Aircraft crash and emergency management essay samples

Engineering, Aviation

In spite of the fact that significant milestones have been made in airline technology, cases of many commercial airlines landing on the wrong airports continue to be on the rise. Although cases of commercial aircraft landing on the wrong airfield are not very common, this does not imply that they are unheard of in the United States. Commercial flights in the United States landed or began to land erroneously in other airports several times in the last two decades. However, the actual figures could be higher than the ones reported by the media and the relevant authorities. There are about 29, 000 commercial flights made both locally and internationally on a daily basis in the United States. This implies that the airspace of the United States is often very busy. It would therefore be disastrous to ignore the threat that these wrong landings by commercial aircrafts actually poses on the safety of passengers on board.

There are a number of instances in the United States where aircrafts have been reported to land on the wrong airports. In July 2012, a cargo plane, Air Force C-17 landed at a small airport, Peter O. Knight after missing the runway located at MacDill Air Force Base close to Tampa, FL. Investigations were conducted by the Air Force to determine how such a large aircraft with 42 people aboard ended up in an aircraft that receives aircrafts 20 times less its size. One month later in August 2012, United Express Flight 4049, which is managed by Silver Airways landed at the Fairmont Municipal Airport, situated about ten miles far from the intended airport destination at Clarksburg. A statement from the airline authorities said that investigations into the reason for the diversion of the flight were underway. Meanwhile, it suspended the members of the flight crew from active duty pending the

outcome of the investigation. This was because the safety of its passengers was their top priority.

Another case of wrong landing happened in November 2013 when the a highly modified 747, Boeing's Dreamlifter, missed its intended landing airport at McConnell Air Force Base to land at Jabara Airport, a much smaller airport in Wichita. Jabara Airport apparently did not have an air control tower. The weather had been favorable for landing and much of the aircraft's fuel had been consumed in the flight from JFK International Airport. The aircraft was managed by Atlas Air. A more recent case has been reported early this year in January when a Branson Mo Airport bound aircraft instead landed at a smaller airport in Hollister Mo. This error in landing caused serious fright amongst the 124 passengers on board. In addition, they were stranded for about two hours as alternative airplanes were made available to them. The pilots were relinquished of their duties as they awaited the result of an investigation.

Reports on wrong landing by aircrafts are not often made available to the public by the investigating authorities. However, the problem of wrong landing by commercial aircrafts usually occurs when two or more airports are located in close proximity. Most of the errors in landing have taken place during the night and in the snowy winter season. This is the time when commercial pilots must land the aircrafts through thick clouds on reaching their intended destinations. Poor vision during stormy or cloudy nights often bars clear vision. Pilots do have to be mindful about such obstacles, and illusions caused by lights set on runways. Many of the pilots complain of being confused by the small runway lights, which they mistake for the ones

in larger airports. Regulation that govern the air transport industry require that when pilots approach the airports of intended landing, they should tune in to a radio at the airports' control center, and to see to it that the radio signals that they receive go with the airport they are landing on. However, pilots do not follow standard procedure in some instances.

Another reason for this is that pilots usually ignore reliable communication from the control towers on the sight of other clear runways that are close to the intended landing airfields. These pilots often presume that controllers from the control towers are providing them with incorrect communication. As a result, they act on what they are able to see and not official communication coming from the air control information centers. This results into these pilots landing in the wrong airports or airstrips. Typically, the instances also involve airports exhibiting low traffic located near those runways that are aligned to the same or similar points on the compass instrument.

Improvement in technology attributed to air traffic control is facilitating the process of replacing old flight routes with user-preferred routes and flex tracks. A good example of such technology is the Automated Dependent Surveillance Broadcast. The Automatic Dependent Surveillance-Broadcast (ADS-B) is a surveillance and communication technology developed by NextGen in which aircraft broadcast is made onboard flight information using a data-link to stations on the ground or equipped aircraft within a specific range.

Some airlines in the United States allow their passengers to stay logged in to their airborne internet system from the take-off to touchdown of the aircraft.

This is often facilitated by system-enabled communication devices. A good example of one such airline is the Southwest Airlines. Staying on the internet is very useful when safety issues have been addressed properly by such systems. This enables both the flight crew and the passengers through the moving- map app to detect cases of making wrong landings. However, the effectiveness of this technology has been undermined since most passengers often opt to check on other things apart from the details of their flight. These passengers assume that the flight crew is well-informed to avoid errors such as wrong landings. This presumption should be avoided because the safety of the flight is an issue that is of concern to all people on board the aircraft.

Approach lighting can be designed to handle any obstructions situated in close proximity to the airport, which the pilot may require to avoid before the commencement of his descent to the runway. Lights can even be positioned at another angle for bigger aircraft since those cockpits are distant from the ground. In addition, the angle of descent will seem different to pilots in these planes. Those pilots who are flying into airports that do not have any staff can often turn on or off landing lights themselves, or regulate their brightness. This can be achieved by adjusting their radio to a recommended frequency, and clicking on their transmitter gadget.

The responsibility and duty of facilitating the safe working of commercial aircraft lies with air traffic controllers. In the same way that traffic police officers ensure the smooth flow of traffic on the roads, air traffic controllers monitor the movements of several aircraft, maintain a safe distance between them, direct them in times of unfavorable weather and ensure the smooth

flow of air traffic with limited delays. The system of air traffic control in the United States has been created around a number of airspace division is operated under the Federal Aviation Administration. Air traffic controls provide useful information about the flight route, weather, terrain that is important for commercial pilots. The control towers located at airports help to handle ground traffic, take-off and landing activities. Air traffic control centers assist in detecting aircrafts that are approaching their airspace. These control centers direct pilots accordingly.

There has been significant evolution from early autopilots to modern ones over time. Autopilots used today are highly sophisticated in nature compared to early autopilot systems. Modern autopilots have the ability to perform similar tasks as a pilot who is trained highly. They are capable of managing landings that are automated under the pilot's supervision. Moreover, autopilots can prove to be more effective than the dexterity of human hands especially for certain in-flight procedures and routines. In other words, autopilots not only make flights to be smoother but also more efficient and safer.

It is important for airlines to acquire the most competent staff for its flight crew. This comprise of pilots, co-pilots, and flight attendants. This is because the flight crew is usually responsible for the safety of all passengers that are on-board the airplane. The flight crew should communicate and respond accurately to information to and from the air control centers. Although it is important for pilots to act upon what they see while on the airplane, it is important for them to follow the landing instructions from the air control centers. On the ground employees such as ground air controllers are also

very instrumental in directing aircrafts into and out of the airports.

The Next Generation Air Transportation helps improve the safety of runways and in the air in the United States. The major purposes of the air transportation system are flight safety and efficiency. The modern airspace is categorized into various sectors. Each of these sectors has an air traffic controller who has the responsibility to manage the traffic within it. Those aircrafts that fall within a specific sector are centrally controlled by the corresponding air traffic controller. A significant increase in air traffic demand is expected over the next decade, which has motivated efforts to modernize air transportation systems by leveraging improved navigation and communication technologies. In the United States, this future system is referred to as the Next Generation Air Transportation System.

There is significant possibility that wrong landing by aircrafts can often result into tragic accidents. This is because misdirection in landing airports may occur as a result of bad weather especially during the night when the vision of pilots is relatively poor. Pilots may find it difficult to trace the runway lights and in the process of making a landing. If the aircraft lands on the wrong airport, which has a runway that has not been properly maintained, the landing may be rugged and turbulent. This causes significant safety concerns to the passengers.

In conclusion, the frequent cases of aircrafts landing on the wrong airports are most of the times due to human error. It is an issue that needs to be treated with uttermost seriousness. This is because air transportation is a highly sensitive mode of transportation when it comes to matters of safety. This is because passengers are exposed to dangerous situations which have

the potential to turn fatal. It is therefore important that airline companies instill the culture of landing on the intended airports amongst their flight personnel. Apart for reducing the inconveniences caused to the passengers for landing in the wrong destinations, this will ensure their safety.

Recommendations

- Although visual aid is very important for pilots when landing the aircraft, they should rely more on the instruments of navigation rather than their own conviction which is sometimes not accurate.

- All information originating from the air control centers should not be ignored because these centers monitor air traffic involving many aircrafts. A slight coincidence of aircraft at the same time may turn out to be fatal.

- Passengers should be actively concerned about the accuracy of information disseminated to them by members of the flight crew. The use of apps such as moving maps can enable passengers to check out details about the landing airports and inform the flight crew about it.

- Aviation authorities and airline companies should ensure that the appropriate disciplinary action is taken against flight crews who disregard official communication from the air control centers and instead erroneously land the aircraft in the wrong airports. This may include grounding those pilots who make wrong landing without any proper reasons such as emergency landing due to bad weather. This will go a long way in ensuring that pilots strictly follow official communication made to them from the air control centers.

- Pilots should be more cautious when landing in airports where there is two

or more low-traffic airports situated close to each other with runways that

are aligned to similar points on the compass.

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