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Abstract

The layout is the correct arrangement of the machines within the industrial plant, similar to the representation of the skeleton of a human being. Materials handling refers generally to all the internal movements of any type of material within the industrial plant, similar to the representation of the muscular system of a human being. Consequently, it becomes obvious that the design priority in facilities has to be given to the plant layout, which is considered to be the skeleton of the whole. The materials handling system must be introduced upon its completion to complete the production process. It has to be indicated that any malfunction in the correct arrangement of the machinery is not allowed, because any movement or changing of the position of any machine is a very difficult task. There is a close relationship between plant layout and material handling. The materials handling technique will affect the plant layout and the factory building. A sound low-cost method can be designed and installed only if material handling has been considered an integral

part of plant layouts. A well-designed arrangement of production equipment, the proper location of different departments, a logical sequence of operation within the department, and convenient location of store areas, tool cribs and similar activity centres are required for effective materials handling arrangement. The efficient and economical materials handling system can be designed and selected for installations only after the floor plan has been adequately organized. In all types of plant layouts, provisions for the receiving and shipping of materials by various possible means (like trucks or trains, etc.) should be made. If it is necessary to move the materials by manually-operated or power-operated trucks, sufficient passage should be provided. If the building is multi-storied, lifts, elevators, and conveyors of different types must be utilized to enable efficient materials handling. The location of items in the storeroom should provide for minimum handling of materials to the point of issue, accessibility, and efficient space utilization.

