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MEASURES TAKEN BY THE EUROPEAN UNION AGENCY FOR AVIATION SAFETY TO ENSURE AVIATION SAFETY

Środki Agencji Unii Europejskiej ds. Bezpieczeństwa Lotniczego służące zapewnieniu bezpieczeństwa lotnictwa

Abstract: *The author will discuss the subject of aviation safety. The measures taken by EASA to maintain the high standard of aviation safety will be identified. At the same time, the paper will present the genesis of the establishment of the European Union Agency for Aviation Safety.*

Keywords: EASA, aviation safety, civil aviation

Streszczenie: *Autorka poruszy tematykę bezpieczeństwa lotniczego. Zostaną wskazane środki stosowane przez EASA, aby utrzymać wysoki standard bezpieczeństwa lotniczego. Jednocześnie, w referacie zostanie przedstawiona geneza powstania Agencji Unii Europejskiej ds. Bezpieczeństwa Lotniczego.*

Słowa kluczowe: EASA, bezpieczeństwo lotnicze, lotnictwo cywilne

*Europe has made air safety a priority,
as is shown once again by the creation of the Agency¹*

1. Introduction

Aviation safety is a key issue addressed by the states, airlines, as well as international organizations and other entities. They all strive to reduce the hazards of air transport. According to Marian Bujnowski, the threats present in the civil aviation can be divided into:

- a) those which are natural and occur commonly. These are atmospheric phenomena, volcanic eruptions, or bird strikes [3];
- b) those arising from human activities. This group is divided into threats that arise as a result of unintentional activities (e.g. errors in the design or production of the equipment) or intentional ones (e.g. aircraft hijacking) [1].

A. Śliwińska lists the following threats:

- c) military and non-military ones. Military threats are associated with the occurrence of a potential enemy that can cause a conflict, while non-military threats can be divided into natural, technical, social and extraordinary environmental ones;
- d) internal and external ones. The first group is generated by people who work at the airport. The second group results from the activities of criminals, individual persons or terrorist groups [14].

M. Bujnowski also mentions the following sources of threats to modern civil aviation: terrorism, psychological factors, economic and operational threats, aircraft shootdowns, unmanned aircraft or lasers [1].

At this stage, it should be emphasized that "safety" and "security" do not mean the same. The first term refers to regulations intended for the production and use of aircraft. The second one consists of organizational and legal as well as operational and technical framework for the prevention of illegal acts targeted at civil aviation. According to J. Cichocki and A.K. Siadkowski's safety refers to the achieved state of security and has a static connotation. On the other hand, the field of security is related to dynamics, because it seeks to expand the security system and ensure security on a continuous basis [2, 13]. K. Myszone-Kostrzewa believes that aviation security deals with the protection of aviation against unlawful acts, for example terrorist attacks [4,5,6,7,10], and aviation safety is about civil aviation security, which is related to airspace and traffic in this space [11].

Considering the above, it should be noted that aviation safety and security are complementary to each other [15]. Pursuant to Annex 19 to the Convention on International Civil Aviation, safety is a state in which the risks associated with various types of aviation activities related to or directly supporting aircraft operations are reduced to an acceptable

¹ Words uttered by Loyola de Palacio during a meeting of the Transportation Commission

level and controlled [23]. The definition of security is included in Annex 17 to the Convention on International Civil Aviation. According to it, security is the safeguarding of civil aviation against acts of unlawful interference. This goal is achieved through the use of a combination of human and material resources and means [22]. Therefore, an effective security is dependent on the existence of aviation safety. The European Union Agency for Aviation Safety (EASA) is the authority established to ensure a high and uniform level of safety [21].

Given the broad subject framework of the European Union Agency for Aviation Safety, the purpose of this study is to outline the means that the Agency uses to ensure a high and uniform level of aviation safety.

2. History of the establishment of the European Union Agency for Aviation Safety

Before the establishment of the European Union Agency for Aviation Safety (EASA), there was an organization called Joint Airworthiness Authorities (JAA), which dealt with the requirements for the design, construction and certification of passenger planes. After some time, JAA evolved into an intergovernmental organization, the goal of which was to ensure a high and common level of aviation safety in the member states. Over time, JAA's activities became insufficient, as a result of which in 1998 works began to create uniform regulations in the field of aviation safety at the level of the European Communities. In this way, an agreement was signed on the transfer of the JAA standardization tasks to the Agency [9]. EASA was established in 2002 under the Regulation No. 1592/2002 of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency [12,20]. In accordance with the preamble to the Regulation, the European Parliament and the Council applied Art. 80 clause 2 of the Treaty establishing the European Community (currently 100 (2) TFEU) [19]. According to this article, the Council, acting by a qualified majority, may decide to what extent and in which manner the relevant provisions for sea and air transport may be adopted. In this case, the procedural provisions of Article 71 TEC were applied, according to which the Council, acting in accordance with the procedure laid down in Article 251 (TEC) and after consulting the Economic and Social Committee and the Committee of the Regions, established: a) common rules applicable to international transport to and from the territory of a Member State or passing across the territory of one or more Member States; (b) the conditions under which non-resident carriers may operate transport services within a Member State; c) measures to improve transport safety [18]. Under current legislation, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, may lay down appropriate provisions for sea and air transport. The provisions are introduced after consulting the Economic and

Social Committee and the Committee of the Regions. Thus, in the case of air transport, provisions will be issued under the ordinary legislative procedure, pursuant to Art. 294 of TFEU (formerly in accordance with the procedure under Article 251 of TEC) [18,19]. EASA is a third generation agency that enjoys decision-making powers. It is an autonomous agency with legal personality and wide independence. EASA is based in Cologne. Thus, it is a regulatory agency, the task of which is to enact and implement European Union law in a given sector [8].

3. Measures taken by the European Union Agency for Aviation Safety

3.1. Introduction

The European Union Agency for Aviation Safety increased its competence from 2002 to 2018. In the original version of the Regulation, EASA was equipped with the following means: issuance of opinions addressed to the Commission, issuance of certification specifications, including airworthiness codes and acceptable means of compliance, as well as any guidance material regarding the application of this Regulation and its implementing rules. In addition, the Agency could make relevant decisions (Article 13 of Regulation 1592/2002) [20]. At this stage, it should be emphasized that, according to the opinion of the European Economic and Social Committee on air traffic safety (issued in 2006), EASA should be given more competence. In addition, the opinion indicated that EASA should take over the licensing process from the Joint Aviation Authorities (JAA) and deal with airport security, air traffic management and air navigation services [16]. Accordingly, in 2008 the catalog of funds used by the Agency was expanded. Pursuant to art. 18 of the Regulation No. 216/2008 the Agency was equipped with additional measures, such as recommendations, certification specifications and reports from standardization inspections [17].

3.2. Measures

Currently, the Agency is equipped with wider competences and may use more resources to ensure the safety of civil aviation. In accordance with art. 76 item 1, the Agency, upon request, supports the Commission in preparing proposals for amendments to the Regulation (EU) 2018/1139 of the European Parliament and of the Council, as well as delegated and implementing acts adopted pursuant thereto, in accordance with the principles set out in Article 4 of this Regulation. The documents which the Agency submits to the Commission shall take the form of an opinion.

In turn, pursuant to Art. 76 item 2 of the Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018, the Agency issues recommendations addressed to the Commission for the application of Art. 70 and 71 [21, 29]. In addition, the Agency, in accordance with art. 115 and applicable delegated and implementing acts adopted pursuant to this Regulation, issues certification specifications and other detailed specifications, acceptable means of compliance and materials containing guidelines for the application of this Regulation and the delegated and implementing acts adopted pursuant thereto.

In addition to the measures indicated above, EASA makes the relevant decisions [28]. The Agency may grant exemptions to any natural or legal person it has issued a certificate in the situations and under the conditions specified in art. 71 par. 1 of the Regulation. In this case, the Agency shall immediately notify the Commission and the Member States, through the repository, of the exemptions granted, of the justification for granting them and, if necessary, of the necessary mitigation measures taken. It should be noted that if the exemption has been granted for a period exceeding eight consecutive months or if the Agency has granted the same exemption several times and its total duration exceeds eight months, the Commission shall assess whether the conditions laid down in 71 par. 1 of the Regulation (EU) 2018/1139 of the European Parliament and of the Council have been met. If the Commission considers that they have not been complied with, it shall adopt implementing acts containing its decision on this matter. These implementing acts are published in the Official Journal of the European Union and are included by the Agency in the repository. The Agency shall withdraw the exemption as soon as it receives notification of this implementing act. Inspection reports and other monitoring activities are further measures adopted by EASA. It should also be noted that the Agency is entitled to respond without undue delay to urgent security issues falling within the scope of this Regulation by:

(a) determining the corrective actions to be taken by natural and legal persons for which the Agency acts as the competent authority, and providing them with relevant information, including guidelines and recommendations, if necessary to ensure the implementation of the objectives set out in Art. 1 of the Regulation (EU) 2018/1139 of the European Parliament and of the Council. The Agency may also issue safety bulletins containing non-binding information or recommendations addressed to natural and legal persons involved in aviation activities;

(b) defining the safety objectives to be achieved and recommending corrective actions to be taken by the competent national authorities, as well as providing relevant information to those competent national authorities if this is necessary to ensure that the objectives set out in Art. 1 are met.

In relation to item (b), the national competent authorities shall without undue delay inform the Agency of the measures taken to achieve those safety objectives as defined by the Agency. In addition, where the problem concerns more than one Member State, the

national competent authorities shall cooperate with the Agency to ensure that the necessary measures to achieve safety objectives are taken in a coordinated manner. In addition to the above, in accordance with Art. 76 item 7 of the Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018, the Agency issues opinions on individual flight time determination programs proposed by Member States in accordance with delegated and implementing acts adopted in accordance with Article 32 par. 1 lit. b) which deviate from the certification specifications adopted by the Agency [21].

3.3. Emergency Airworthiness Directive

The European Union Agency for Aviation Safety may issue airworthiness directives in response to urgent aviation safety issues. EASA has issued many such directives. One of them was the Airworthiness Directive of the European Aviation Safety Agency (EASA) No. 2019-0177-E of 19 July 2019 in connection with CASA Directive 44/19 of 19 July 2019 issued by the Australian Government, Civil Aviation Safety Authority [25, 29]. Based on these documents, operations performed by GippsAero GA8 and GippsAero GA8 – TC 320 aircraft were banned for a period of 15 days from 20 July 2019 (from the date of the entry into force of both Directives). The ban was connected with the objections regarding the safety of flying this type of aircraft. The abovementioned directives were repealed both by EASA (Notice No. 2019-0177-CN of 25.07.2019) and by the Australian Aviation Authority (CASA No. 46/19 of 25 July 2019) [26, 27].

3.4. Alternative Methods of Compliance to Airworthiness Directives (AMOC to ADs)

An Alternative Method of Compliance (AMOC) is an EASA-approved derogation from the airworthiness directive. This way of achieving the level of safety differs from the one specified in the directive. It aims to solve the issue of dangerous condition of products, parts and accessories. AMOC has to provide an acceptable level of safety that is equivalent to the level of safety that would be achieved by the originally issued airworthiness directive [24].

4. Conclusions

Thanks to its independence and decision-making powers, the European Union Agency for Aviation Safety can influence the safety of civil aviation. The means that this Agency is equipped with allow it to immediately response to aviation hazards by issuing, e.g. an Emergency Airworthiness Directive. In addition, the Agency's task is to support countries in the process of the harmonization of the security framework. It should be emphasized that

the Agency cooperates on a continuous basis with the Member States of the European Union, as well as with third countries or international organizations, such as FAA or ICAO. The main question arises whether the Agency is able to minimize the number of accidents or incidents. The financial resources allocated for the training of the crews or technical staff are of great importance. Factors that cause aviation accidents or incidents can be dormant and active. It should be noted that an aviation accident or incident results from several factors that occurred at the same time. From this point of view, the countries should invest in the training of people who in the future will be responsible for passenger traffic both in the air and in the airport infrastructure. In addition, the already existing *just culture* should induce anyone who witnesses a situation that may cause an aviation threat to report such cases in order to be able to respond to the existing problem in a timely manner. For the seventeen years of operation of EASA, its competences and applied measures have expanded, thus it can be concluded that, if needed, EASA can be entrusted with further tasks to improve civil aviation safety.

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