Claims

1. System for parking and processing aircraft, comprising:
   - at least one transport device for transporting aircraft from an arrival location to a departure location at a distance from the arrival location, wherein the transport device comprises a plurality of processing segments lying in line and displaceable between the arrival location and the departure location, wherein each processing segment is configured to support and process at least one aircraft and wherein each processing segment is provided with at least one loading station and at least one unloading station for respectively loading and unloading the parked aircraft between the arrival location and the departure location, and
   - at least one passenger terminal positioned relative to the transport device such that the passenger terminal is configured to co-act with aircraft parked on the transport device for the purpose of allowing passengers to deboard and board between the arrival location and the departure location.

2. System as claimed in claim 1, wherein the transport device is configured to displace the processing segments in a single direction.

3. System as claimed in claim 1 or 2, wherein the transport device takes a continuous form.

4. System as claimed in any of the foregoing claims, wherein each processing segment is configured to support one aircraft.

5. System as claimed in any of the foregoing claims, wherein the processing segments connect to each other.

6. System as claimed in claim 5, wherein the processing segments are connected integrally to each other.

7. System as claimed in any of the foregoing claims, wherein all processing segments are positioned in the same substantially horizontal plane.

8. System as claimed in any of the foregoing claims, wherein the processing segments are displaceable along a curved path, in particular a circular path.

9. System as claimed in claims 7 and 8, wherein the processing segments together form at least a part of a processing apron.

10. System as claimed in claim 9, wherein the processing apron is axially rotatable.

11. System as claimed in claim 10, wherein the processing apron forms an axially rotatable disc.

12. System as claimed in claim 11, wherein at least a part of the passenger terminal is enclosed by the processing apron.

13. System as claimed in claim 11 or 12, wherein each processing segment is formed by a circle segment of the disc-shaped apron.

14. System as claimed in any of the foregoing claims, wherein at least a part of the passenger terminal is displaceable, in particular rotatable, such that the displaceable part of the passenger terminal and an adjacent processing segment can co-act in substantially stationary manner along a path situated between the arrival location and departure location.

15. System as claimed in claim 14, wherein the displaceable part of the passenger terminal comprises a plurality of footbridges, wherein each footbridge is configured for coupling between the arrival location and the departure location to an aircraft parked on a processing segment to allow deboarding and boarding of passengers.

16. System as claimed in claim 15, wherein the number of footbridges used is greater than the number of processing segments used.

17. System as claimed in claim 14 or 15, wherein each footbridge is pivotally connected to a displaceable, in particular rotatable, other part of the passenger terminal.

18. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with luggage or freight.

19. System as claimed in any of the foregoing claims, wherein at least one unloading station is configured to remove luggage or freight from the aircraft.

20. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with fuel.

21. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with water.

22. System as claimed in any of the foregoing claims, wherein at least one unloading station is configured to remove waste water from the aircraft.

23. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with provisions, in particular food.

24. System as claimed in any of the foregoing claims, wherein at least one station of the at least one loading station and the at least one unloading station is connected in displaceable, in particular extendable, manner to a deck layer of the processing segment.

25. System as claimed in any of the foregoing claims, wherein the system comprises at least one supply container for fuel connected to at least one loading station and positioned at least partially under the displaceable processing segments.

26. System as claimed in any of the foregoing claims, wherein the system comprises at least one supply container for water connected to at least one loading station and positioned at least partially under the displaceable processing segments.

27. System as claimed in any of the foregoing claims, wherein the system comprises at least one supply container for waste water connected to at least one unloading station and positioned at least partially under the displaceable processing segments.

28. System as claimed in any of the foregoing claims, wherein each processing segment has passing therethrough at least one associated loading station and the at least one associated unloading station.

29. System as claimed in any of the foregoing claims, wherein at least one displaceable processing segment comprises at least one axially rotatable first manoeuvring disc for manoeuvring at least one support wheel of the aircraft.

30. System as claimed in any of the foregoing claims, wherein at least one displaceable processing segment comprises at least one axially rotatable second manoeuvring disc for manoeuvring at least one support wheel of the aircraft.

31. System as claimed in claims 29 and 30, wherein the first manoeuvring disc is enclosed by the second manoeuvring disc.

32. System as claimed in any of the foregoing claims, wherein the transport device comprises at least one stationary support structure for bearing support of the displaceable processing segments.

33. System as claimed in claim 32, wherein the processing segments are provided with transport wheels, these transport wheels being configured for co-action with a guide track of the stationary support structure.

34. System as claimed in claim 32 or 33, wherein the support structure is provided with at least one liquid column, wherein the processing segments are supported by the at least one liquid column.

35. System as claimed in any of the foregoing claims, wherein the system comprises at least one drive unit coupled to the transport device for the purpose of displacing the processing segments.

36. System as claimed in claim 35, wherein the drive unit is configured to displace a processing segment within a time period of between 30 and 60 minutes from the arrival location to the departure location.

37. System as claimed in any of the foregoing claims, wherein the number of processing segments lies between 4 and 12, in particular between 5 and 9.

38. System as claimed in any of the foregoing claims, wherein at least one aircraft is parked on at least one processing segment for the purpose of processing the aircraft.

39. System as claimed in any of the foregoing claims, wherein the system comprises a plurality of transport devices.

40. Processing segment for use in a system as claimed in any of the foregoing claims.

41. Apron for use in a system as claimed in any of the claims 9-13.

42. Airport provided with a system as claimed in any of the claims 1-39.

43. Method for parking and processing aircraft, in particular by making use of a system as claimed in any of the claims 1-39, comprising of:

A) parking an aircraft on a processing segment of a transport device at an arrival location,

B) displacing the processing segment in the direction of a departure location, wherein the aircraft is coupled during this displacement to a passenger terminal and one or more loading stations and unloading stations for the purpose of loading and unloading the aircraft,

C) removing the aircraft from the processing segment when it reaches the departure location.

44. Method as claimed in claim 43, wherein the steps A)-C) take a period of time of between 30 and 60 minutes.

45. Method as claimed in claim 43 or 44, wherein multiple series of steps A)-C) are performed in succession.

46. Method as claimed in claim 44 or 45, wherein step B) of a first series and step B) of at least one other series are performed at least partially simultaneously.

Claims

1. System for parking and processing aircraft, comprising:
   - at least one transport device for transporting aircraft from an arrival location to a departure location at a distance from the arrival location, wherein the transport device comprises a plurality of processing segments lying in line and displaceable between the arrival location and the departure location, wherein each processing segment is configured to support and process at least one aircraft and wherein each processing segment is provided with at least one loading station and at least one unloading station for respectively loading and unloading the parked aircraft between the arrival location and the departure location, and
   - at least one passenger terminal positioned relative to the transport device such that the passenger terminal is configured to co-act with aircraft parked on the transport device for the purpose of allowing passengers to deboard and board between the arrival location and the departure location,

   wherein all processing segments are positioned in the same substantially horizontal plane, wherein the processing segments are displaceable along a curved path, wherein the processing segments together form at least a part of a processing apron forming an axially rotatable disc, wherein the processing apron encloses at least a part of the passenger terminal.

2. System as claimed in claim 1, wherein the transport device is configured to displace the processing segments in a single direction.

3. System as claimed in claim 1 or 2, wherein the transport device takes a continuous form.

4. System as claimed in any of the foregoing claims, wherein each processing segment is configured to support one aircraft.

5. System as claimed in any of the foregoing claims, wherein the processing segments connect to each other.

6. System as claimed in claim 5, wherein the processing segments are connected integrally to each other.

7. System as claimed in any of the foregoing claims, wherein all processing segments are positioned in the same substantially horizontal plane.

8. System as claimed in any of the foregoing claims, wherein the processing segments are displaceable along a curved path, in particular a circular path.

9. System as claimed in claims 7 and 8, wherein the processing segments together form at least a part of a processing apron.

10. System as claimed in claim 9, wherein the processing apron is axially rotatable.

11. System as claimed in claim 10, wherein the processing apron forms an axially rotatable disc.

12. System as claimed in claim 11, wherein at least a part of the passenger terminal is enclosed by the processing apron.

13. System as claimed in claim 11 or 12, wherein each processing segment is formed by a circle segment of the disc-shaped apron.

14. System as claimed in any of the foregoing claims, wherein at least a part of the passenger terminal is displaceable, in particular rotatable, such that the displaceable part of the passenger terminal and an adjacent processing segment can co-act in substantially stationary manner along a path situated between the arrival location and departure location.

15. System as claimed in claim 14, wherein the displaceable part of the passenger terminal comprises a plurality of footbridges, wherein each footbridge is configured for coupling between the arrival location and the departure location to an aircraft parked on a processing segment to allow deboarding and boarding of passengers.

16. System as claimed in claim 15, wherein the number of footbridges used is greater than the number of processing segments used.

17. System as claimed in claim 14 or 15, wherein each footbridge is pivotally connected to a displaceable, in particular rotatable, other part of the passenger terminal.

18. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with luggage or freight.

19. System as claimed in any of the foregoing claims, wherein at least one unloading station is configured to remove luggage or freight from the aircraft.

20. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with fuel.

21. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with water.

22. System as claimed in any of the foregoing claims, wherein at least one unloading station is configured to remove waste water from the aircraft.

23. System as claimed in any of the foregoing claims, wherein at least one loading station is configured to load the aircraft with provisions, in particular food.

24. System as claimed in any of the foregoing claims, wherein at least one station of the at least one loading station and the at least one unloading station is connected in displaceable, in particular extendable, manner to a deck layer of the processing segment.

25. System as claimed in any of the foregoing claims, wherein the system comprises at least one supply container for fuel connected to at least one loading station and positioned at least partially under the displaceable processing segments.

26. System as claimed in any of the foregoing claims, wherein the system comprises at least one supply container for water connected to at least one loading station and positioned at least partially under the displaceable processing segments.

27. System as claimed in any of the foregoing claims, wherein the system comprises at least one supply container for waste water connected to at least one unloading station and positioned at least partially under the displaceable processing segments.

28. System as claimed in any of the foregoing claims, wherein each processing segment has passing therethrough at least one associated loading station and the at least one associated unloading station.

29. System as claimed in any of the foregoing claims, wherein at least one displaceable processing segment comprises at least one axially rotatable first manoeuvring disc for manoeuvring at least one support wheel of the aircraft.

30. System as claimed in any of the foregoing claims, wherein at least one displaceable processing segment comprises at least one axially rotatable second manoeuvring disc for manoeuvring at least one support wheel of the aircraft.

31. System as claimed in claims 29 and 30, wherein the first manoeuvring disc is enclosed by the second manoeuvring disc.

32. System as claimed in any of the foregoing claims, wherein the transport device comprises at least one stationary support structure for bearing support of the displaceable processing segments.

33. System as claimed in claim 32, wherein the processing segments are provided with transport wheels, these transport wheels being configured for co-action with a guide track of the stationary support structure.

34. System as claimed in claim 32 or 33, wherein the support structure is provided with at least one liquid column, wherein the processing segments are supported by the at least one liquid column.

35. System as claimed in any of the foregoing claims, wherein the system comprises at least one drive unit coupled to the transport device for the purpose of displacing the processing segments.

36. System as claimed in claim 35, wherein the drive unit is configured to displace a processing segment within a time period of between 30 and 60 minutes from the arrival location to the departure location.

37. System as claimed in any of the foregoing claims, wherein the number of processing segments lies between 4 and 12, in particular between 5 and 9.

38. System as claimed in any of the foregoing claims, wherein at least one aircraft is parked on at least one processing segment for the purpose of processing the aircraft.

39. System as claimed in any of the foregoing claims, wherein the system comprises a plurality of transport devices.

40. Processing segment for use in a system as claimed in any of the foregoing claims.

41. Apron for use in a system as claimed in any of the claims 9-13.

42. Airport provided with a system as claimed in any of the claims 1-39.

43. Method for parking and processing aircraft, in particular by making use of a system as claimed in any of the claims 1-39, comprising of:

A) parking an aircraft on a processing segment of a transport device at an arrival location, wherein the processing segment is displaceable along a curved path, and wherein the processing segment together form at least a part of a processing apron forming an axially rotatable disc, wherein the processing apron encloses at least a part of the passenger terminal.

B) displacing the processing segment in the direction of a departure location, wherein the aircraft is coupled during this displacement to a passenger terminal and one or more loading stations and unloading stations for the purpose of

loading and unloading the aircraft, wherein during operation, the processing apron is axially rotated around a passenger terminal.

C) removing the aircraft from the processing segment when it reaches the departure location.

44. Method as claimed in claim 43, wherein the steps A)-C) take a period of time of between 30 and 60 minutes.

45. Method as claimed in claim 43 or 44, wherein multiple series of steps A)-C) are performed in succession.

46. Method as claimed in claim 44 or 45, wherein step B) of a first series and step B) of at least one other series are performed at least partially simultaneously.