AVIATION ACCIDENTS INVOLVING BOEING 737 MAX: LEGAL CONSEQUENCES

ANNA KONERT*

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1. INTRODUCTION

A new type of Boeing 737, i.e. the Boeing 737 MAX, operated by the Indonesian Airlines Lion Air crashed in October 2018. A very similar accident took place on 10 March 2019. The aircraft belonged to the Ethiopian Airlines. In both cases, shortly after the take-off the aircraft suddenly gained and lost altitude. It might have been caused by the defectively working MCAS (Manoeuvring Characteristics Augmentation System), which is to prevent an aircraft from losing lift force. The system automatically pushes the airplane nose down if the angle of attack is excessive. It was introduced because of the use of new, more powerful engines on Boeing airplanes (very modern and efficient LEAP-1B engines produced by CFM International), which was a response to the development of the competing Airbus A320. The heavier engines and their new nacelles increase the risk of losing lift.

The systems in the 737 MAX series are operated similar to its predecessor 737 New Generation. The main aim was to limit crew training to the necessary minimum, i.e. a two hour-course on the iPad.

Most probably, in both cases one of MCAS sensors was defective and transmitted erroneous information to the engine control module, which continuously pushed down the airplane nose. In addition, the accidents might have resulted from the lack of supervision at the time Boeing obtained certification of the 737 MAX series, and insufficient pilot training. The aircraft accident investigation preliminary report indicates such causes. It is necessary to wait for their confirmation until

^{*} PhD hab., Associate Professor, Dean of the Faculty of Law and Administration of Lazarski University in Warsaw; e-mail: a.konert@lazarski.edu.pl; ORCID: 0000-0002-1188-7087

Preliminary report on ET 302 crash, 4 April 2019: http://www.ecaa.gov.et/documents/20435/0/Preliminary+Report+B737-800MAX+%2C%28ET-AVJ%29.pdf; Preliminary Aircraft

the inquiry is finished and a final report is issued. However, civil liability may be examined, regardless of the final report.²

The article aims to present legal consequences of the two aviation accidents and indicate entities liable for damage caused by the accidents. The article in particular analyses the provisions concerning liability for passengers' death, destruction of airplanes and 737 MAX groundings.

Lawsuits have been already filed in the US (against the producer) as well as in other countries such as France, Indonesia, Kenya and Ethiopia (against airlines).

2. COMPENSATION FOR AIRPLANE GROUNDINGS

On 12 March 2019, the European Union Aviation Safety Agency (EASA) decided to suspend flight operations of all 737-8 MAX and 737-9 MAX aircraft in Europe. In addition, the EASA decided to suspend all commercial flights of those models performed by third-country operators into, out of or within the European Union. On 14 March 2019, the Federal Aviation Administration (FAA) issued a temporary grounding order for all 737 MAX operated by American airlines and foreign airlines in the American airspace. At present, the FAA and EASA are carrying out MCAS tests. The Executive Director of the EASA, Patrick Ky, stated that in order to return the MAX to service in Europe, the EASA must approve of all changes introduced by Boeing and perform an additional independent certification process of the design changes.³

China was one of the first countries to ground B737 MAX aircraft in March 2019. China Eastern Airlines (grounded 14 aircraft), Air China (15 aircraft) and China Southern Airlines (24 aircraft) announced that they demand compensation for groundings. The loss resulting from the suspension of one airplane's flights amounts to USD 1.5 m monthly.⁴ Norwegian Air Shuttle grounded 18 aircraft and was the first to announce it would claim damages for the loss of income and additional costs incurred due to groundings.⁵ LOT Polish airlines had ordered a total of 14 Boeing 737 MAX. It was forced to ground five 737 MAX aircraft and charter four older-type 737 airplanes. It will most probably claim compensation when the investigation into B737 MAX accidents causes is concluded. On the other hand, Enter

Accident Investigation Report, Republic of Indonesia, 29 October 2018: https://www.skybrary.aero/bookshelf/books/4477.pdf.

² For the use of data and information provided in the Report in a trial, see A. Konert (ed.), *Aspekty prawne badania zdarzeń lotniczych w świetle Rozporządzenia 996/2010*, Wydawnictwo Uczelni Łazarskiego, Warszawa 2013, and M. Żylicz, *Prawo lotnicze. Komentarz*, Warszawa 2016.

³ A. Domański, *EASA i ECA chcą sprawdzić MAX-y*, Rynek Lotniczy, published on 25 May 2019, https://www.rynek-lotniczy.pl/wiadomosci/easa-i-eca-chca-sprawdzic-maxy---6042.html (accessed on 18.07.2019).

⁴ Chińskie linie lotnicze chcą od Boeinga odszkodowań za uziemienie 737 MAX, PAP: https://businessinsider.com.pl/wiadomosci/chinskie-linie-chca-od-boeinga-odszkodowan-za-uziemienie-737-max/6w8ej6f (accessed on 2.07.2019).

⁵ P. Rudzki, *B737 MAX 8: dojdzie sprawa odszkodowań*, Rzeczpospolita, published on 13 March 2019, https://www.rp.pl/Lotnictwo/303139946-B737-MAX-8-dojdzie-sprawa-odszkodowan. html (accessed on 2.07.2019).

Air was the second airline in the world to claim damages for grounding aircraft.⁶ American Airlines cancelled all flights starting on 3 September 2019 (115 flights daily). Southwest Airlines and United Airlines also stopped operating MAX aircraft.

Airlines may claim compensation for loss resulting from B737 MAX grounding pursuant to general rules of civil law based on evidence of losses, events causing loss and the causal relationship. The establishment of property loss (actual losses and lost profits) is not difficult in such a case. It will usually be connected with contractual liability for improper performance of contracts. The rules concerning liability depend on the law applicable in the jurisdiction, which is usually referred to in a contract between an airline and the manufacturer. Moreover, there can be clauses concerning liquidated damages in the contract. Thus, it may turn out that a contract lays down penalties for grounding aircraft, which may, although does not have to, substitute for compensation.

Aircraft grounding all over the world already took place as early as in 2013 when the FAA, which is an agency within the US Department of Transportation and supervises civil aviation in the country, took the decision. The entire B787 Dreamliner fleet was grounded worldwide for three months as a result of the JAL airplane accident caused by fire of lithium-ion batteries. There are no official data concerning compensation for airlines that lost several hundred million dollars. However, the matter was amicably settled. Thus, liquidated damages might have been paid or a discount price of successive airplanes could have been offered to the airlines concerned. However, the consequences of Boeing MAX grounding are much more serious.

3. AIRLINE LIABILITY

The issue of liability for passengers' losses has been uniformly regulated at the international level. In the case of international flights, an airline liability is mainly subject to the Warsaw Convention of 1929 and the Montreal Convention of 1999,7 which compose the Warsaw-Montreal system, i.e. the Warsaw system supplemented by the Montreal Convention. In accordance with Article 1 para. 2 MC, international carriage means "any carriage in which, according to the agreement between the parties, the place of departure and the place of destination, whether or not there be a break in the carriage or a transhipment, are situated within the territories of two State Parties or the territory of a single State Party if there is an agreed stopping place within the territory of another State, even if the State is not a State Party. Carriage between two points within the territory of a single State Party without

⁶ P. Otto, R. Hirsch, Enter Air zażąda od Boeinga odszkodowania. Co zrobi LOT?, Gazeta Prawna, published on 18 March 2019, https://serwisy.gazetaprawna.pl/transport/artykuly/1403524,enterair-zazada-od-boeinga-odszkodowania-co-zrobi-lot.html (accessed on 2.07.2019).

⁷ Convention for the Unification of Certain Rules Relating to International Carriage by Air, Signed at Warsaw on 12 October 1929 – Warsaw Convention 1929; hereinafter also WC; Convention for the Unification of Certain Rules for International Carriage by Air, Montreal, 28 May 1999; hereinafter also MC.

an agreed stopping place within the territory of another State is not international carriage for the purpose of this Convention."

The Ethiopian Airlines flight was from Addis Ababa (Ethiopia) to Nairobi (Kenya). Thus, within the meaning of the Convention, it was an international carriage. Both Ethiopia and Kenya ratified the Montreal Convention⁸ so its provisions are applicable to airline liability for passengers' death.

However, in order to establish whether airline liability rules under the Warsaw-Montreal system are applicable to a particular passenger, the contractual carriage route, not the actual flight route, of the crashed aircraft should be taken into account. The will of the parties (a flight ticket indicating the carriage route) is of major importance in such a situation. Airline liability towards passengers is determined depending on the formerly specified, according to a contract between parties (an airline and a passenger), route. Thus, theoretically, each passenger can be subject to different rules of liability. If the Warsaw-Montreal system is applicable, the conditions for airline liability are as follows:

- the loss resulted from a passenger's death or bodily injury;
- the accident caused a passenger's death or bodily injury;
- the accident took place on board the aircraft or at the time of whatever activities connected with boarding or disembarking.

An airline incurs objective (strict) liability regardless of fault. Thus, it is not important what the reason of an accident was; an airline is obliged to pay damages to dead passengers' families and maintains the potential right to claim recourse against persons responsible for the accident (e.g. against the producer of an airplane). Such a liability rule concerns a situation when the aggrieved files claims not exceeding 113,100 SDRs.⁹ In such a case an airline cannot exclude or limit its liability. It will defend itself only in case it proves that the damage was caused by negligence or other wrongful act or omission of the person claiming compensation, or the person from whom he/she derives his/her rights (Article 20 MC).¹⁰ However, if damage exceeds 113,100 SDRs, an airline liability is based on the principle of the presumption of fault.¹¹ An airline will defend itself from liability by indicating the fault of the person claiming compensation (Article 20 MC) as well as exculpating itself by indicating that the loss was not caused by negligence or other wrongful act

⁸ See the list of State Parties to the Montreal Convention: https://www.icao.int/secretariat/legal/List%20of%20Parties/Mtl99 EN.pdf.

⁹ Initially the limit was 100,000 SDRs, but in accordance with Article 24 MC, the limits of liability shall be reviewed by the Depositary at five-year intervals, by reference to an inflation factor which corresponds to the accumulated rate of inflation since the previous revision.

[&]quot;If the carrier proves that the damage was caused or contributed to by the negligence or other wrongful act or omission of the person claiming compensation, or the person from whom he or she derives his or her rights, the carrier shall be wholly or partly exonerated from its liability to the claimant to the extent that such negligence or wrongful act or omission caused or contributed to the damage. When by reason of death or injury of a passenger compensation is claimed by a person other than the passenger, the carrier shall likewise be wholly or partly exonerated from its liability to the extent that it proves that the damage was caused or contributed to by the negligence or other wrongful act or omission of that passenger." (Article 20 MC).

¹¹ On the other hand, the Convention maintained limited liability of an airline for delays in the carriage of passengers and delays, damage and loss of baggage and cargo.

or omission of the carrier or its servants or agents, or that the loss was caused only by negligence or other wrongful act or omission of a third party.

In accordance with Article 28 MC, the carrier, Ethiopian Airlines, was obliged to make advance payments to family members of the dead passengers. Advance payments must be made without delay in order to meet immediate economic needs of such persons and may not constitute a recognition of liability and may be offset against any amounts subsequently paid as damages by the carrier.¹²

It should be remembered that the Convention does not contain precise rules for recognising the group of the aggrieved, the existence, nature and assessment of damage or the way of claiming reparation, the amount of claims, causal relation, etc. Therefore, the issue of jurisdiction is important. The law applied by the competent court will usually be decisive in such cases. The issue of compensation for non-financial loss is even more important. The two conventions do not contain a definition of damage or the precise rules of liability. Therefore, the issues were left to national courts to deal with.¹³ Such authorisation is laid down in Article 24 WC and Article 29 MC, which stipulate that in the carriage of passengers, baggage and cargo, any action for damages, however founded, whether under the Convention or in contract or in tort or otherwise, can only be brought subject to the conditions and such limits of liability as are set out in the Convention without prejudice to the question as to who are the persons who have the right to bring suit and what are their respective rights. Analysing the case law based on the two Conventions, undoubtedly compensation is possible only when non-financial loss results from bodily injury. On the other hand, the Convention does not determine compensation for family members' death. Therefore, the law of a country adjudicating is extremely important because it not only provides for the possibility but also the amount of such compensation. Filing a lawsuit is most popular in the United States mainly thanks to experienced American lawyers representing the aggrieved, generosity of the jury when determining the amount of compensation, and mainly the possibility of obtaining compensation for non-financial loss as well as the so-called punitive damages.¹⁴ This is the phenomenon of "forum shopping", i.e. the practice of litigants looking for a competent court more likely to hear their case favourably for them. 15 In common law countries, there is a solution to the problem of "forum shopping", which is the application of the doctrine of forum non conveniens. It is

¹² For detailed discussion of the issue of advance payments, see A. Konert, H. Ephraimson-Abt, New Progress and Challenges in the Air Law: Air Crash Victims Families Protection, Wydawnictwo Uczelni Łazarskiego, Warszawa 2014, p. 20 et seq.

¹³ Zicherman v. Korean Air Lines Co., 516 U.S. 217, 225 (1996).

¹⁴ A. Konert, Doktryna forum non conveniens w sprawach o odszkodowanie w wypadkach lotniczych, [in:] E. Pływaczewski, J. Bryk (eds), Meandry prawa – teoria i praktyka. Księga jubileuszowa prof. zw. dra hab. Mieczysława Goettela, Białystok 2018.

¹⁵ See B. Fuchs, Ujednolicanie prawa na płaszczyźnie międzynarodowej a zagadnienie forum shopping, [in:] W. Popiołek, L. Ogiegła, M. Szpunar (eds), Rozprawy Prawnicze. Księga pamiątkowa Profesora Maksymiliana Pazdana, Kraków 2005; S.W. Brice, Forum Shopping in International Air Accident Litigation: Disturbing the Plaintiff's Choice of an American Forum, Boston College International and Comparative Law Review Vol. 7, issue 1, 1984; R.U. Whitten, U.S. Conflict-of-Laws Doctrine and Forum Shopping, Domestic and International, Texas International Law Journal Vol. 37, 2002 p. 559 et seq.; F.K. Juenger, Forum Shopping, Domestic and International, Tulane Law

a principle that allows a court to acknowledge that it will be more appropriate to send a case to another court. 16

In accordance with Article 33 MC, an action for damages must be brought, at the option of the plaintiff, in the territory of one of the State Parties, either before the court of the domicile of the carrier or of its principal place of business, or where it has a place of business through which the contract has been made or before the court at the place of destination. And in respect of damage resulting from the death or injury of a passenger, the action is brought in the territory in which at the time of the accident the passenger has his/her principal and permanent residence and to or from which the carrier operates services for the carriage of passengers by air, either on its own aircraft, or on another carrier's aircraft pursuant to a commercial agreement, and in which that carrier itself conducts its business of carriage of passengers by air from premises leased or owned by the carrier itself or by another carrier with which it has a commercial agreement.

Among the five above-mentioned jurisdictions, the only possibility of filing a lawsuit in the US in the case analysed is the fact that at the time of the accident the passenger had his/her principal and permanent residence in the US. There were eight passengers on board Ethiopian Airlines 302 who had their principal and permanent residence in the US. Other passengers can claim damages before courts in Ethiopia or Kenya. The average amount of damages paid in the US for the death of a passenger accounts for ca. USD 2–3 million, while in African countries this is ca. USD 200,000.¹⁷

American courts jurisdiction envisaging higher damages is also possible, regardless of the application of the Montreal or Warsaw Convention, in relation to a carrier's liability due to the domicile of the manufacturer that contributed to the accident.

The limitation of claims period under the Convention is two years from the date of arrival at the destination or the date on which the aircraft ought to have arrived, or from the date on which the carriage stopped (Article 35 MC).¹⁸

The Lion Air aircraft, flight JT-610 from Jakarta (CGK) to Pangkal (PGK) Pinang (Indonesia), had 181 passengers and seven members of the crew. Thus, it was a domestic flight and national law is applicable. Families were offered a lump sum of USD 91,000 in damages on condition that they agree to drop their claims against Lion Air, Boeing and their business partners. All the aggrieved rejected the offer. At present, a class action against the manufacturer in the US is being prepared.

Review Vol. 63, 1989, p. 553; M.G. Algero, In Defense of Forum Shopping: A Realistic Look at Selecting a Venue, Nebraska Law Review Vol. 78, issue 1, 1999.

¹⁶ See more on the issue of FNC, see A. Konert, Doktryna forum non conveniens, op. cit.

¹⁷ https://www.reuters.com/article/us-ethiopia-airplane-insurance/insurers-face-large-claims-after-second-boeing-737-max-crash-idUSKBN1QS1D8 (accessed on 2.07.2019).

¹⁸ For more on the issue of airline liability for damage to a person, see A. Konert, Odpowiedzialność cywilna przewoźnika lotniczego, Warszawa 2010 and literature referred to therein.

4. AIRCRAFT MANUFACTURER'S LIABILITY

Civil liability for a faulty aviation product means liability for damage resulting from a faulty design or faulty production of aviation products, supply of faulty materials or the lack of warning about potential losses caused as a result of the use of aviation products. Liable entities include aviation products manufacturers, their sub-contractors and suppliers. Aviation products include aircraft, engines and propellers as well as the parts and devices for aircraft (instruments, mechanisms, equipment, software used in operation or to control an airplane).¹⁹

Almost in all the states at present, the aggrieved can sue a producer if they prove that a defect of the product has resulted in damage with no need to prove the producer's fault. Thus manufacturers' liability is objective.²⁰ In accordance with Section 402A of the American Law Institute's Restatement (Second) of Torts of 1965, anyone who sells any defective product "unreasonably dangerous" to the user or consumer or his property is subject to liability for physical harm thereby. He is also liable, although he has exercised all possible care in the preparation and sale of his product, and the user or consumer has not bought the product from or entered into any contractual relation with the seller.²¹ Therefore, in order to be awarded damages, it is not required that fault or even just a warranty exist.²²

Strict liability can result from:

- a design defect;23
- the "lemon product" (a manufacturing defect);²⁴
- a lack of warning (a marketing defect/failure to warn)^{25,26}

A design defect (construction defect) is one in which the whole product line or every product of a given model is dangerously defective. The consumer expectation tests are often applied. If a manufacturer produces a product inappropriately, a production defect may occur. This means that the final product is worse than identical products of the same production line (e.g. because of the use of materials not matching the norms, faulty assembly, etc.). Somebody has been at fault (negligence) when making the product but a plaintiff does not have to prove the manufacturer's

¹⁹ A. Konert, Odpowiedzialność producenta systemów antykolizyjnych za szkody spowodowane przez wypadek lotniczy nad Überlingen, Ius Novum No. 3, 2015.

²⁰ Also see L.L. Haertlein, et al., Applying a Federal Standard of Care in Aviation Product Liability Actions, Journal of Air Law & Commerce Vol. 82, 2017, p. 743.

²¹ In the past most courts denied the right to compensation when a plaintiff could not prove a legal relation to a defendant. A party could not get anything from the other, unless a product was bought directly from the defendant. Even when the relation existed, courts often refused to award damages due to the *caveat emptor* ("let the buyer beware") principle. Thus, it was necessary to prove that the warranty conditions were breached. For more, see P.S. Dempsey, *Aviation Liability Law*, 2nd edn LexisNexis, Markham, Ontario 2013, p. 2 et seq.

²² A. Konert, Odpowiedzialność producenta, op. cit.

²³ Barker v. Lull Engineering Co., 20 Ca. 413, 573 P.2d 443, 143 Ca. Reptr. 225 (1978).

²⁴ Pouncey v. Ford Motor Co., 464 F.2d 957 (5th Cir. 1972).

²⁵ Jackson v. Coast Paint & Lacquer Co., 499 F.2d 809 (9th Cir. 1974).

²⁶ P.J. Kolczynski, *Aviation Product Liability*, AvWeb, published on 19 October 2001, http://www.avweb.com/news/avlaw/181885-1.html?redirected=1; P.S. Dempsey, *Aviation Liability Law*, op. cit., pp. 15–16. Citation in A. Konert, *Odpowiedzialność producenta*, op. cit.

fault. It is sufficient that the product is worse than identical products of the same production line and this difference results in harm. Finally, the last type of liability concerns a situation in which manufacturers do not provide appropriate warnings and user manuals. These may be general instructions accompanying a product. If the instructions are ambiguous or insufficient, the product cannot be safely used. In addition, these can be special warnings about danger, i.e. special procedures in case of emergency, e.g. notices in the cockpit, the evacuation method, etc.²⁷

Many lawsuits against manufacturers have already been filed (and consolidated) in the Federal Court of Chicago and King County Superior Court in Washington on behalf of the dead passengers' families.

In March 2019, the family (three children) of the Ethiopian Airlines' passenger Jackson Musoni (a Rwandan national) filed the first lawsuit against the manufacturer in a federal court in Illinois. The complaint alleged that Boeing defectively designed the flight control system and failed to warn the public, airlines and pilots about faulty sensors, which allegedly caused automatic and uncontrolled dive of the aircraft.²⁸

The lawyer of Nadege Dubois-Seex (a French national), the plaintiff whose husband Jonathan Seex was the Ethiopian Airlines' passenger, during the trial against Boeing asked the jury, "after considering all of the evidence, after considering Boeing's reckless and wilful action in which it consciously disregarded the safety of its passengers, to award a minimum in the form of punishment to Boeing of 267 million dollars because it is one day's worth of gross receipts by Boeing. In 2018, Boeing grossed 101 billion dollars. When you take that figure and divide it by 365, you arrive at the figure of USD 276 million".²⁹

On 21 June 2019, over 400 pilots brought class action lawsuit against Boeing in a court in Chicago stating that since groundings they have lost part of their earnings and they claim compensation for non-financial losses in the form of suffering caused by psychical problems. The pilots accuse Boeing of "unprecedented suppression of recognised construction defects" of machines that "probably resulted in catastrophes (...), and then the grounding of all those airplanes".³⁰

In July 2019, Boeing set up a special fund for the families of passengers of Lion Air Flight 610 and Ethiopian Airlines Flight 302 accounting for USD 100 million, which is to be used to pay damages. According to the representatives of the aggrieved, the amount is insufficient to cover all the claims.³¹

²⁷ Ibid.

²⁸ H. Leung, *A U.S. Lawsuit Targets Boeing Over the Deadly Ethiopian Airlines Crash*, Time, 29 March 2019, https://time.com/5561035/boeing-jackson-musoni-lawsuit-ethiopia-airlines-crash/ (accessed on 5.07.2019).

²⁹ B. Berteau, S. Vandoorne and E. Mackintosh, *French Widow Sues Boeing for \$276 Million over Ethiopian Airlines Crash*, CNN, 22 May 2019: //edition.cnn.com/2019/05/21/europe/frenchwidow-sues-boeing-intl/index.html (accessed on 5.07.2019).

³⁰ S. Baker, More than 400 737 Max Pilots are Suing Boeing over an "Unprecedented Coverup" of Flaws in the Plane's Design, Business Insider, 24 June 2019, https://www.businessinsider. com/737-max-pilots-sue-boeing-claim-unprecedented-cover-up-issues-2019-6?IR=T (accessed on 5.07.2019).

³¹ S. O'Kane, *Boeing Announces \$100 Million Fund for Families of 737 Max Crash Victims*, The Verge, 3 July 2019, https://www.theverge.com/2019/7/3/20681261/boeing-737-max-fund-families-crash-victims (accessed on 18.07.2019).

Shareholders also sued Boeing because their shares lost value. The company lost about USD 30 billion of its value on the stock market. The lawsuit was filed in District Court DN in Illinois by a shareholder Richard Seeks, who accused Boeing of securities fraud violation stating that it quickly introduced the 737 MAX model to compete with the European Airbus and omitted elements that could have prevented accidents. In addition, he claims that in order to make B737 MAX cost-effective, Boeing "put profitability and growth ahead of plane safety and honesty".³²

OTHER LEGAL CONSEQUENCES OF ACCIDENTS INVOLVING B737 MAX

The FAA may also face the consequences of the Boeing MAX crashes. It is indicated that there was a potential conflict of interest between Boeing and the FAA, which allowed Boeing to extensively self-certify aircraft, in particular MCAS. The Justice Department opened an investigation into the certification process of Boeing aircraft.³³

It is a puzzling fact that a passenger aircraft manufacturer can play a key role in the process of taking a decision whether its product is safe. In the course of the inquiry, it was indicated that the FAA, with the approval of the Congress, had delegated a large amount of certification authority and safety assessment to Boeing over the last years, mainly because of the lack of staff in the FAA.³⁴ The Seattle Times journalist, Dominic Gates, ran an investigation into the level of passengers' safety in the certification of aircraft and spoke to many Boeing employees and the FAA inspectors involved in the B737 MAX certification process. After the crash in Ethiopia, the journalist published a detailed article in which he accused Boeing and the FAA of ignoring the risk and failing to meet safety requirements necessary to obtain a certificate because of being under strong pressure of managers who wanted to launch B737 as soon as possible.³⁵

The method of aircraft certification in the US requires that the issue of safety, which is a basic category in civil aviation, be focused on.³⁶ In the light of so

³² Seeks v. The Boeing Company (Case 1:19-cv-02394). The complaint content is available at: http://zhanginvestorlaw.com/wp-content/uploads/2019/04/The-Boeing-Company-Complaint. pdf (accessed on 18.07.2019).

³³ D. Slotnick, *The Justice Department is Looking Deeper into Boeing while the Company Scrambles to get its Troubled 737 Max Plane up and Running again*, Business Insider, https://www.businessinsider.com/boeing-justice-department-investigation-subpoena-787-dreamliner-records-2019-6?IR=T (accessed on 22.09.2019).

³⁴ P. Bożyk, FAA i Boeing z poważnymi zarzutami o certyfikację B737 MAX, Rynek Lotniczy, 22 March 2019, https://www.rynek-lotniczy.pl/wiadomosci/faa-i-boeing-z-powaznymi-zarzutami-o-certyfikacje-b737-5634.html (accessed on 18.07.2019).

³⁵ http://wiadomosci.gazeta.pl/wiadomosci/7,114881,24595778,jest-pierwszy-pozew-przeciwko-boeingowi-po-katastrofie-w-etiopii.html (accessed on 5.07.2019).

³⁶ For aviation safety, see P. Kasprzyk, Odpowiedzialność a bezpieczeństwo transportu lotniczego. Kilka uwag o Just Culture, [in:] A. Dańsko-Roesler, M. Leśniak, M. Skory, B. Sołtys (eds), Ius Est Ars Boni et Aequi, Księga pamiątkowa dedykowana Profesorowi Józefowi Frąckowiakowi, Wrocław 2018; P. Łaciński, A. Konert, P. Kasprzyk, Podstawy prawne zarządzania bezpieczeństwem w lotnictwie

dynamically developing air traffic and enormous competition, inter alia in aircraft production, the maintenance of the present safety level in air transport is the biggest challenge for the aviation sector. As Piotr Kasprzyk indicates in connection with matters concerning air transport safety, the public-legal regulations determining the requirements, rules or procedures in aviation aimed at maintaining or increasing the level of flight safety are of basic importance.³⁷ Administrative regulations, taking into account inter alia the experience and technological advancement, impose a series of requirements and obligations on entities involved in aviation, including in particular impartiality of entities taking decisions on an aviation product safety and certification.³⁸ This is the way to minimise risk and, as a result, to reduce the number of accidents to a minimum.³⁹

6. CONCLUSIONS

B737 MAX aircraft accidents resulted in legal consequences of an unprecedented scale. Usually, when one of the reasons of an air crash is an aviation product's defect, apart from the airline liability towards the dead passengers' families, which is objectively liable (regardless of the lack of its fault), an aviation product manufacturer also bears liability. In the above-discussed cases, there are many more entities claiming damages from a manufacturer. These are the dead passengers' families, airlines and pilots who lost earnings as a result of B737 MAX grounding. In addition, shareholders brought a class action lawsuit due to the loss of Boeing shares' value. The company lost USD 30 billion in its market value.

As the article indicates, Boeing is the main liable entity. Although Ethiopian Airlines has strict liability for damage to a person in accordance with the Montreal Convention of 1999, the amount of damages is limited to 113,100 SDRs. Most of the aggrieved (the dead passengers' families) in the two flights are claiming or will claim high compensations (including redress) from the manufacturer. At present, class action complaints are being prepared against the producer in the US. American courts issue judgements in which they award very high damages to be paid by aviation manufacturers. Courts are even accused of leading to the extinction of industry.⁴⁰

Having finished tests and prepared all corrections of the MCAS operation, the manufacturer will have to apply to the FAA and the EASA for certification. Moreover, airlines will have to introduce their own technical procedures of implementing those corrections in their fleets. However, it may turn out that the FAA will approve

cywilnym, [in:] K. Łuczak (ed.), Zarządzanie bepieczeństwem w lotnictwie cywilnym, Katowice 2016; and E. Jasiuk, R. Wosiek, Global Security and Safety Management in Civil Aviation in Light of Annex 19 to the Chicago Convention, [in:] E. Jasiuk, R. Wosiek (eds), Legal Conditions of International Cooperation for the Safety and Efficiency of Civil Aviation, Uczelnia Łazarskiego, Warszawa 2019, p. 131 et seq.

³⁷ P. Kasprzyk, Odpowiedzialność a bezpieczeństwo, op. cit.

³⁸ See H. Schebesta, Risk Regulation Through Liability Allocation: Transnational Product Liability and the Role of Certification, Air and Space Law, Vol. 42, No. 2, 2017, pp. 107–136.

³⁹ P. Kasprzyk, Odpowiedzialność a bezpieczeństwo, op. cit.

⁴⁰ P.J. Kolczynski, Aviation Product Liability, op. cit.

of the manufacturer's corrections and the EASA will recognise them as insufficient. Then, airlines in the European Union will not be able to use B737 MAX in their operations and the European Union air space will remain closed to them. Undoubtedly, it would affect the amount of airlines' and pilots' losses discussed in the article.

Air crashes involving B737 MAX resulted in increased international control, the rise in mistrust of the American manufacturer, airlines responsible for training pilots and the method of aircraft certification in the US.

The competition of the two biggest aircraft manufacturers resulted in a situation where one again asks questions about actual safety of plane passengers.⁴¹

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⁴¹ "Boeing acted with cynicism. My husband was the collateral damage of a system, of a business strategy" – the words of the plaintiff in a trial against Boeing who lost her husband in the Ethiopian Airlines air crash.

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AVIATION ACCIDENTS INVOLVING BOEING 737 MAX: LEGAL CONSEQUENCES

Summary

The article discusses the legal consequences of the two aviation accidents involving B737 MAX aircraft in which a total of 346 people were killed. Most probably, in both crashes, one of the MCAS sensors was defective and transmitted false information to the control module, which continuously pushed down the nose of the airplane. The article aims to indicate the entities liable for damage caused by the accidents, in particular the liability for passengers' death, the destruction of airplanes and aircraft grounding.

Keywords: aviation accidents, aviation manufacturer's liability, airline liability, Boeing 737 MAX, EASA, FAA

WYPADKI LOTNICZE Z UDZIAŁEM SAMOLOTU TYPU BOEING 737 MAX – KONSEKWENCJE PRAWNE

Streszczenie

W artykule zostały omówione konsekwencje prawne dwóch wypadków lotniczych z udziałem samolotu typu B737 MAX, w których zginęło łącznie 346 osób. Najprawdopodobniej w obu wypadkach jeden z czujników MCAS był niesprawny i przekazywał fałszywe informacje do modułu sterowania, który przez to nieustannie opuszczał dziób maszyny. Celem artykułu jest wskazanie podmiotów ponoszących odpowiedzialność za szkody spowodowane tymi wypadkami, w tym zwłaszcza analiza przepisów w zakresie odpowiedzialności za śmierć pasażerów, za zniszczenie samolotów oraz za ich uziemienie.

Słowa kluczowe: wypadki lotnicze, odpowiedzialność producenta lotniczego, odpowiedzialność przewoźnika lotniczego, Boeing 737 MAX, EASA, FAA

ACCIDENTES DE AVIÓN CON LA PARTICIPACIÓN DEL AVIÓN TIPO BOEING 737 MAX – CONSECUENCIAS LEGALES

Resumen

El artículo versa sobre las consecuencias legales de dos accidentes de avión con la participación del avión tipo B737 MAX, en los cuales murieron 346 personas en total. Lo más probable es que en ambos casos uno de los sensores MCAS estaba averiado y trasmitía información falsa al módulo de control que constantemente bajaba la proa del avión. El presente artículo tiene por objetivo identificar a sujetos responsables por daños ocasionados por dichos accidentes e incluye el análisis de la normativa relativa a la responsabilidad por la muerte de los pasajeros, por la destrucción de aviones y por su puesta a tierra.

Palabras claves: accidente de avión, responsabilidad de productor de aviación, responsabilidad de aerolíneas, Boeing 737 MAX, EASA, FAA

АВИАЦИОННЫЕ ПРОИСШЕСТВИЯ С УЧАСТИЕМ CAMOЛЕТОВ BOEING 737 MAX – ПРАВОВЫЕ ПОСЛЕДСТВИЯ

Резюме

В статье рассматриваются правовые последствия двух авиакатастроф с участием самолета В737 МАХ, в результате которых погибли 346 человек. Скорее всего, в обоих случаях один из датчиков MCAS вышел из строя и передавал ложную информацию в модуль управления, который в последствии постоянно опускал нос машины. Целью данной статьи является указание лиц, ответственных за ущерб, причиненный этими авариями, включая, в частности, анализ положений, касающихся ответственности за гибель пассажиров, за уничтожение воздушных судов и запрет на их эксплуатацию.

Ключевые слова: авиационные происшествия, ответственность авиационного производителя, ответственность авиаперевозчика, Boeing 737 MAX, Европейское агентство по безопасности полетов (EASA), Федеральная авиационная администрация (FAA)

LUFTFAHRZEUGUNFÄLLE UNTER BETEILIGUNG VON FLUGZEUGEN DES TYPS BOEING 737 MAX – RECHTSFOLGEN

Zusammenfassung

In dem Artikel werden die rechtlichen Folgen von zwei Unfällen im Luftverkehr unter Beteiligung eines Flugzeugs des Typs B737 MAX besprochen, bei denen insgesamt 346 Menschen zu Tode kamen. Aller Wahrscheinlichkeit nach war in beiden Fällen einer der Sensoren des MCAS-Stabilisierungssystems defekt, wodurch falsche Angaben an das Steuerungsmodul übermittelt wurden, das die Nase des Flugzeugs dadurch fortwährend nach unten drückte. Ziel des Artikels ist es, die Akteure zu bezeichnen, die für die durch diese Unfälle verursachten Schäden Verantwortung tragen und haften und insbesondere eine Analyse der Haftungsregeln bei Tötung von Reisenden, für die Zerstörung der Flugzeuge und das verhängte Flugverbot.

Schlüsselwörter: Flugzeugbetriebsunfälle, Haftung des Flugzeugherstellers, Haftung des Luftfahrtunternehmens, Boeing 737 MAX, Europäische Agentur für Flugsicherheit (EASA), Federal Aviation Administration (FAA)

ACCIDENTS AÉRIENS IMPLIQUANT DES AERONEFS AVEC L'AÉRONEF BOEING 737 MAX – CONSÉQUENCES JURIDIQUES

Résumé

L'article traite des conséquences juridiques de deux accidents aériens impliquant un avion B737 MAX, qui ont causé la mort de 346 personnes. Très probablement, dans les deux cas, l'un des capteurs d'incidence MCAS était hors service et transmettait de fausses informations au module de commande, qui mettait l'avion constamment en piqué. Cet article a pour but d'indiquer les entités responsables des dommages causés par ces accidents, y compris en particulier l'analyse des dispositions en matière de responsabilité du décès de passagers, de la destruction des aéronefs et de leur suspension de vol.

Mots-clés: accidents aériens, responsabilité d'un producteur aéronautique, responsabilité d'un transporteur aérien, Boeing 737 MAX, EASA, FAA

INCIDENTI AEREI CON AEREI DI TIPO BOEING 737 MAX – CONSEGUENZE LEGALI

Sintesi

Nell'articolo sono state descritte le conseguenze legali di due incidenti aerei con aerei di tipo B737 MAX, nei quali sono morte complessivamente 346 persone. Probabilmente in entrambi gli incidenti uno dei sensori MCAS non funzionava e inviava false informazioni al modulo di controllo, che per questo motivo continuava ad abbassare il muso della macchina. Obiettivo dell'articolo è mostrare i soggetti responsabili dei danni provocati da questi incidenti, con in particolare l'analisi delle norme di legge nell'ambito della responsabilità per la morte dei passeggeri, per la distruzione degli aerei e il loro ritiro dal servizio.

Parole chiave: incidenti aerei, responsabilità del produttore aereo, responsabilità del vettore aereo, Boeing 737 MAX, EASA, FAA

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