

BASIC TYPES OF ROADS AND PAVEMENT STRUCTURES

RSM001

COURSE DESCRIPTION

The primary functions of a pavement are, first to provide smooth riding surface (Low Roughness) which is essential for riding comfort, and over the years it has become the measure of how road users perceive a road. Roughness can arise from a number of causes, most often however it is from pavement distress due to structural deformation. Roughness is the distress parameter used by the vehicle operating cost sub-models of a pavement management system, to estimate the timing, type and cost of maintenance needs. Second to provide safety for road users. Safety, especially during wet conditions can be linked to a loss of surface friction between the tyre and the pavement surface. A pavement must therefore provide sufficient surface friction and texture to ensure road user safety under all conditions. Third is to protect the subgrade, therefore the pavement must have sufficient structural capacity (strength and thickness) to adequately reduce the actual stresses so that they do not exceed the strength of the subgrade. And, fourth the pavement surfacing acts as a waterproofing surface that prevent the underlying support layers including the subgrade from becoming saturated through moisture ingress. Based on the importance, this course is designed to cover basic types of road and pavement structures.

COURSE GOAL

To enhance the participants knowledge, skills and abilities necessary to know the types of road and understand the pavement types and strategies.

COURSE OBJECTIVES

By the end of this course, participant will be able to:

- Classify highway according to its Function and purposes
- Determine Pavement types
- Understand Pavement Strategies
- Be familiar with flexible and rigid pavement design.

WHO SHOULD ATTEND

Engineers, formans, engineering technologists and technicians working in the field of road and pavement structure, design and maintenance.

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. Basic Types of Roads

- Introduction
- Highway Functional Classifications and their purposes
 - Concepts
 - Criteria
 - Purposes
 - Access versus mobility
 - Urban and Rural highways
 - Local Roads
 - Minor and Major Collector Roads
 - Sub-Arterial and Arterial Roads
 - Express and Freeways
 - Limited access grade-separated highways

2. Pavement Types and Structure

- Pavement types
 - Flexible Pavements
 - Rigid Pavement
- Pavement Strategies
 - Project Types
 - Life Cycle Cost Analysis
 - Design Factors
 - Performance Prediction
 - Future Rehabilitations and Maintenance Policies.
- Introduction to Flexible and Rigid Pavement Design.

arctic