



The impact of COVID-19 on airfield pavement



The coronavirus crisis has grounded most of the worldwide fleet of commercial airliners.

Due to the lack of space in the apron areas, some airports are parking these overflow aircraft on runways and taxiways, most of them consisting of asphalt pavement.



● Rigid pavement (concrete) ● Flexible pavement (asphalt)

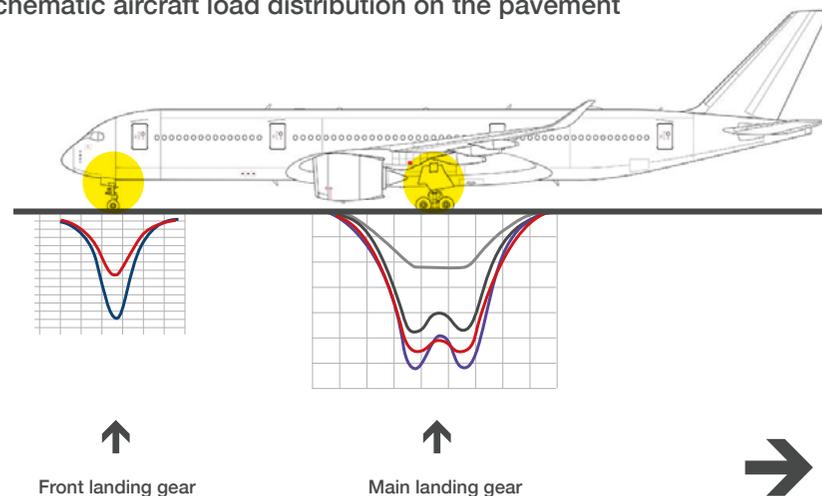


Is asphalt pavement on runways and taxiways prepared to withstand parked aircraft for a while?

Traditionally, aprons have been built in PQC (concrete) rather than asphalt, for the following reasons:

- Due to its viscoelastic properties, asphalt is more sensitive to the prolonged static loads
- Sensitive to high temperatures
- Likely to deteriorate due to fuel spillages, which could soften the surface course

Schematic aircraft load distribution on the pavement





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The combined and prolonged effect of the above factors, might lead to pavement deterioration and worsening of its surface characteristics. In order to minimize these effects, actions to preserve airfield pavement should focus on the following:

1. While the pavement is being used for overflow parking, regular monitoring is recommended, to control its current condition and early detection of any defect.
2. Before resuming operations, an audit of the pavement (visual inspection, testing...) should be carried out. The aim is to evaluate the actual impact of this situation on the pavement and to determine whether maintenance works might be required. In addition, other airfield elements will need to be inspected and tuned-up: AGL, paint marking, drainage, excessive growth of vegetation and proliferation of small animals on the airfield strip (FOD risk)...



The airports already carry out regular monitoring and maintenance, as part of their infrastructure maintenance plan. However, due to the current situation, these actions might be re-scheduled.

Some experts are even considering the re-certification of runway and taxiway pavements used to park aircraft during the COVID-19 pandemic before resuming operations.

