OPERATION ORGANIZATION AND PRACTICES IN AIRFIELD THREAT

Martina Maguľaková - Robert Klír

The article "Operation organization and practices in airfield threat" deals with the analysis of risks that may endanger the safety of the airport. It describes the different stages of risk analysis, and finally suggests a possible security measures.

K e y w o r d s : Risk, Civil Airport, Preventive Measures, Air Transport

1 INTRODUCTION

Air travel today is very important for humans. Its speed and sometimes the important fact that in some cities in the world can be reached only by air meant that in recent years there has been a great demand for it. At the same time the expansion has caused a variety of airlines that air travel is becoming more accessible to a wider number of people. This is the mode has become an integral part of many people. Therefor, safety related to aviation is an important and topical issue today.

In recent years more and more frequently in the media of the experiments, and often also of successful terrorist attacks not only in civil aviation. A milestone in the field of the 11th september 2001, when the small group of terrorists pronounce successful attacks on aircraft and the killing of thousands of people. Then it became clear that aviation security has many gaps that needed to be resolved, that similar attacks in the future, not repeated. As a result, the airports have tightened security measures.

The expansion of aviation meant that created many new companies offering a variety of security systems to ensure greater passenger safety. However, they must be based on an analysis of possible risks that may treaten it.

Each risk can be assigned to security measures. It also proposes measures that could be used and still in use.

2 LEGISLATION OF CIVIL AVIATION

In recent decades there has been a great development of civil aviation. Air transport has for the past fifteen years more than double, and it brings many benefits but also risks. The introduction of the internal aviation market has contributed significantly to speeding up this trend. Flying has become a normal means of transport, and so is the quality and safety of the transportation is vervy important. It has a decisive influence on the quality of the transport department. They are therefore set safety standards, in particular concerning Access control of passengers, baggage and cargo at airporst.

2.1 International legal standards

Aviation has more than a century of history in this period, a number of international Instruments that have played but also play an important role in aviation. The most relevant international treaties, which provide a shared ground rules on aviation security are issued by major international organizations, sucha s in particular:

- Internacional Civil Aviation Organization (ICAO);
- The European Union:
  - The European Aviation Safety Agency (EASA);
- European Organization for the Safety of Air Navigation (EUROCONTROL);
- The European Civil Aviation Conference (ECAC).

2.2 Legal norms SR

On 1 May 2004, the Slovak Republik joined the European Union, which became part of the EU common aviation market. By joining the WU in Slovakia apply all the principles of the common transport policy as well as all applicable legal action for a common aviation market. Each state is responsible for concluding its own bilateral aviation agreements ASAs (air service agreement) which must be in accordance with the principles of

the European Union. The most important legal document in the Slovak Republic in the field of aviation safety is:

- Law no. 143/1998 Z. z. Civil Aviation;
- Rule 17L safeguarding civil aviation against acts of unlawful interferece.

3 AIRPORT SECURITY THREATS

One of the most watched, as well as quantitative indicators of air transport safety in civil aviation,which has a decisive influence on the quality of the transport department. The aviation safety is the most important element.

Order to ensure aviation safety is to protect civil aviation against acts of unlawful interference. The safety of passengers, crew, ground staff and the public is a major challenge in all matters relatingto the protection of civil aviation against acts of unlawful interference.

The most serious theat to the safety signs at the airport are mainly:

- Terrorism;
- a threat to airport terminal;
- a threat to non-public part of the airport.

4 RISK ANALYSIS

The main of risk analysis is to identify the likely extent and consequences of hazardous events resulting from the work or other acivities in the system or equipment.

At the beginning of the risk analysis examines the possible negative consequences aristing form the operation of technical systems failures, mistakes by the staff, or variation in technological processes. This procedure is considered very special. It also examines the negative affects on human beings and their evironment and in the normal operation of the technical system.

Following analysis and its results are taken reasonable precautions and solutions to determine the location and design objects, and to protect and transport of hazardous materials. The process of risk analysis using a variety of situations that may be encountered during your operations management personnel. In paricular, the occurrence of adverse situations.

4.1 Risk

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4.2 The phase of risk analysis

Risk analysis is actually a process that seeks to describle the nature of risk and all connection with it. Accordingly, i tis then possible to choose the right ones not just to eliminate the potential consequances but especially the root causes of risks.

Accordingly, i tis possible to define different stages of risks, including in particular:

- analysis of environmental;
- identification of risk;
- classification of risk;
- risk assessment;
- prioritization.

4.3 Security risk analysis in air

One of the safety analyzes, with which themanagement of airports and airlines engaged inthe identification of the characteristic dangers and threats of unlawful conduct in the air. The process of identification is possible only if the knowncharacteristics of threats and risks to aviation safety. This knowledge is the main criterion in assessing any potential risks and hazards against acts of unlawful interference in aviation with regard to priorities and reliability of the airport security system.

When processing the safety analysis and risk identification in airport security systems can be used several known methods and procedural approaches to determine the nature of the risks and possible consequences for air transport. With these methods i tis possible to determine the level of acceptable risk. Analytical evaluation process of identifying risks may also provide opportunities to optimize and propose measures to improve the

overall condition of protecting and ensuring the security of civil aviation.

4.3.1 Risk factors

Risks in aviation can be divided into several groups according to risk such an object danger of public and private premises of the airport, the danger to the aircraft. With each new technology, new risk factors. I tis worth mentioning a few risk factors, namely:

- unauthorized access to VPBOL;
- unauthorized access to the baggage hall;
- unauthorized access to the aircraft before departure;
- potentially disruptive passengers on board the aircraft;
- firearms on board;
- explosives on board;
- willful damage through navigation facilities;
- environmental accidents;
- abatement of aircraft on the ground;
- collision of aircraft with birds;
- and others.

5 PROPOSE PROTECTIVE SECURITY MEASURES

Analysis of security risks in aviation is especially recently watched an area that significantly affects the process of adopting security measures in civil aviation. The results are also the basis for financial analysis of investment and operating costs of airport security level, which is significantly reflected in teh economy of the airport.

Given today is world, full of innovative technologies, new types of materials and human ingenuity is necessary to regularly adapt and improve systems, increasing safety in civil aviation. There is no security system, which would be impossible to overcome. Therefore, i tis mainly about how to limit the possibilities for overcoming them.

The measures and procedures to ensure safety and protection of civil airports is to prevent the weapons, explosives or other dangerous devices which may be used in teh commission of an act of unlawful interference shall not in any way introduced on board an aircraft or restricted areas.

In the field of civil airports are therefore the most important measures as follows:

- measures to break down the airport perimeter;
- measures to protect the safety of aircraft;
- arrangements for passengers and their hand luggage.

5.1 Reducing the Risk of Breaking the Airport Perimeter

Gateway protection airport is an airport and circuit protection lies primarily in installations modernize technical equipment with high precision and reliable identification of site disturbance.

Account should be taken the fact that there is no absolute protection of the airport perimeter. The only stand-alone solution as perimeter protection airport fencing, security does not sovle the whole building, but instead must always be a complete solution. I tis actually a comination of security systems.

Every airport that serves the international operation must be protected from the outside and inside. The way has to be dealt with protection of the airport is dismantled in the standards and guidelines of ICAO, EASA and EU regulations. Gateway protection and restricted areas may be provided in three areas.

A higher level of security is required at major international airports and some buildings at such airports. The desired level is usually not possible to achieve a common fence. To ensure the objects of special interest are used barrier-type protection systems or other types of systems that operate on different physical principles. In general we can say that the level of security respecively degree of security of any system is the proboability of such a brach of the protected object without the identification of place and time distortion. The degree of security is one of the most important parameters to assess the degree of security. Currently used as:

- fence detection systems;
- camera systems;
- and others.

5.1.1 Proposed Measures

- **More thorough airport perimeter security lighting** at a time when reduced visibility (fog, nigth), because then the adversary more opportunity to enter the protected area in any way.
- **Guarding the living force** that is guarding the building and area individuals. This would protect the airport worker perform private services with trained Professional dogs. Physical control of the buidling woul be activated i fit has been reported disturbance area.
- **The introduction of new technologies** for example new sensors, new types of fencing, new camera system. This change is needed because today technology development is still ahead.

5.2 Increasing Protection of the Safety of Aircraft

The safety and control measures in relation to the aircraft on the trip and airport parking areas is to weapons, explosives and other dangerous devices which may be used in the commission of unlawful interference were introduced on board and aircraft.

These are the prohibited items that could pose a hazard which could endanger the crew on board the aircraft, passengers, aircraft and flight safety.

The role of security measures to prevent unauthorized access to aircraft boarding aircraft before departure and ensure that do not let passengers on board an aircraft during transit stops.

Get a weapon aboard an aircraft is in compliance with basic safety procedures essentially impossible. Even police officers, they can get on board an aircraft with a weapon only under a permit issued by the Ministry of the interior, or under international agreements. Command must be familiar with a number of armed persons on board and the places where sitting.

When there is suspicion that the aircraft may be subject to unlawful interference, it is necessary to notify the appropriate authorities, whether the airport operator or the Ministry of Interior to take special safety inspection of the aircraft in order to find hidden weapons, explosives or other dangerous devices.

5.2.1 Proposed Measures

- **The use of new technology** designed to prevent the transfer of weapons, explosives and other dangerous items on board aircraft. For example a metal detector in body cavities, which i sused to detect small metal object hidden in body cavities. Security guard randomly selects one passenger, and this survey or the passenger who was suspicious message.
- **Regularly inform the traveling public** what is forbidden and what is allowed to bring on board an aircraft. Further more, to inform passengers about the rules on cabin baggage container (sucha s a take with him). The Europena Union sets rules for all member airlines.
- **A thorough inspection of cargo** by moderm X-ray macines. The operator of this equipment will need to train attendants.
- **Check cargo security officer** at the airport with dogs trained to detect explosives and drugs. They will ensure that cargo contains hazardous substances or weapons.
- **Random inspection** of food, which made selecting one portion / piece of foof board the aircraft and ask the catering staff to be tasted. The role of prevention will find that whether the aircraft did not receive drugs or substances that could endanger the health of passengers and staff.

5.3 Reduce Risks to the Safety of Passengers and their Hand Luggage

To the passengers got on the board, must pass a series of prcedures, wich include the screening of passengers and their cabin baggage. This control is one of the most fundamental control in terms of safety, so i tis also time-consuming. This is a very detailed inspection of passengers and hand luggage review, which passes through X-band, cpable of high accuracy to detect unwanted objects. Passengers must pass all the hardware and electronic items (cell phone, belt, watches, necklaces) is carrying into the prepared

bowl. They then pass through the X-ray scanner as well as cabin baggage. Only then can proceed to check where the first frame passes through a metal detector and then is subjected to additional inspection of hand held metal detectors, carried out by security staff.

Technology still go ahead and equipment will be constantly improved, but without fofgetting the human factor, which it manages and performs all over the supervision. This factor is around today and it can be assumed that in the future security system is indispensable. Accordingly, the people who work with it constntly trained to perform their work best, and that they could rely on.

5.3. Proposed Measures

The use of frame metal detectors already at the entrance to the airport, because even at entry is important to identify whether a passenger does not transfer dangerous devices that can be used in the commission of unlawful interference. The detectro must track security guard at the airport and the risk of disclosure to ensure the attacker.

Preventing the mexing of travelers who have already passed the security control with the person who chcecks still waiting. Aircraft operator is obliged to take measures to prevent the possibility of mixing and passengers. In case there would be a mixture of passengers must be re-submitted to secrutiy checks.

Perform profiling passengers, where greater attention to suspicious persons (persons coming from countries supporting terrorism) as a small group of schoolchildren. Passengers will be monitored by a camera system and then the security officer at the airport.

Thorough inspection of baggage and passengers to detect prohibited articles and substances. The inspection of baggage and passengers can use hand held metal detectors, frame metal detector personal searches of passengers and different X- ray machines that can detect prohibited articles and substances.

4 CONCLUSION

Air transport is one of the safest modes of transport, despite the fact that it threatens an increasing number of risks that are described at least approximately.

The analysis conducted shows that the safety of civil, but not in civil aviation could be done even more action, which is also of increasing the boom times, when they are available to the public a new and modern technologies.

Security at airports is nowadays secured many new technologies, but these times of advanced still rising. The new measures, but sometimes increases the skill of those who would like airport security compromise. I tisa a mistake, that some of the ways to circumvent control can also be found on the internet.

We suggested a few more measures to ensure greater safety of passengers at airports, but well known that there is no assurance system, which would be impossible to overcome.

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AUTHOR(S)´ ADDRESS(ES)

Martina MAGUĽAKOVÁ, Bc.,
Letecká fakulta technickej univerzity v Košiciach
Katedra manažmentu leteckej prevádzky
Rampová 7, 041 21 Košice, Slovenská republika
e-mail: magulakova.martina@gmail.com

Robert KLÍR, Ing., PhD.
Letecká fakulta technickej univerzity v Košiciach
Katedra manažmentu leteckej prevádzky
Rampová 7, 041 21 Košice, Slovenská republika
e-mail: robert.klir@tuke.sk

Reviewer: Ján Kolesár, Ing. PhD.