NVH testing tracks

DESCRIPTION

Noise and vibration measurements are performed either in laboratories and test-tracks. The test-tracks are usually used to assess the general Noise and vibration performance of the vehicle. All test tracks are digitalized in order to use the excitation data in the digital models.

Test tracks used for NVH purposes

- Track 1 - High speed circuit: The high speed circuit is used for on-vehicle NVH general assessments and measurements due to its smooth surface. The optimal conditions of the asphalt, its length and good weather conditions are the key aspects that make this facility very attractive for the clients.
- Track 7 - Comfort “B” track: Single inputs test track. This track provides a complete variety of transient inputs (steps, bumps, joints, etc). It is used to assess and measure the vehicle comfort performance when the vehicle drives over a known input surface. There are four different sectors with different inputs:
  - SECTOR 1 - U-shaped inputs
  - SECTOR 2 – Big steps
  - SECTOR 3 – Small steps
  - SECTOR 4 – Screwed profile
- Road noise test track: This rough asphalt track consists of two parallel strips of 300 m long and 1.2 m wide. There is a 0.8 m space between them. The asphalt is a hot bituminous mixture which is quite common on British roads, and is defined by the BS 594 standard. This track is very adequate to perform road noise tests.
  - Comfort “A” track
  - Comfort surfaces provide a complete variety of surfaces for ride comfort, rattles, squeaks, suspension and steering vibration and noises.
• Belgian pave
• Badly maintained road
• Washing board

• Exterior noise test track (ISO track): The exterior noise test track provides an excellent facility to measure the pass-by noise. The ISO surface due to its approaching and departure length allows measuring any kind of vehicle, including buses and heavy trucks.