

Lec. NO.10

Principles of Transportation

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Components of an Airport

There are various components of an airport which are structures. The planning and designing of these Airport components are carried out by civil and transportation engineers. Fig. No.1



Fig. No.1 :Typical Airport

Components of Airport

1. Runway
2. Taxiway

3. Apron
4. Terminal building
5. Control tower
6. Hanger
7. Parking

Runway

Runway is a paved land strip on which landing and takeoff operations of aircrafts takes place. It is in leveled position without any obstructions on it. Fig. No.2

The number of runways for an airport is depends upon the traffic. If the traffic is more than 30 movements per hour, then it is necessary to provide another runway.

Runway can be laid using bitumen or concrete. Bitumen is economic but concrete runways have long span and requires less maintenance cost.

The width of runway is dependent of maximum size of aircrafts utilizing it. The length of runway is decided from different considerations like elevation of land, temperature, take off height, gradients etc.



Fig. No.2: Runway

Taxiway

Taxiway is path which connects each end of the runway with terminal area, apron, hanger etc. These are laid with asphalt or concrete like runways. Fig. No. 3



Fig. No. 3:Taxiway

Apron

Apron is a place which is used as parking place for aircrafts. It is also used for loading and unloading of aircrafts. Apron is generally paved and is located in front of terminal building or adjacent to hangers. Fig. No. 4



Fig. No. 4: Apron

Terminal Building

Terminal building is a place where airport administration facilities takes place. In this building, pre-journey and post journey checking's of passengers takes place.

Fig. No.5



Fig. No.5: Terminal Building

Control Tower

The control tower is a place where aircrafts under a particular zone is controlled whether they are in land or in air. The observation is done by the controller through radars and information is carried through radio.

The controller from the control tower observes all the aircrafts with in that zone and informs pilots about their airport traffic, landing routes, visibility, wind speeds, runway details, etc. based on which the pilot decides and attempts safe landing. Fig. No.6



. Fig. No.6 :control tower

Hanger

Hanger is a place where repairing and servicing of aircrafts is done. Taxiway connects the hanger with runway so, when a repair needed for an aircraft it can be moved to hanger easily.

It is constructed in the form of large shed using steel trusses and frames. Large area should be provided for Hanger for comfortable movement of aircrafts. Fig.

No.7



Fig. No.7 :Hanger

Parking

This is a place provided for parking the vehicles of airport staff or passengers which is outside the terminal building or sometimes under the ground of terminal building. Fig. No.8 .



Fig. No.8:Parking