Pavement Management Services provide specialist pavement testing and design services to meet the need of ports and terminal operators in the design, building, rehabilitation and expansion of heavy duty pavements, hard standing and terminal sites. Our aim is to deliver a trouble free solutions to the Transport Industry designed to facilitate unimpeded operations and longevity and trouble free hard standing.

Port and Terminal Pavements Services

Pavements represent a huge investment to any agency. Early pavement failures, poor performance, and costly repairs can impact greatly on efficiency and profitability. As such, pavements must be designed properly to accommodate traffic loads and climatic conditions. Increased use of pilotless straddle carriers has brought its own problems in addition to increased tonnages.

Design details are extremely complex, and the potential risks are far too great to entrust pavement design work to anyone not versed in the intricacies of pavement engineering. Pavement Management Services (PMS) have recognised expertise and decades of pavement design and materials experience. Our knowledge of asphalt and concrete materials, stabilised and permeable bases, traffic loads, joint design, subsurface drainage, and overall pavement performance make PMS suitably qualified to assist agencies and consultants in developing long-lasting, cost-effective designs for both new and rehabilitated pavements.
PORT AND TERMINAL PAVEMENTS SERVICES

Pavement Designs

A proper rehabilitation design begins with a detailed evaluation of the existing pavement structure to identify current conditions (both structural and functional), identify causes of the pavement deterioration, and determine the remaining pavement life. Once these activities are completed, the following steps are performed to develop and design the appropriate repair strategy:

- Identify feasible rehabilitation alternatives
- Conduct a design of each alternative
- Perform a life cycle cost analysis to determine the most cost-effective option
- Undertake laboratory testing of proposed materials prior to construction
- Test the resultant works to ensure compliance
- Verify and provide ongoing testing.

Ground Penetrating Radar (GPR) Testing: Ground Penetrating Radar is a highly versatile non-destructive method which provides a range of condition and construction information. In the pavement industry, GPR is widely used for locating utility lines, monitoring pavement and runways, locating reinforcement bars, changes in layer thicknesses and voids, as well as moisture determination. In the investigation of Port and Terminal pavements, GPR is widely used to locate load transfer bars and detect possible voiding below the concrete.

Geotechnical Testing: Boreholes, coreholes and test pits are undertaken to determine material quality and pavement configuration details. Pavement Management Services work with established NATA accredited laboratories for all materials testing.

Visual Inspections: Visual Inspections of Port and Terminal pavements are undertaken by suitably qualified and accredited Senior Pavement Engineers for the collection and assessment of pavement distresses and crack mapping.

Testing Services

Structural Testing using a Heavy Weight Deflectometer: A heavy vehicle bends the pavement, introducing some permanent distress into the pavement structure, causing it to fatigue in bitumen and cement bound materials and deform plastically in unbound granular materials, including the sub-grade.

Structural Testing is the application of a known load, similar to the dynamic effects of a moving truck and the measurement of the strains, thus produced, in the pavement.

Structural Evaluation is the analysis of this data to determine the characteristics of the pavement materials and computation of the likely performance under load.

In addition it is used to ensure road contractors have met the design specifications for the project and hence the completed works will meet the needs of the predicted traffic volumes and loads.

Notable Projects

Port Botany, Molineux Point, Pavement Investigation Project
Port of Brisbane, DB World Terminal, Pavement Investigation Project, O’Leary Drainage and Civil
Port Botany, HWD Testing, Network Geotechnics
Port Botany, HWD Testing, Green Civil
Visual Inspection, Port Kembla, Port Corporation
Dilapidation Study, Enfield, Sydney Ports
Fishermans Island, Brisbane
DLA Piper International

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More information available at www.pavement.com.au