.

2. Walk Through Metal Detector (WTMD). A Walk Trough Metal Detector (WTMD) or commonly referred to as a detection gate is one of the airport electronic equipment that functions as a detector for metal objects attached to or carried by prospective passengers or employees who will pass through areas that are required to be sterile from sharp items and dangerous for aviation. The type of walk trough metal detector (WTMD) at the Tunggul Wulung Cilacap Airport has 2 WTMD units, 1 unit WTMD branded CEIA with procurement in 2008 which is at security check point 2 in good condition with a percentage of 70% and 1 unit branded GARRET with procurement in 2019 which is at Security check point 1 in good condition with a percentage of 90%.
3. Handy Talky. Handy talky is a handheld device that is used to communicate remotely. HT can be used to communicate with two or more people using radio waves. There are 25 handy talkies in the avsec unit at Tunggul Wulung Cilacap Airport with different conditions, 19 handy talkies in good condition and 6 walkie talkies with damaged conditions.
4. Circuit Cable Television (CCTV). Circuit cable television or also known as CCTV is a camera equipment used to visually monitor situations and conditions in all rooms or areas within the airport environment. There are three CCTV units located at the Avsec unit at Tunggul Wulung Cilacap Airport. 1 unit of Avtech brand cctv in good condition, 1 unit of Samsung brand cctv in good condition, and 1 unit of Spc brand cctv in good condition.
5. Handheld Metal Detector. Hand held metal detector or also known as HHMD is a hand held detector equipment that is used by the hand to detect the position of the device or the location of the luggage in the body of the prospective passenger aircraft which is made of metal which data endangers flight safety. There are 4 units of hand held metal detector equipment located at the avsec unit at Tuggul Wulunh Airport Cilacap with procurement in 2016. 3 units of hand held metal detectors in good condition and 1 unit of hand held metal detector in damaged condition.
6. Vehicles. The vehicle is used by aviation security officers to conduct patrols throughout the Tunggul Wulung Cilacap Airport area. There are 2 patrol vehicles in good condition at the AVSEC unit at Tunggul Wulung Cilacap Airport.

### **Impact Arising From the Condition of Security Check Equipment That Does Not Work Properly on Aviation Safety**

Aviation security and safety is very important in aviation activities, according to law no. 1 of 2009 article 1 paragraph 48 concerning aviation, aviation safety is a condition of fulfilling safety requirements in the use of airspace, aircraft, airports, air transportation, flight navigation as well as supporting facilities and other public facilities. The following are some actions that can interfere with aviation safety and security according to the Decree of the Minister of Transportation Number: KM 54 of 2004 concerning the National Civil Aviation Security Program that is Categorized as Against the Law:

1. Acts of violence against a person on board an aircraft in flight which may endanger flight safety.
2. Destroy or damage the aircraft to be operated, causing the aircraft to be unable to fly or endangering the safety of the aircraft.
3. Placing tools or materials on the aircraft in any way so that the aircraft cannot fly, is destroyed or endangers safety during flight.
4. Destroying, damaging or disrupting the operation of flight navigation facilities which results in endangering flight safety.
5. Communication of false information which results in endangering flight safety.

6. Performing unlawful acts accompanied by the use of substances, materials or weapons. The forms of threats, disturbances, obstacles and challenges that occur in the airport work environment, can be in the form of: Bomb threats; Natural disasters; Demonstrations or demonstrations; Fire; aircraft hijacking; embezzlement or smuggling; Extortion; Counterfeiting or Fraud; Destruction; Strike; theft; brokerage; illegal trade; Sabotage; armed attack; terror. and others that may impede or disrupt the smooth running or operation of the airport as well as the peace and tranquility of work at the airport.

In overcoming unlawful acts in aviation, Avsec officers are supported by security facilities and inspection of goods and passengers. Tunggul Wulung Cilacap Airport has several security equipments to support the performance of the avsec unit in carrying out security checks to support flight safety. Examination of passengers and passengers' luggage is carried out at security check point 1 and security check point 2, the following is the equipment available at Tunggul Wulung Cilacap Airport, including: X-ray machine used to check passenger luggage for items that can endanger flights , a hand held metal detector (HHMD) is used to examine the body and clothing of passengers, a walk through metal detector (WTMD) is used to detect all items made of metal, walkie talkies (HT) are used as a communication tool between avsec officers at the airport, and several vehicles to support security activities around the airport.

**Table 2. Aviation Security Unit Equipment Data at Tunggul Wulung Cilacap Airport**

No	Tool	Type	Merk	Year	Total	Condition (%)	Information
1	X-ray Cabin	CMEX-B6055	Fiscan	2011	1 Unit	55	OPS, Disconnected
	X-ray Cabin	HI-SCAN 6040I	Smiths	2017	1 Unit	80	Normal
	X-ray Bagage	XIS 100XD	Astrophisics	2018	1 Unit	85	OPS, Disconnected
2	Handy Talky (HT)	ALINCO	DJ-W500	2015	10 Unit	85	7 Good, 3 Damaged
	Handy Talky (HT)	ALINCO	DJ-W500	2016	7 Unit	85	6 Good, 1 Damaged
	Handy Talky (HT)	ALINCO	DJ-W500	2018	4 Unit	86	2 Good, 2 Damaged
	Handy Talky (HT)	ALINCO	DJ-W500	2019	4 Unit	87	4 Good
3	DVR CCTV	Avtech	F 36-E	2015	1 Unit	85	Good
	NVR CCTV	Samsung	SRN-16735	2016	1 Unit	85	Good
	NVR CCTV	Spc		2016	1 Unit	85	Good
4	Walk Trough Metal Detector (WTMD) CEIA	CEIA	VM 1120	2008	1 Unit	70	Good
	Walk Trough Metal Detector (WTMD) GARRET	GARRET	PD6500i	2019	1 Unit	90	Good
5	Hand Held Metal Detector (HHMD)	GARRET	1165180	2016	4 Unit	85	3 Good, 1 Dagamed
6	Vehicle	Ferza	Honda		1	80	Good
	Vehicle	Crf	Honda		1	95	Good

From the table above it can be seen that there are several equipments that are damaged or in poor condition. Equipment that experienced damage or error, namely 1 unit x-ray machine cabin which was at security check point 2 with 55% damaged condition, 1 unit baggage x-ray



machine with 85% damaged condition. With the condition of x-ray equipment that is not working properly, it can cause security checks to take longer and can cause passenger queues because it is done manually one by one, lack of accuracy in checking airplane passenger luggage, lack of Circuit cable television (CCTV) equipment as well can disrupt the safety of flight, because there are still many spaces that have not been monitored by CCTV cameras.

### **What is the Role of Aviation Security Officers in Overcoming the Limitations of Aviation Security Check Equipment at Tunggul Wulung Cilacap Airport**

Aviation security officers basically work in accordance with the applicable Standard Operating Procedures (SOP), in which there are various kinds of facilities that facilitate the performance of aviation security officers in carrying out passenger inspection activities, as described in the Standard Operating Procedures for checking passengers and goods that apply in Tunggul Wulung Cilacap Airport:

1. Manual passenger inspection; Request and obtain passenger permits; The inspection is carried out by security personnel of the same sex as the passenger being examined; Asking passengers to take out all the contents of their pockets and objects that are removed must be checked; Directs the passenger to face the examiner and asks to spread his arms; Passengers with short hair only need to have a visual inspection and passengers with long hair or hairstyles that can hide weapons must have their hair and shoulders checked; Passengers who wear certain religious, belief or cultural attributes must be subject to special inspection or with tools; Passengers wearing short sleeves, it is sufficient to start the inspection from the end of the sleeve; Passengers wearing long sleeves, the inspection should be carried out by feeling the long sleeves with both hands and fingers, moving from the shoulder to the cuff of one movement, repeating this on the other arm; Starting from above the shoulders and moving the hands down to the hips until the whole upper body is examined, the examination must be carried out efficiently but very politely in the breast area; The area of the back near the waist which is formed by the curve of the spine and the area under the armpits, where weapons are usually concealed, should be given special attention; If the passenger is wearing light outer clothing, check the area away from the body; Insert the two thumbs between the passenger's belt and the waist from behind and then wrap the thumbs around the waist forward; Squat if necessary and start checking at the waist and working your way down to the hem of the trousers or the hem of the skirt until the entire bottom is examined, repeat on the bottom of the other leg; With the passenger's permission the groin area must be checked; Passengers do not need to take off their shoes, except when necessary, the inspection must determine the bottom of the shoe or boot or the toe of the boot by hand; After the inspection is complete the officer must say thank you. In the event that prohibited items are found during inspection, the following steps are taken: Detain or confiscate prohibited items in accordance with the provisions; Continuing the inspection from the location where prohibited items were found; If prohibited items are found in the form of firearms or explosive devices, then: Detain the passengers; Report to supervisor; Conduct investigations, and coordinate with security forces when necessary.
2. Manual inspection of cabin baggage is carried out with the following provisions: Ensuring cabin baggage ownership. Ordering the owner to open the cabin baggage by observing the owner's reaction: Checking the cabin baggage with the permission and witnessed by the owner; Ensuring and maintaining inspection control until completion; Starting the inspection from the outside, look for signs that can indicate or by feeling around if any part of the bag that has been changed is not the same as the original; Opening and checking all pockets and the contents of zippers, if there is anything suspected, the examiner may open

the bag; Continue checking the inside of the bag clockwise; Inspect all folded or rolled clothing by pressing or unfolding it to ensure that nothing is hidden underneath; Checking heavy objects, such as toys filled with kapok, cigarette boxes and aerosol cans, if there are objects that are unusually heavy, report them immediately to the supervisor; If cabin baggage has been checked, all items must be returned to the bag and the passenger can help to tidy up the bag; If goods that are categorized as suspicious cannot be checked manually, then the goods are checked separately using an x-ray machine; If objects that are categorized as suspicious have been found and resolved, then the cabin baggage must be re-examined using an x-ray machine and if the appearance of cabin baggage on the monitor screen is detected as a black object, an inspection of the black object is carried out and an examination is carried out on the part covered by the black object. The object is removed from cabin baggage for re-examination with an x-ray machine; Do not leave suspected cabin baggage until the inspection process is complete and after the inspection is complete the officer says thank you.

The role of the aviation security officer is in accordance with applicable operational standards, namely by carrying out manual passenger and baggage checks, but if a passenger cannot comply with the regulations in accordance with the applicable standard operating procedures, the Avsec officer will provide directions and take preventive steps against the passenger. those who disobey or interfere by supervising passenger behavior prohibit passengers from carrying dangerous goods such as matches, ensure that there are no dangerous goods in the waiting room area, inform criminal sanctions regarding passengers who do not comply or disrupt flights. For passengers who do not comply with the regulations and have been warned but do not pay attention to these regulations, the security at the Tunggul Wulung Airport prohibits these passengers from boarding the airplane, if necessary the airport will report to the nearest police station.

## **CONCLUSION**

From the results of observations by researchers at Tunggul Wulung Airport, Cilacap, damage to equipment, such as one X-ray cabin unit with OPS cut off and one X-ray cabin engine unit normally, however, unstable electric current problems often occur. and one unit of X-ray baggage machine which is damaged and cannot be used due to OPS disconnection and lack of CCTV. The impact arising from the damage to the X-ray machine can lead to longer security checks and can cause queues of passengers because inspections are carried out manually one by one, the lack of checking the luggage of airplane passengers and the lack of CCTV equipment can also interfere with flight observation nets, because there are still rooms that have not been monitored by CCTV cameras. The lack of security inspection equipment greatly impacts the smoothness and safety of aviation, especially in the inspection service for passengers and goods to be transported on board the aircraft. Based on observations made by researchers, the duties and roles of Aviation Security personnel in dealing with inadequate inspection facilities at Tunggul Wulung Cilacap Airport are very good and are in accordance with the SOP that applies at Tunggul Wulung Cilacap Airport.

Suggestions for future researchers: The results of this study only discuss the security inspection facilities at the Tunggul Wulung Cilacap Airport. Of course, it is necessary to carry out further research from larger airports by comparing more complete security inspection facilities with more complex problems. For companies: The author is of the opinion that the inspection facilities at the Tunggul Wulung Cilacap Airport are lacking and there is damage to the security inspection facilities in the form of X-rays and a lack of CCTV equipment which must

be immediately completed and repaired by the organizing unit of the Tunggal Wulung Airport in order to ensure continuity aviation safety and security.

#### **BIBLIOGRAPHY**

- Arubusman, D. A., Jusnibilna, O., & Setiawan, A. (2019). Pengawasan Tempat Pemeriksaan Keamanan Pertama Terhadap Implementasi Keamanan Penerbangan. *Jurnal Manajemen Bisnis Transportasi dan Logistik*, 5(2), 157-160.
- Direktorat Jendral Perhubungan Udara Tentang Pengertian Peran Dan Fungsi Bandar Udara. Peraturan direktur jendral perhubungan udara nomor: KP 260 tahun 2012 tentang sertifikasi peralatan keamanan penerbangan.
- Peraturan Menteri Perhubungan No 127 Tahun 2015 Tentang Program Keamanan Penerbangan Nasional.
- Peraturan Menteri Perhubungan No 51 Tahun 2020 Keamanan Penerbangan Nasional.
- Peraturan Menteri Perhubungan, Nomor KM 9 Tahun 2010 Tentang Program Keamanan Penerbangan Nasional.
- Santosa, S. A. (2020). Pengaruh Beban Kerja Petugas Avsec Dalam Melaksanakan Tugas Keamanan Dan Pelayanan Terhadap Kenyamanan Penumpang Di Centralize Bandar Udara Sultan Aji Muhammad Sulaiman Sepinggian Balikpapan. Surabaya: Politeknik Penerbangan Surabaya.
- Undang-Undang Republik Indonesia No 1 Tahun 2009 Tentang Penerbangan.
- Walewangko, M. (2021). Budaya Keselamatan Penerbangan Berdasarkan Undang-Undang Nomor 1 Tahun 2009 Tentang Penerbangan. *Lex Administratum*, 9(3).
- Widagdo, D. (2019). Analisa Kualitas Pelayanan Keamanan Petugas Aviation Security (Avsec) Terhadap Kepuasan Penumpang Di Bandar Udara Internasional Adi Soemarmo Surakarta. *Jurnal Optimal*, 16(2), 35-45.