

Design and Load Analysis of Industrial Monorail Overhead Hoist Crane

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Abstract: *The design and analysis of a monorail girder overhead hoist crane is important for efficient material handling in industries. This project focuses on the structural design, load analysis, and performance evaluation of a monorail girder crane used for lifting and transporting heavy loads. The study includes calculation of stresses, load distribution, and selection of suitable materials to ensure safety and reliability. Modern design methods and analysis tools are used to evaluate the strength and stability of the crane components. The results help in optimizing the crane design for better efficiency, reduced weight, and improved durability. This study contributes to safer lifting operations and enhanced productivity in industrial environments where overhead material handling systems are widely used.*

Keywords: Monorail Girder Crane, Overhead Hoist Crane, Structural Design, Load Analysis, Stress Analysis, Material Handling Equipment, Finite Element Analysis (FEA)

