



PLATFORM for MEASUREMENT and ANALYSIS of SURFACE CHARACTERISTICS and SKID RESISTANCE

Research on contact and interface

- understand and model phenomena related to contact, friction, wear and lubrication.
- develop applications to improve user's safety, optimize road maintenance and innovate road materials.

A dedicated laboratory

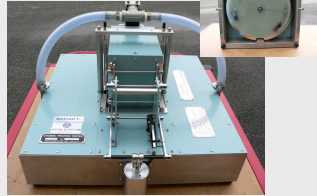
- started in 2000.
- equipments for the study of road surface characteristics and their effect on road performance.
- complement of full scale test facilities (test tracks, instrumented vehicles).

Friction

DFT (Dynamic Friction Tester)

- provide friction coefficient at different speeds.
- integrated wetting system.
- in/outdoor measurements.
- test surfaces : road, crosswalk, curb, etc.

Purchased in 2009 (National project CLEAN)



SRT (Skid Resistance Tester)

- spot measurement.
- provide friction coefficient at low speed.
- in/outdoor measurements.
- test surfaces : road, crosswalk, curb, etc.



T2GO

- continuous measurement (20% slip).
- provide friction coefficient at low speed.
- in/outdoor measurements.
- suitable for reduced-dimensions surfaces (metro rails especially).

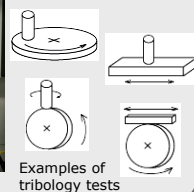
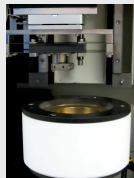
Purchased in 2014



Tribometer

- platform for tribology tests.
- perform standardized (ISO, ASTM) and customized tests.
- measure (linear or circular) friction force, wear depth, acoustic emission, etc.

Purchased in 2010 (FP7 SKIDSAFE)



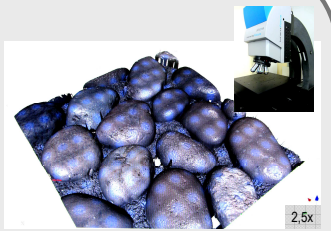
Examples of tribology tests

Surface roughness

Sensor Infinite Focus

- no contact measurement (focal variation – EN 25178).
- height cartography.
- magnifications: 2,5x to 100x.
- test surface (usual size) : 100 mm x 100 mm.

Purchased in 2012 (Region PdL)



Circular Texture Meter

- no contact measurement (CCD laser sensor).
- circular profile Ø284 mm.

Purchased in 2010 (FP7 SKIDSAFE)



Captureur confocal

- no contact measurement (imagerie confocale chromatique – EN 25178).
- height cartography.



Purchased in 2002

TexRoad 3D

- spot measurement of road surface images (stereovision).
- reproduce 3D height cartographies.
- in/outdoor measurements.
- test surfaces : road, crosswalk, curb, etc.



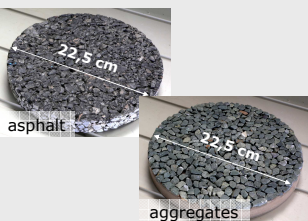
Prototype developed in 2013

Polishing

Wehner / Schulze

- polishing, skid resistance evolution.
- provide friction coefficient at different speeds.
- integrated wetting system.
- measurements on specimens.
- test surfaces : road, crosswalk, curb, etc.

Purchased in 2004

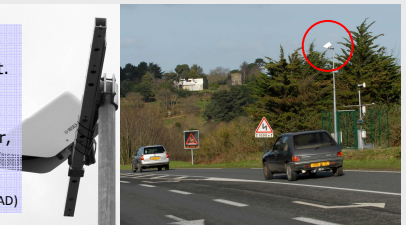


Water depths

Vaisala DSC111

- spectroscopic measurement.
- detects presence of water, snow, ice.
- measurement range : water, ice (0-2 mm), snow (0-10 mm).

Purchased in 2006 (National project IRCAD)



Aquasens

- spectroscopic measurement.
- static and dynamic measurements.
- measurement range : 0-10 mm.

Purchased in 2000 (National project APTP)

Collaborations

