

Pre-Flight Planning

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Abstract

The basic knowledge and understanding about the pre-flight planning which plays an important role in transport passengers and goods. There is a need to consider the safety, economy and comfort of frugality users. Starting from the departure airport, en-route, and then at the airport of destination consideration that the requirements is or rules are accurate in various aspects include: (1) calculation and consideration of reserved fuel that is required for a particular flight plan (2) calculation and consideration of take-off weight and landing weight and (3) weight control and load control at take-off, during cruising, and gaining equilibrium during landing.

Keywords

flight plan, flight planning, fuel , weight , balance control

Introduction

Flight planning is the process of producing a flight plan to describe a proposed aircraft flight. It involves two safety-critical aspects: fuel calculation, to ensure that the aircraft can safely reach the destination, and compliance with air traffic control requirements, to minimise the risk of midair collision. In addition, flight planners normally wish to minimise flight cost through the appropriate choice of route, height, and speed, and by loading the minimum necessary fuel on board. Air Traffic Services (ATS) use the completed flight plan for separation of aircraft in air traffic management services, including tracking and finding lost aircraft, during search and rescue (SAR) missions.

Flight planning requires accurate weather forecasts so that fuel consumption calculations can account for the fuel consumption effects of head or tail winds and air temperature. Safety regulations require aircraft to carry fuel beyond the minimum needed to fly from origin to destination, allowing for unforeseen circumstances or for diversion to another airport if the planned destination becomes unavailable. Furthermore, under the supervision of air traffic control, aircraft flying in controlled airspace must follow predetermined routes known as airways (at least where they have been defined), even if such routes are not as economical as a more direct flight. Within these airways, aircraft must maintain flight levels, specified altitudes usually separated vertically by 1000 or 2000 feet (305 or 610 m), depending on the route being flown and the direction of travel. When aircraft with only two engines are flying long distances across oceans, deserts, or other areas with no

airports, they have to satisfy additional ETOPS safety rules to ensure they can reach some emergency airport if one engine fails.

Producing an accurate optimised flight plan requires millions of calculations, so commercial flight planning systems make extensive use of computers (an approximate unoptimised flight plan can be produced using an E6B and a map in an hour or so, but more allowance must be made for unforeseen circumstances). When computer flight planning replaced manual flight planning for eastbound flights across the North Atlantic, the average fuel consumption was reduced by about 1,000 pounds per flight, and the average flight times were reduced by about 5 minutes per flight.[1] Some commercial airlines have their own internal flight planning system, while others employ the services of external planners.

A licensed flight dispatcher or flight operations officer is required by law to carry out flight planning and flight watch tasks in many commercial operating environments (e.g., US FAR §121,[2] Canadian regulations). These regulations vary by country but more and more countries require their airline operators to employ such personnel.

Research methodology

Flight planning before flight operations Pre-flight planning, flight management for passenger and cargo transportation must be considered safe, economical and convenient for users. The most important thing is that security must be ranked first. From the origin airport on the way until reaching the destination airport as well as the reserve airport By considering Requirements or main rules that are accurate and provide many important safety features as follows

1. Calculate the weight of the aircraft while taking the plane up and while carrying the aircraft (performance pre-flight planning).

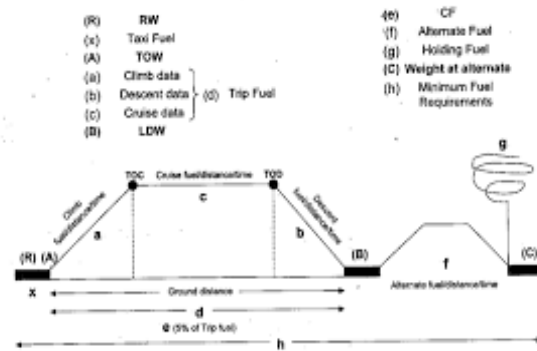
2. Calculate the amount of fuel required for the flight path, visiting other (Fuel Pre-Flight Planning.)

3. weight control and the truck. The aircraft landed during the run up to and during flight in a balanced manner (payload planning) or (weight and balance control). The preparation of the plan of the airport. Before each flight operations Pilots who fly tier responsibility of visiting it. Must learn Aviation News and prepare the flight plan route. Operations at the airport to take a flight plan. And airport operators to ensure correct and safe way to alleviate the burden of the pilot. The International Civil Aviation Organization (ICAO) has set up a pilot whose function is to assist with the preparation. Document Management for planning and airport operators All flights That person is the staff director of flight (flight operation officer) by making and shared responsibility as follows (IATA ICAO, 2001) 1. Help the pilot to prepare flight plans (Air traffic service flight plan) to be submitted to the authorities. Air navigation services and flight plan workshop (Flight operational flight plan) to pilot the aircraft operator. 2. Provide information that is necessary. Safety as pilots flew missions with appropriate 3. Convey the message that there is. Safe flight operations as well as news. According to the flight plan route 4. The emergency staff at the airport. In addition to the ability to perform the procedures established in flight operations (operationmanual) has. However, to avoid confusion with the offense. Agency services to air

traffic. The staff at the airport will be operational front. The first pilot to fly at least 2 hours to prepare a flight plan with the pilot before flight operations.



Help the pilot to prepare flight plans



Preparation of fuel

Conclusion

The reason why the pre-flight planning is very important, because all parties must work together as a team. Flight plan for an economical and safe as possible. Pilots are required to open the complete monitoring system of the aircraft, whether the navigation system, electrical system, fuel system. Fire protection systems, engine and APU systems and air pressure adjustment. And also to check the weather before flying or will coordinate with it. In the Preparations before the flight, as the aircraft inspection to check the oil wipers, navigation and communication. During this Ground staff, baggage loading, refueling, it will take passengers on a plane. The pilots will have to cooperate with these authorities. The data were calculated to determine whether it matches or not. And must be communicated to the air traffic control authorities. To obtain approval to use the flight plan of the aircraft.

Therefore, all parties will be required to study the flight data and communicate with clarity and understanding. Prepare flight plans and airport operators to ensure accuracy. And precision every step For economy and convenience, most importantly, safe.

Discussion and Recommend

Flight planning before flying Already mentioned, it is considered important to the service business operator. Air transport, especially passenger safety And property throughout the route

The responsible person must study, learn. And understand very well, such as the performance of the specific aircraft used to provide the service, including the rules and regulations relating to safety according to such factors in order to integrate into the flight plan to be safe

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