



The Falling Weight Deflectometer

The Falling Weight Deflectometer (FWD) applies a dynamic load that simulates the loading of a moving wheel. The pavement response is analysed with Dynatest's (Evaluation of Layer Moduli and Overlay Design) ELMOD software to determine the elastic moduli and stresses of each modeled layer. ELMOD reports the weakest layer of failure, residual life and determines the optimum rehabilitation alternatives.

Key benefits of the Dynatest Falling Weight Deflectometer:

- Automated and rapid structural pavement testing applicable to pavements all over the world
- Determines individual layer modulus
- Determines the layer of failure, rather than simply determining the bearing capacity
- QA/QC of newly built pavements
- Compares a range of rehabilitation options, including plane off and recycling rather than just applying overlays
- The use of the FWD provides accurate, reproducible and repeatable structural data
- Automated and real-time monitoring of the load cell, geophones, and data variations ensures high quality of collected data
- Uses mechanistic-empirical analysis applicable to most of pavement structure

In conjunction with our ELMOD software package:

- Rapid analysis
- Can be used to determine the optimum rehabilitation alternatives
- Can consider new innovative materials, that may be better suited to local environmental conditions
- Determines the effects of overloading, allowing additional rehabilitation costs to be determined
- Utilises mechanistic-empirical analysis techniques that work over a wide variety of pavements types, loading and local environmental conditions
- Parameter files can be easily setup with local material, vehicle loading and rehabilitation options
- Determines moduli, stresses and strains for up to five layers
- Integrated into the ELMOD core program, FEM/LET/MET gains the advantages of Finite Element Method, Linear Elastic Theory and Method of Equivalent Thicknesses Theory by seeding one value into the next, providing a very accurate analysis

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Habitat



Rural



Motorway



Residential