

CARGO AND MAIL SECURITY CONTROL IN CIVIL AIR COMMUNICATIONS

ŁUKASZ SZYMANKIEWICZ

ABSTRACT

The article is dedicated to the security control of cargo and mail in civil air transport. The hypothesis presented in the article is that cargo and mail security control can be regarded as an effective method of protecting civil aviation against the act of unlawful interference. In order to verify it, the author tries to answer the question what elements and how do they affect the effectiveness of cargo and mail security control?

For this purpose, the systemic, legal and institutional method was used. Thanks to the developed algorithm of the procedure, the control methods used, appropriate personnel and the lack of access to the inspected cargo of unauthorized persons, this method is considered to be the most effective and successful form of civil aviation security.

KEY WORDS

Security control, cargo and mail, civil aviation security.

DOI: 10.26410/SF_4_2/21/7

ŁUKASZ SZYMANKIEWICZ, PHD

e-mail: lszymankiewicz@wsb.edu.pl

ORCID: 0000-0002-9859-9896

WSB University

The essence of civil aviation safety is influenced by two concepts: aviation safety and aviation security. This article is dedicated to civil aviation security with particular emphasis on cargo and mail security control as one of the elements of the security system. Aviation security, on the other hand, consists of combined means and human and material resources, intended to protect civil aviation against acts of unlawful interference (Jaferník, Fellner, 2015: 23). The act of unlawful interference is defined in *Annex 17 to the Convention on International Civil Aviation* as an unlawful and deliberate act or attempt to commit an act that threatens the safety of civil aviation, where seven general categories of crimi-

nal acts are listed exhaustively (*Annex 17 to the Convention on International Civil Aviation. Safeguarding International Civil Aviation Against Acts of Unlawful Interference, 2011: 1-1*). However, in the case of cargo and mail, the following threats can be indicated, listed in the Annex:

- destruction of the aircraft while in operation;
- carrying on or entering the aircraft or airport premises, weapons or a dangerous device or material intended for criminal purposes;
- using the aircraft during its operation to cause death, serious injury or serious property damage, or environment

The civil aviation security system consists of the following elements:

- legal regulations – including regulatory, supervisory and executive institutions;
- airport security – by using physical and perimeter protection, CCTV, employee access control, security control of personnel, vehicles and airport supplies;
- access control to the restricted area
 - using ID cards, boarding pass checking, CMC crossing service and authorization verification;
- safety check – including passengers and cabin baggage, flight personnel and crew, check-in baggage, cargo and mail, airport supplies and in-flight supplies;
- forms of protection on board during the flight, i.e. protective guards and physical obstacles in the form of a door to the cockpit (Siadkowski, 2015a: 129),
 - intelligence and profiling.

This article is dedicated to one element of the security system, i.e. security control, detailing the control of cargo and mail. The division of security control into the six above-mentioned types results from the separate specificity of each of these groups, where the primary goal is to ensure an appropriate level of security and prevent the introduction of a prohibited item into the security restricted area of an airport and on board an aircraft, which could be used to carry out an act of unlawful interference. (Szymankiewicz 2018b: 62). To achieve the above goal, it is necessary to adapt the procedures and work out an algorithm of conduct to enable the most effective security control. The author puts forward a hypothesis that cargo and mail security control can be considered an effective method of protecting civil aviation against the act of unlawful interference. On the other hand, the research question is: what elements

and how do they influence the effectiveness of cargo and mail security control? In this article, the author uses the following research methods: systemic, legal and institutional; however, all legal acts presented in the article are valid as of November 10, 2020.

Legal considerations in the context of security checks

In the case of Poland, the legal provisions on security control arise from three sources: international law, European Union Community law and national law (Ceglarski, 2014: 196). At the international level, the legal provisions relating to the security of civil aviation are regulated by the Convention on International Civil Aviation, signed in Chicago on December 7, 1944 where the basic international legal act dedicated to the protection of civil aviation is Annex 17 to the Convention on International Civil Aviation "Protection of International Civil Aviation against acts of unlawful interference" (Rzepka, 2013: 17; Szymankiewicz, 2019: 90). For countries belonging to the European Union, the basic legal act in the field of civil aviation security is Regulation (EC) No 300/2008 of the European Parliament and of the Council of 11 March 2008 on common rules in the field of civil aviation security and repealing Regulation (EC) No 2320 / 2002. The other Community legal acts in the field of civil aviation security are:

- Commission Implementing Regulation (EU) 2015/1998 of 5 November 2015 laying down detailed measures for the implementation of the common basic standards on civil aviation security;
- Commission Regulation (EC) No 272/2009 of 2 April 2009 supplementing the common basic standards on civil aviation security set out in the Annex to Regulation (EC) 300/2008

of the European Parliament and of the Council;

- Commission Implementing Decision C (2015) 8005 of 16 November 2015 laying down detailed measures for the implementation of the common basic standards on civil aviation security containing the information referred to in Article 18 lit. A) of Regulation (EC) 300/2008 – it is a classified document, not published in the Journal of Laws.

National regulations on civil aviation security, including security control, are:

- Polish Aviation Law Act of 3 July 2002, Journal of Laws No. 130, item 1112;
- Minister of Transport, Building and Maritime Affairs Regulation of 31 July 2012 on the National Security of Civil Aviation Program, Journal of Laws No. 2012 item 912, (NSCAP);
- Regulation of the Minister of Transport, Building and Maritime Affairs of 20 September 2013 on the National Aviation Security Training Program in the field of civil aviation security, Journal of Laws No. 2013 item 1147 (NAT);
- Regulation of the Minister of Transport, Building and Maritime Affairs of 25 July 2013 on the National Quality Control Program in the field of civil aviation security, Journal of Laws No. 2013 item 1148 (NQCS).

Organizational dimension of cargo and post security control

Pursuant to Regulation (EC) No 300/2008 of the European Parliament and of the Council, security control means the application of technical or other means to identify or detect prohibited articles (OJ L 97) and to prevent people from entering the security restricted area and the aircraft with prohibited items or items that may endanger infrastructure

or flight. Prohibited items means weapons, explosives or other dangerous objects, devices or substances that may be used to commit an act of unlawful interference that threatens the safety of civil aviation (OJ L 97). From March 18, 2013, the obligation to perform security check rests with the airport operator, who performs the tasks imposed by the law by the airport security service (Szymankiewicz 2018a: 74). According to Art. 21 of the Aviation Law Act, the airport security service is the internal security service or a specialized armed security unit operating on the basis of the Act on the protection of people and property of August 22, 1997 (Journal of Laws 2002, No. 130, item 1112: Article 21). The possibility for the airport managing body to choose the entity performing the security control is provided for in Art. 186b, paragraph. 1 of the Aviation Law Act, pursuant to which tasks related to security control in civil aviation are performed by:

- 1) the airport operator, in particular with regard to the control of persons, baggage, cargo, mail, in-flight supplies and airport supplies:
 - a) in connection with air transport;
 - b) in the area of crossings from the public area to the restricted area of the airport:
- 2) registered agent and a registered supplier of in-flight supplies as defined in Regulation No 300/2008 / EC (ibid: Art. 186b, paragraph 1).

After selecting the entity responsible for the security check, more attention should be paid to the human factor, because regardless of the solutions regarding the selection of the entity performing the security check, it is physically carried out by a screener who must meet a number of requirements and have appropriate qualifications and com-

petences. Ultimately, it is the screener that determines the effectiveness of the civil aviation security system. The basic document entitling to work in the position of a screener is a valid certificate issued by the president of the Civil Aviation Association (CAA), an entry on the list of qualified physical security employees is also mandatory. The changing work environment (technological development, changes in legal regulations and procedures) and the emergence of new threats force constant changes in the security system, which should be aimed at constant improvement of the system effectiveness and increased security. One of the most important forms of improving competences and skills is training. In the field of civil aviation security, the following types of training are provided:

- 1) general in the field of civil aviation security awareness;
- 2) civil aviation security awareness;
- 3) basic training;
- 4) professional training;
- 5) specialized for people:
 - a) directly supervising the ones who apply security control measures,
 - b) responsible for the organization of security civil aviation in the entity conducting aviation activities;
- 6) instructors;
- 7) national auditors and internal auditors of quality control in the field of civil aviation security;
- 8) EDD team;
- 9) refresher training; OJ L 2013 item 1147: Art. 2).

However, with regard to the practical skills of operators, training using computer programs, in which operators analyze virtual images, and also have the opportunity to acquire the ability to use the image enhancement functions available in the X-ray machine are of key importance. (Szy-

mankiewicz 2018b: 66). The third type of training that should be subjected to a screener is so-called *on the job training*. This method is particularly important in the case of newly hired employees, when retraining or modifying the scope of duties of employees and in the case of training good habits and eliminating errors, violations and shortcomings. The most important elements of practical training for a screener performing cargo and mail security checks are the following:

- conducting a proper manual inspection of cargo and mail;
- operation of the x-ray device including image analysis and the use of image enhancement functions;
- operation of devices for detecting trace amounts of explosives;
- using the developed communication system in the event of detection of a prohibited and / or dangerous object in the cargo;
- reacting to the detection of the cargo of a prohibited and / or dangerous item;
- conducting a simulation of security checks, taking into account unusual scenarios.

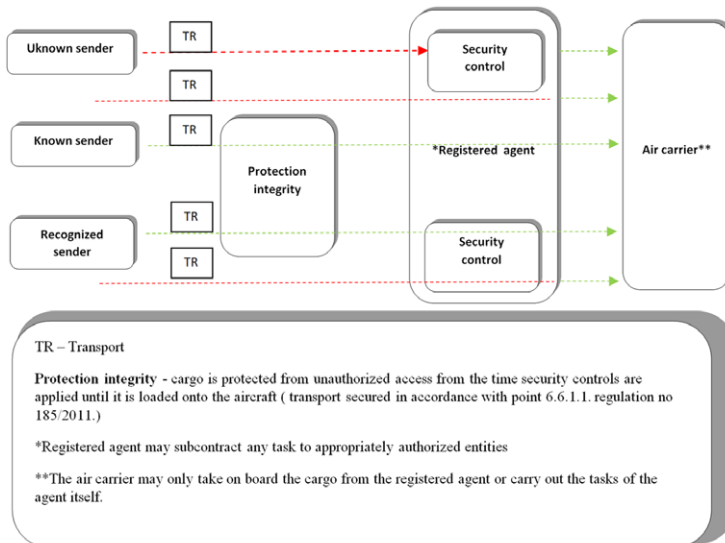
Cargo and mail safety control as an algorithm of conduct

Security control in civil air transport is a process defined and based on legal acts, thanks to which it is possible to present an algorithm of conduct during security control, the characteristics of which are determined, among others, by the specificity and list of prohibited items in relation to the controlled types of people and objects. Cargo and mail constitute a common category which, due to the very wide scope of the subject, often causes many problems during security

checks. The load can be virtually any type of goods, ranging from the smallest and prosaic things, to items with large dimensions or complex construction, the inspection of which can be quite a challenge. The cargo and mail may also contain hazardous materials in the form of substances and articles, the properties of which may pose a threat to life, health, the environment or property. The carriage of dangerous goods by air is allowed if the relevant regulations and requirements set out in the *IATA Dangerous Goods Regulations* are met. The IATA DGR Manual classifies approximately 3,000 hazardous materials, which best illustrates the difficult and complex nature of cargo and mail security checks. In order to facilitate screening while maintaining an adequate level of security, a number of facilities have been introduced in the form of a registered agent, known consignor and recognized consignor who, by applying appropriate security controls, can optimize their activities in the air transport in-

dustry. Pursuant to Regulation 2015/1998, a registered agent prior to loading an aircraft undergoes a security screening of all cargo and mail, unless the registered agent / known consignor has applied the required security controls to the shipment and from the moment of application of these security controls until the moment of loading, the shipment was protected against unauthorized interference. In the case of an account consignor, in addition to applying the required controls to secure the consignment against unauthorized interference, there is a restriction on the cargo that prevents the account consignor's cargo from being carried on a passenger aircraft (OJ L 299: 6.1.1). The registered agent plays a key role in this system by screening all cargo and mail prior to being loaded onto an aircraft, unless the entities involved in a secure supply chain have ensured adequate protection of the cargo and mail sent. A diagram of a secure supply chain is presented below.

Fig. 1. Freight and mail transport system



Source: <http://www.ulc.gov.pl/pl/ochrona/cargo/zarejestrowany-agent>, access 30.04.2017

The type of shipment should be taken into account in the security checks of cargo and mail in order to adapt the methods or measures to the greatest effectiveness in the detection of prohibited articles. Screener has to make sure that the applied methods or measures ensure a sufficient level of security, thus complying with the security control conditions and guarantee (as far as possible) that the shipment does not contain prohibited articles. The composition of specific methods of cargo and mail security control are:

- a) manual inspection;
- b) x-ray equipment;
- c) EDS (Explosive Detection System) equipment;
- d) explosive detection dogs (EDD);
- e) ETD (explosive trace detection) equipment;
- f) visual inspection;
- g) metal detection equipment (MDE) (ibid: par. 6.2.1.5).

In the case of security control of cargo and mail, there are also shipments exempt from security control and high risk cargo or mail (HRCM). HRCM may consist of shipments that appear to have been subjected to interference by third parties to a degree that would allow the inclusion of prohibited articles, reported by the appropriate authority as posing a threat to aviation security and from third countries – a full list of countries from which cargo and mail are classified as HRCM is classified, but the most common ones are countries where armed conflicts are taking place or are widely recognized as “fallen countries”.

For HRCM shipments, security control is applied in the form of a combination of at least two control methods together with the ETD method. In the case of cargo and mail, an element that hinders

the conduct of security checks is the fact that the load can be practically anything, often large and complicated items are transported, e.g. engines, gearboxes or electronic equipment that cannot be disassembled – this is a factor negatively affecting the level of protection. However, one should also take into account the lack of third parties who cannot interfere with the shipment after the screening has been carried out until the aircraft is unloaded – this element has a positive effect on the level of security. An additional advantage, despite the fact that companies from the aviation industry as well as courier and forwarding companies care about time – is the fact that in the case of cargo and mail security checks, security control operators do not have as much time pressure as in the case of screeners performing security checks of passengers, cabin luggage and checked baggage. According to the author, from a practical point of view, the ultimate effectiveness of security control is precisely the access to the checked item, luggage or shipment of a third party, who may manipulate it or use it to carry out an act of unlawful interference.

It is also worth mentioning the elements complementing the security system, including cargo and mail security control, which are supervision and compliance control. Supervision and compliance control are aimed at ensuring the proper conduct of the control while maintaining the relevant legal provisions and procedures. Supervision over security control for the benefit of the President of CAA is exercised by the Border Guard, which is authorized to independently undertake activities consisting in: observing and recording the functioning of the security control point; controlling the number of screeners at the security control station

and reporting doubts to the airport operator regarding the psychophysical condition of operators responding to violations of civil aviation security regulations; inspecting the safety checks of certificates held by operators; responding to signals about disturbance of public order at the security control point and the adjacent area (Journal of Laws 2002 No. 130, item 1112: Article 186b). However, in relation to the compliance control, the National Quality Control Program mentions security audits, security inspection, security test, security review (Journal of Laws of 2013, item 1148: Article 4); controls are carried out by national and internal auditors.

In conclusion, due to the current nature and the developed algorithm of conduct, cargo and mail security control is considered the most effective method to prevent prohibited articles from being brought on board an aircraft that could be used to carry out an act of unlawful interference. When comparing the security checks of cargo and mail to the security checks of other categories of items, it is important to indicate that the final effectiveness of the method is also based on the elimination of the possibility of landing the checked cargo having third party "secure" status. What is also important, the measures and methods of cargo and mail security control presented in the article are not only an effective form of civil aviation security, but also due to the developed algorithm of conduct, they do not adversely affect the efficient flow of cargo and mail by air.

Bibliography

- Annex 17 to the Convention on International Civil Aviation. Safeguarding International Civil Aviation Against Acts of Unlawful Interference (2011), The International Civil Aviation Organization.
- Aviation Law Act, July 3, 2002 OJ No. 130 item 1112(2002).
- Ceglarski M. (2014), Bezpieczeństwo w porcie lotniczym – wybrane procedury kontroli bezpieczeństwa pasażerów i bagażu in: Bezpieczeństwo w lotnictwie w różnych aspektach działalności lotniczej, (Eds.) T. Compa, J. Rajchel, K. Załęski, Dęblin.
- Decision 6 of the President of the CAA of February 18, 2014 w sprawie regulaminu przeprowadzania egzaminów dla kandydatów na operatorów kontroli bezpieczeństwa (2014).
- Implementing Regulation of European Commission (EEC) 2015/1998 of November 5, 2015 laying down detailed measures for the implementation of the common basic standards on aviation security, OJ No L299 of 2015.
- Jaferník H, Fellner R. (2015), Prawo i procedury lotnicze, Gliwice.
- Karnowska-Werner M. (2010), Ochrona portów lotniczych przed zagrożeniami terrorystycznymi, in: Reagowanie państwa na zagrożenia terroryzmem lotniczym, (Ed.) A. Glen, Warszawa.
- Minister of Transport, Building and Maritime Affairs Regulation of 20 September 2013 on the National Aviation Security Training Program in the field of civil aviation security OJ 2013 item 1147.
- Minister of Transport, Building and Maritime Affairs Regulation of 31 July 2012 on the National Security of Civil Aviation Program, OJ 2012 item 912.
- Regulation of European Commission (EEC) no 272/2009 of April 2, supplementing the common basic standards on civil aviation security set out in the Annex to the Regulation (EC) 300/2008 European Parliament and the Council, OJ No L91, 2009.

- Regulation of European Parliament (EP) and the Council no 300/2008 of March 11, 2008 on common rules in the field of civil aviation security and repealing the regulation EP) no 2320/2002, OJ No L97 of 2008.
- Regulation of the Minister of Transport, Building and Maritime Affairs of 25 July 2013 on the National Quality Control Program in the field of civil aviation security, OJ 2013 item 1148.
- Rzepka A., Realizacja kontroli bezpieczeństwa w portach lotniczych na przykładzie lotniska Chopina, in: *Bezpieczeństwo w lotnictwie w wybranych aspektach funkcjonowania portu lotniczego*, (Eds.) T. Compa, J. Rajchel, K. Załęski, Dęblin.
- Siadkowski A. (2011), Między wolnością a bezpieczeństwem. Kontrola bezpieczeństwa pasażerów w ochronie lotnictwa cywilnego, in: *Współczesne determinanty bezpieczeństwa*, (Eds.) I. Bieńkowska, J. Szymczyk, R. Kochańczyk, Gliwice.
- Siadkowski A.K. (2013), *Bezpieczeństwo i ochrona w cywilnej komunikacji lotniczej*, Szczytno.
- Siadkowski A.K. (2015a), *Prawodawstwo w ochronie lotnictwa cywilnego*, Dąbrowa Górnicza.
- Siadkowski A.K. (2015b), *Bezpieczeństwo portu lotniczego w systemie ochrony lotnictwa cywilnego*, in: *Wybrane aspekty zarządzania portem lotniczym* (Ed.) Siadkowski A.K., Dąbrowa Górnicza.
- Szymankiewicz Ł. (2018a), *Polski system ochrony lotnictwa cywilnego przed aktem bezprawnej ingerencji*, „Res Politicae” t. X, pp. 67-85.
- Szymankiewicz Ł. (2018b), *Security Control as Part of the Civil Aviation Security System Against the Acts of Unlawful Interference*, “Security Forum” vol. 2, no 2, pp. 61-71.
- Szymankiewicz Ł. (2019), *Terroryzm lotniczy wobec Izraela*, Warszawa 2019.
- Zakrzewska A., Korczak M. (2013), *Ochrona lotnictwa cywilnego w świetle uwarunkowań prawnych*, in: *Bezpieczeństwo w powietrznej i morskiej przestrzeni państwa*, (Eds.) T. Compa, J. Rajchel, K. Załęski, Dęblin.