NextRoad

MAINTENANCE AND CONTROL OF AERONAUTICAL PAVEMENTS

AERONAUTICAL PAVEMENT SERVICES

The Road and Structure division of NextRoad fully supports Airports managers all through the lifetime of their roads.

In France, the South Paris & Airports Agency is devoted to airport facilities.

In Africa, the Airports unit is based in Tunisia.

APL NextRoad

MEASUREMENT AND CONTROL OF THE LONGITUDINAL UNEVENNESS

Longitudinal evenness exposes surface irregularities of airfield runways as well as traffic lanes and which are sensed by aircrafts during take-off and landing phases.

A poor evenness may trigger off such phenomena as pumping, pitching and rolling, shock absorbers resonance, which provokes a complete loss of tire-to-runway contact, that in turn may lead to a loss of grip ...

The measurements are carried out using a Longitudinal Profile Analyzer (LPA) in accordance with **the test procedure n°46 set by the Laboratoire Central des Ponts et Chaussées** which provides for an analysis of the Notes by Wave Bands (NBO).

IMAG NextRoad

SKID RESISTANCE CONTROL

Adhesion to an aircraft tire track is fundamental for braking on landing or for rejected take-offs, the spinning of the wheels on landing, and control of the steering while rolling.

The measurements are carried out using an Automatic Slip Measurement Instrument (IMAG), a tool consistent **with annex 14 of the ICAO, in accordance with test procedure n° 50-2 set by the Laboratoire des Ponts et Chaussées**. These measurements restore the Braking Force Coefficient.

A PRIVILEGED INTERLOCUTOR

SERVICE INDEX EVALUATION - CONDITION OF THE PAVEMENT-

The Service Index (SI) is a digital indicator depicting the condition of the roadway. It assigns a score from 0 (pavement out of order) to 100 (new pavement).

The Service Index is calculated from visual distress survey, in accordance with the **DGCA methodological guide issued in June 2003 and the DGCA distress catalog issued in April 2007.**

The reported index enables a better assessment of the level of pavement service as well as its evolution; it also helps to propose short and medium-term needs planning in surveying and maintenance works.

EXTERNAL CONTROL AND TECHNICAL ASSISTANCE

External control enables the checking on the quality and the compliance of the work with the technical specifications. It plays a key role in the durability of pavements.

NextRoad supports airport managers all through the work process: before, during and after.

ASBESTOS ANALYSIS AND PAH

Associated with COFRAC accredited laboratories, Roads and OA division of NextRoad can assist in the implementation of a research methodology on asbestos fibers and in the realization of PAH assays.

AN ACKNOWLEDGED EXPERTISE

PCN DETREMINATION

The ACN / PCN method is a rating system that has been standardized by the ICAO (the International Civil Aviation Organization) and adopted as an aeronautical pavement management tool.

The ACN index determines the aggressiveness of aircrafts and the PCN index the bearing capacity of the structures of the pavements receiving them: an airplane is admissible without any restriction on a given aeronautical pavement if ACN <PCN

To determine the PCN, several studies are carried out: a geotechnical study, thickness measurements (radar) and deflection measurements.

GEOTECHNICAL TESTS TO EVALUATE THE BEARING CAPACITY

Several geotechnical tests are carried out in order to identify the nature (immediate GTR and CBR classifications) and the condition of the level. They also allow the determination of the constituents of the roadway in place.

These data, therefore, provide an evaluation of the bearing capacity.

MEASUREMENT AND NATURE OF THICKNESS

Layer thickness measurement is generally carried out using a GPR-type pavement radar in accordance with **test process N° 42 set by the Laboratoire Central des Ponts et Chaussées.**

The results of the measurements enable the splitting of the platform into homogeneous structure zones and the calculation of average thicknesses for each of them.

MEASUREMENT OF DEFLECTION AND ELASTICITY MODULES

Deflection basin measurements and elastic moduli are determined by means of the passage of the Heavy Weight Deflectometer (HWD).

For rigid pavements, the HWD enables the evaluation of the load transfer among concrete slabs yielding thereby insights into the joints behavior.

HWD NextRoad