Convergence of Advances in Design, Test Methods and Stabilization Product Technologies

Design Methods

The EMC SQUARED System (EMC2) — Advanced Stabilization Product Technology. Clean. Green. Concentrated power to improve the stability of earth materials at low cost. Applied as compaction water additives to aggregates, soils and recycled pavement materials with pre-established compaction controls and construction procedures, preconditioning aggregate materials to behave more like conglomerate rock, clays like claystone, sands like sandstone, and silts like siltstone, paralleling the natural processes of consolidation and lithification. These stabilizer products have been in use for over three decades for construction of city streets and expressways, county roads, interstate freeways, industrial and renewable energy sites, military supply routes and runways, remote unpaved highways, border roads, haul roads, forest roads, oilfield access roads, temporary and permanent closures of construction sites and landfills, and for other applications.

Advancements in Design Methodology

The highway industry has long been hindered by a lack of standardization in testing, monitoring and design methodology. Each state has had its own department of transportation with its own set of standards and procedures. The Federal Highway Administration (FHWA) has promoted national standardization in cooperation with AASHTO, the American Association of State Highway Transportation Officials, and these standards are typically used on federally aided highway projects. Prior to the publication of the AASHTO Mechanistic-Empirical Pavement Design Guide (MEPDG) program in 2002, pavement design was based upon a highway field monitoring study known as the AASHO Road Test conducted in the 1950's at a single location in Illinois, which had only modest traffic levels in comparison to the traffic volume of today. Starting in 1996, AASHTO sponsored the development of MEPDG, based upon an extended nationwide field-testing study and the use of Resilient Modulus laboratory testing. Mechanistic - Emperical Pavement Design (M-E Design) is far more sophisticated in regards to specific traffic loading, climatic conditions, design life and the ability to model real-world performance and changes in material properties. It makes it practical to evaluate a considerable number of alternative pavement designs for new construction and pavement rehabilitation. The chosen functional performance indicator in the MEPDG is pavement smoothness as determined by the International Roughness Index (IRI). It facilitates better-informed decisions and takes advantage of new materials and features. M-E Pavement Design, with its emphasis on pavement smoothness is already supporting the use of cost-saving EMC SQUARED System treatments. It will be fundamental to increasing the use of advanced stabilization technology as more public agencies and engineering consultants become familiar and comfortable with Resilient Modulus testing and use of the MEPDG for their pavement design requirements.

Stabilization Products LLC
Ph: (209) 383-3296 or (800) 523-9992
E-mail: info@stabilizationproducts.net
Website: http://www.stabilizationproducts.net

Canadian Sales
Milieu Road Technologies
(780) 875-9159