



Samwoh Innovation Centre

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Discover pioneering pavement solutions at Samwoh Innovation Centre (SWIC), an advanced consultancy and research hub dedicated to sustainable, green, and innovative practices in the construction industry.

Accredited by the Singapore Accreditation Council under ISO/IEC 17025:2017, the SWIC team utilises diverse state-of-the-art testing equipment to deliver a comprehensive suite of testing services. Our expertise spans from pavement engineering materials to field evaluations, and include condition assessments, distress inspection, and materials analysis. Our team of experts addresses the intricate needs of the construction industry and delivers forward-thinking solutions for a resilient and environmentally conscious future.

Having conducted structural investigation and testing services for airport pavements in many countries in the world including Singapore, Malaysia, Cambodia, Brunei, Hong Kong, Seychelles, UAE, Saudi Arabia, Netherlands, France, Belgium, and UK, **SWIC** stands as your trusted global partner for cutting-edge solutions in construction.



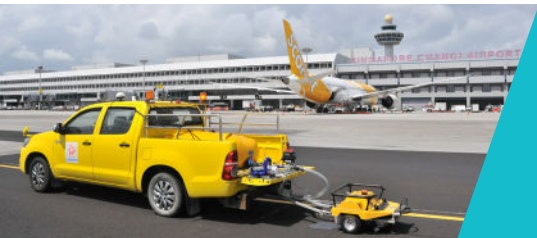
Structural Assessment Heavy Weight Deflectometer (HWD)

- Utilises high loading capability to evaluate structural conditions of airport and road pavement, simulating load levels of large aircraft.
- Back-calculates pavement layer elastic moduli for overlay design and evaluates remaining life in in-service pavements.
- Determines load transfer between adjacent concrete slabs and detects voids under slabs in rigid pavements.
- Calculates Pavement Classification Number (PCN) / Pavement Classification Rating (PCR) of airfield pavement.



Pavement Surface Distress Inspection Laser Crack Measurement System (LCMS-2)

- Utilises 3D sensors for pavement inspection, measuring key parameters in a single pass, operating day and night at speeds up to 100 km/h.
- Provides high-accuracy GPS positioning and captures video images for verifying pavement condition.
- Outputs formatted data for pavement management software.
- Determines parameters such as rut depth measurement, pavement ride quality in terms of International Roughness Index, automated crack detection, and mean texture depth.



Friction Test Grip Tester

- Provides continuous friction measurement, complying with ICAO and FAA requirements, identifying poor surface friction areas.
- Wide applications for road network surveys, airfields, runways, spot tests, and accident sites with real-time results.
- Collects data at speeds of 65 km/h or 95 km/h, calculating Grip Number (GN) for dynamic friction reading.



Pavement Smoothness Auto Rod & Level (AR&L)

- Implements a profiling system with Trimble laser receiving mast, using a rotating laser as a horizontal reference.
- Measures 3,300 meters in one hour, collecting data points every 0.25m.
- Determines the pavement's true profile and ride quality with an elevation accuracy of 1mm, allowing for the calculation of Boeing Bump Index (BBI), Ride Comfort Index (RCI) calculation and Aircraft Simulation.