

Technology's description

This invention combines a specific device with a calculation method to determine the frictional characteristics between geotextiles and geomembranes surfaces G at the interface of a ground surfaces S. The measurements are performed on any geosynthetic materials and any "grounds" under both static & kinematic situations, using a tilted device. In the case of multilayer geosynthetics configurations, the weak sliding layer can be identified and its resistance can be quantified.

The invention allows to measure the frictional parameters at the initial sliding time as well as during the sliding movement. Hence, the frictional value (frictional angle) can be determined at controlled speed during the sliding process. The sliding speed can be induced and controlled with the inclination speed, allowing the determination of the frictional parameter(s) as a function of the effective sliding speed. During "stick-slip" situations, the high and low resistance values can be quantified as well.

Advantages

- **Characterization** in real (sloped ground) situations & "stick-slip" behavior
- **Supports** the development of new & customized materials (multilayer, reinforced)
- **A demanding methodology** providing a comprehensive sliding risk assessment
- **Securing** the material compliance with respect to the norms.

Applications

- Characterization, test & control instrument - Civil engineering & building infrastructures.



Intellectual property

Patent

Development level

System prototype demonstration in operational environment



Technology transfer

- License,
- Know-how.

