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Review of The Security Check Process at The Passenger Security Checkpoint (PSCP) to Improve Flight Security at Soekarno-Hatta International Airport

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Abstract: Threats to aviation security have increased, firearms technology has developedrapidly, including the existence of firearms using a magazine in which there are 4 (four) rounds of ammunition and firearms with revolver type with titanium material which is light, strong and can store 5 (five) rounds of ammunition so that it can shoot with a certain amount of ammunition contained in it. In addition to thedevelopment of firearms, there are also sharp weapons that are not made of metal (non-metallic knife) where the developmentof this sharp weapon is in stark contrast to the technology of security equipment used at terminal 3 Soekarno-Hatta International Airport, the majority of which still use metal detectors. With the development of weapons technology,both firearms and sharp weapons, it is this equipment, procedures and capabilities of aviation security personnel, especially at Terminal 3 of Soekarno- Hatta Airport, that can be improved to anticipate technologicaldevelopments in aviation crimes, so that aviation security and safety is the goal. in aviationin Indonesia can be realized. The Ministry of Transportation seeks to assist every airport operator in determining standards for each personel, equipment and procedures to anticipate increasing aviation security threats through the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 28 of 2021 concerning the National Aviation Security Education and Training Program.

Keywords: Aviation Security Threats, Tools, Procedures, Personnel, Airports

INTRODUCTION

In the current era of technology 4.0 requires every airport organizer to improve the ability of Human Resources (HR), equipment and procedures in the security inspection process and is required to be adaptive to technological developments in line with the development of threats to aviation security. Aviation security personnel have their own challenges as the frontline in the process of ensuring smooth and safe flights. In an effective aviation security

management system, there is an assessment and analysis of every threat to aviation security. Thus airport organizers can ensure the development and implementation of appropriate measures as an effort to prevent and reduce the possibility of an unlawful act that can cause disruption in the process of implementing aviation security. In order to implement effective security measures, the Ministry of Transportation issued Ministerial Regulation Number PM 51 of 2020 concerning National Aviation Security establishing a system based on a risk assessment of the number of departing passengers at the airport which is grouped into 8 (eight) security systems, including Security System A airports, which are airports designated as international airports and have more than 3,000,000 (three million) international departing passengers / year, Soekarno-Hatta Airport includes security system A airports.

The determination of the number of departing passengers at the airport is calculated for 1 (one) year starting from January to December. The development of prohibited items which also pose a threat to aviation security in Indonesia is as follows:

Figure 1: 357 Magnum (Single Shot)

Caliber	*45 ACP, Magnum (Also fires 38specials)*
Capacity	*Single sjot*
Trigger	*Double action only*
Weight	11 oz
Overall Length	3.25”
Barrel Length	2.10”
Height	2.25”

Table 1: 357 Magnum specifications

As for some of the advantages of the above weapons, it can be seen from the table of specifications of weapons that have a very small size so that it is easy to hide in the body of the person being examined, but still has several shortcomings, namely having a single shot system (one shot) and along with the development of technology in the current era which also makes weapons such as the example above experience rapid development to improve the shortcomings of weapon technology in the past.

Currently there have also been several developments regarding weapons that can cause increased flight security threats in the aviation world, the following developments in firearms technology have been obtained:

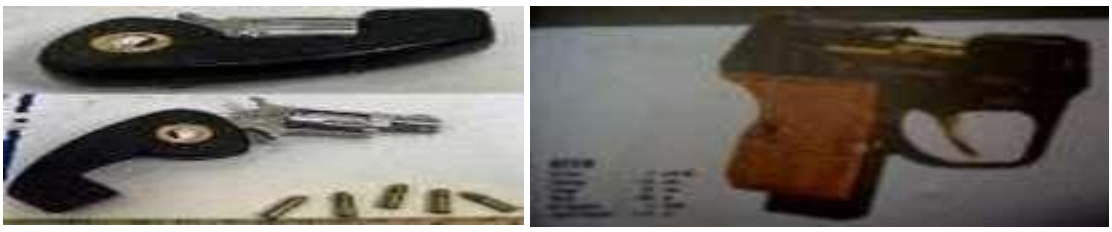


Figure 2: Development of Aviation Security Threats Through Firearms

Based on Figure 2 in this study, it can be seen that firearms technology has developed rapidly, including firearms that use magazines in which there are 4 (four) rounds of ammunition and revolver-type firearms with titanium materials that are lightweight, strong and can store 5 (five) rounds of ammunition that can shoot with a number of ammunitions contained therein.

In addition to the development of firearms, there are also sharp weapons that are not made of metal (nonmetallic knife) where the development of sharp weapons is very contrary to the technology of security equipment used in terminal 3 of Soekarno-Hatta Airport, the majority of which still use metal detectors.

Figure 3: Nonmetallic Knife

With several discoveries of technological developments in weapons, both firearms and sharp weapons, this is what makes aviation security equipment, procedures and personnel capabilities, especially in Terminal 3 of the Soekarno-Hatta International Airport, can be improved to anticipate technological developments in aviation crime, so that aviation security and safety which is the goal in aviation in Indonesia can be realized. The Ministry of Transportation seeks to assist each airport operator in determining standards for each personnel, equipment and procedures to anticipate increasing threats in aviation security.

METHOD

The approach used in this research is a qualitative approach, namely a research approach without using statistical numbers but with descriptive explanation, namely trying to describe a symptom, event and event that occurs as the focus of attention and then described as it is. This research is also field research and conducts Focus Group Discussions (FGD) in asking for responses from stake holders, namely PT Angkasa Pura II (Persero) as the organizer of Soekarno-Hatta airport which is the locus of research and invites Subject Matter Experts (SME) from the Directorate of Aviation Security of the Ministry of Transportation as a resource person to respond to problems in the field and enrich regulatory insights into the problems that occur.

Data Collection Techniques:

- Observation technique

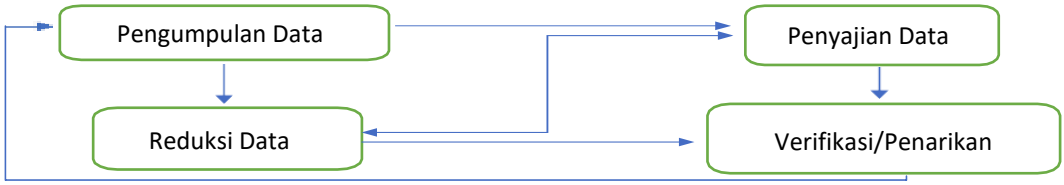
In qualitative research, observation is understood as direct observation of objects, to find out the truth, situation, condition, context, space, and meaning in an effort to collect data for a study. Through observation, researchers learn about behavior and the meaning of that behavior as said by Marshal, "through observation, the researcher learns about behavior and the meaning attached to those behaviors" (Ibrahim, 2015: 67). Through this observation technique, the researcher goes directly to the location where the object of this research is located. Researchers see and pay attention to the inspection process carried out by avsec personnel on prospective passengers both using security equipment (metal detectors, body sceiner and others) and manual inspection.

- Document data collection technique

According to Ibrahim, (2015: 93) in the book Research Methodology, documents or documentation in research have two meanings which are often misunderstood by novice researchers. First, documents are intended as evidence of something, including notes, photos, video recordings or anything produced by researchers. In this study, researchers used documents relating to past events or moments or activities, from which information, facts and data desired in the research might be generated.

Data Processing Technique:

The data analysis model used in this research is the Interactive model of Miles and Huberman. Analysis is carried out during data collection, and after completion of data collection for a certain period. After conducting the interview, the author analyzes the answers of the interviewees who have been interviewed. If the answers of the interviewees who have been interviewed are not satisfactory, the author will re-interview the interviewees until they get credible data. Activities in data analysis are data reduction, data presentation, and conclusion/verification. (Umrati & Wijaya, 2020: 87).



Source: Umrati & Wijaya, 2020: 87

RESULTS AND DISCUSSION

Problem Analysis

Airport is one of the main facilities used to carry out intra and intermodal transportation transfer activities. Soekarno-Hatta International Airport managed by PT Angkasa Pura II (Persero) is one of the gateways for the entry and exit of passengers or visitors who come from within and outside the country, therefore the airport security system must be built as well as possible to provide security and comfort for passengers or visitors. Soekarno-Hatta International Airport currently has 3 passenger terminals to serve the movement of passengers on both international and domestic flights, but the current researcher will discuss the security check process at the Passanger Security Check Point (PSCP) at terminal 3 of Soekarno-Hatta International Airport. Terminal 3 is equipped with a level 5 Baggage Handling System (BHS) that can be used to detect explosive circuits and components and an Airport Security System (ASS) that can control up to 600 Closed Circuit Television (CCTV) to detect faces available on the security register.

a. Desain Lay out di Passanger Security Check Point (PSCP)

Pada saat ini personil aviation security dan fasilitas aviation security yang telah dimiliki oleh PT Angkasa Pura II (Persero) dan digunakan di Terminal 3 Bandar Udara Internasional Soekarno-Hatta sudah sangat baik dalam mengantisipasi berkembangnya barang-barang terlarang yang dapat digunakan untuk melakukan ancaman keamanan penerbangan, akan tetapi desain lay out yang digunakan di Passanger Security Check Point (PSCP) masih berpeluang untuk lolos dari senjata yang telah dibahas pada bab sebelumnya. Berikut ini adalah Lay out Passanger Security Check Point (PSCP) yang digunakan di Terminal 3 Bandara Internasional Soekarno-Hatta saat ini:

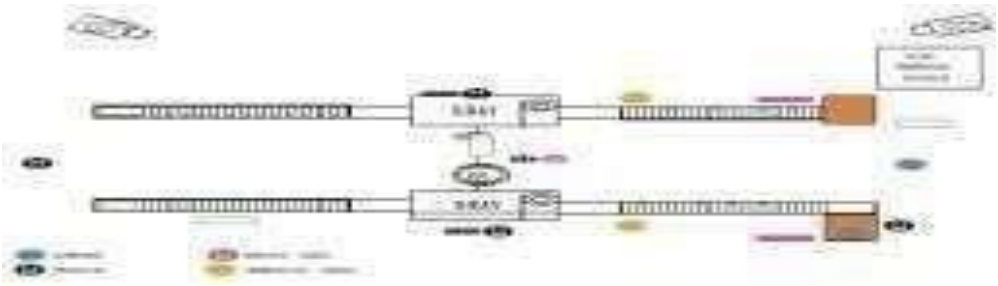


Figure 4: Terminal 3 of Soekarno-Hatta International Airport

Based on the current lay out in Terminal 3, it can be seen that the flow of passenger movement at the Passanger Security Check Point (PSCP) is given an option to go through the inspection process, namely through the Walk Through Metal Detector (WTMD) or through the Body Scanner. As explained in the previous chapter, the use of metal detection security equipment has not been able to anticipate the development of technology with sharp weapons in the form of nonmetallic knives, so that it can be an opportunity for the carrying of prohibited items carried by people who are checked through the Passanger Security Check Point (PSCP) at Terminal 3 of Soekarno-Hatta International Airport.

b. Prohibited Items Concealment Techniques

The development of prohibited items technology is followed by the development of concealment techniques (modus operandi), which makes the threat to aviation security increases. The following are examples of concealment techniques for prohibited items, especially firearms and sharp weapons:

Figure 5: Prohibited Items Concealment Technique

c. Inspection procedures at the Passanger Security Check Point (PSCP)

Based on the results of the Focus Group Discussion (FGD) on Friday, December 3, 2021 conducted by researchers with PT Angkasa Pura II (Persero) and the Directorate of Aviation Security and PPI Curug lecturers who have competence, Mr. Muhammad Ikhwan as Aviation Security Terminal Manager representing PT Angkasa Pura II (Persero) stated that the policy for people being checked and aviation security personnel at Passanger Security Check Point Terminal 3 Soekarno-Hatta International Airport is not carried out with the same gender due to complaints and input from airport service users Terminal 3 Soekarno-Hatta International Airport. The procedure for checking people (body search) in accordance with the provisions and culture in Indonesia cannot carry out manual checks on people to be checked with aviation security personnel where they have different genders or do not match gender, so when conditions like this occur, the procedure is that flight security personnel will use Hand Held Metal Detector (HHMD) equipment to carry out inspection procedures on people who have different genders or do not match their gender. As we already know related to the development of techniques for concealing prohibited items, it will be very difficult to detect non-metal objects such as non-metallic knives with metal detection security check equipment. The technology that can help anticipate this is body scanner equipment, but the equipment available

at Terminal 3 of Soekarno-Hatta International Airport is very limited in number.

Problem Solving

In the previous discussion, this research discusses the problem of procedures enforced in Terminal 3 of Soekarno-Hatta International Airport. The researchers created a problem-solving description to solve the problems found that have the potential to threaten the security of flights in Indonesia and especially at Terminal 3 of Soekarno-Hatta International Airport.

a. Short-term Solution

The technique of concealing prohibited objects that has been described previously can be socialized to all aviation security personnel who carry out their main duties and functions of securing flights at Terminal 3 of Soekarno-Hatta International Airport. This can be done through regular training that can be carried out by the Soekarno-Hatta Airport organizers by utilizing the time during nonpeak hours (not peak hours) to socialize to all personnel serving at that time.

Based on the attachment to the Terminal 3 passenger flight plan on January 4, 2022 as shown in the attachment in this study, it can be seen that through this schedule, a selection of non-peak hours can be selected to socialize the development of aviation security threats for approximately 1 month, including:

The inspection procedure at the Passanger Security Check Point (PSCP) in Terminal 3 of Soekarno-Hatta International Airport is currently considered to still have an opportunity for aviation security threats to occur at the airport. To prevent the occurrence of such aviation security threats, it can be done by implementing a policy for people who will go through the Passanger Security Check Point (PSCP) Terminal 3 of Soekarno-Hatta International Airport to be checked by security personnel of the same sex/gender because this technique can strive for all people who go through the Passanger Security Check Point (PSCP) to be checked manually (body search). In addition to the above solutions, the researcher also recommends optimizing the inspection at the Passanger Security Check Point (PSCP) by changing the plan / la yout Passanger Security Check Point (PSCP) at Terminal 3 of Soekarno-Hatta International Airport to be as follows:

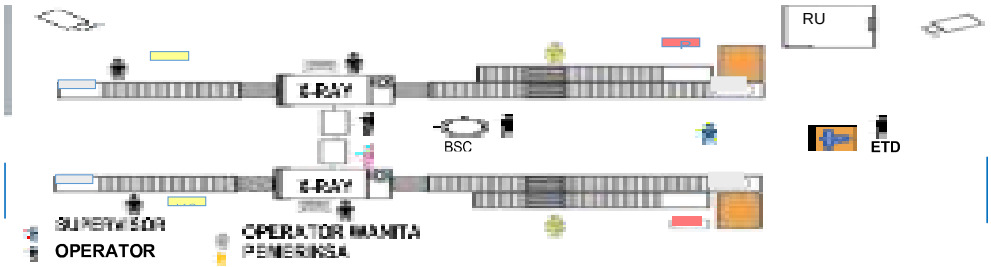


Figure 6: Recommended PSCP Plan/Layout

Equipped with 2 units of walk through metal detector (WTMD) will make people who are examined at the Passanger Security Check Point (PSCP) Terminal 3 Soekarno-Hatta International Airport can pass through the security equipment and if there is something on the body of the person being examined that can cause the alarm on the walk through metal detector (WTMD) equipment to sound, it can be continued with a manual inspection procedure (body search) or with body scanner equipment if based on the assessment and condition of the person being examined, it is not possible to be examined manually using the body scanner equipment, these changes are expected to be implemented within a maximum period of 3 months.

b. Long-term Solution

Problem solving through long-term solutions is the most effective step in anticipating the development of aviation security threats, but this step will certainly require high costs to meet the standards.

Security System A eligibility such as Soekarno-Hatta International Airport which is designated as an international airport and has more than 3,000,000 (three million) international departing passengers per year and Security System D airports, which are designated as domestic airports and have more than 1,000,000 (one million) domestic departing passengers per year.

(Based on KM 211 of 2020 concerning the National Aviation Security Program). The following is a recommendation for the plan / lay out of the Passanger Security Check Point (PSCP) at Soekarno-Hatta Terminal 3 as a long-term improvement and fulfillment step is as follows:

Figure 7: PSCP recommendations

With Long-Term Measures Equipped with 2 units of body scanner equipment at each Passanger Security Check Point (PSCP) is the most effective solution step because all people who pass through the inspection process are required to go through and be examined with a body scanner where for now the body scanner equipment is the equipment with the most up-to-date technology in anticipation of developments towards security threats of flight, it is expected that the body scanner equipment can be fulfilled within a maximum period of 1 year.

CONCLUSION

1. Aviation security personnel and aviation security facilities owned byPT. Angkasa Pura II (Persero) and used in Terminal 3 of Soekarno-Hatta International Airport at this time are very good at anticipating the development of prohibited items that can be used to carry out aviation security threats, but the layout design used at the Passanger Security Check Point (PSCP) still has weaknesses, namely the opportunity to escape objects that can be used to carry out aviation security threats.
2. The development of prohibited items technology is followed by the development of concealment techniques (modus operandi), so that the threat to aviation security increases, firearms whose specifications have a length of 3.25 inches and a weight of only 11 ounces and sharp weapons in the form of very difficult to detect when checked only with metal detection equipment and manual inspection (body search) carried out by aviation security officers, because culturally in Indonesia does not justify holding the male / female genital parts of the person being examined, during the inspection process.

Gratitude is expressed to the Activity Partner PT Angkasa Pura II located in Tangerang, which has given permission so that research activities can be carried out. It is also conveyed to all the implementation team who have been willing to work together in the research activities of the Indonesian Aviation Polytechnic Curug.

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