

Review of Material Handling System

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Abstract- Material handling has very old method. In evaluation and implementation of material handling system, multiple factors should be considered, including the plant facilities, the machines, the material handling equipment and of course people involved. In this paper the overall revive of material handling systems is taken.

Keywords- Material handling ,Cranes, Human powered forklift

I. INTRODUCTION

In every activity needs means of moving the material. Hence there is need of material handling and hence material handling equipment's. Industrial material which is heavy and bulky, this cannot handle efficiently. That's why we need material handling equipment's. Any type of industry whether small or big, productions plant or process plant, agriculture industry or service sector in which such application there is only one common thing, movement of material, material handling

II. LITERATURE REVIEW

KeshavaChandaArora (Aspects of Material Handling)[1]

Nowadays every industry use various types of conveyors for material handling purpose. In industry various types of conveyor are used like wheel, roller, magnetic belt, trolley, conveyor etc,

MikellP.Groover (Automation, Production Systems and Computer Integrated Manufacturing)[2]

Cranes used to move loads over variable paths within a restricted area. It also used when there is insufficient flow volume such that the use of a conveyor cannot be justified. It Provide more flexibility in movement than conveyors. Also It Provide less flexibility in movement than industrial trucks.

MayankDev Singh (Overall Productivity Improvement in Casting Industry)[3]

It consists of two wheeled hand truck and powered pallet jack.. In two wheeled hand truck ,Load tilted during travel Good for moving a load up or down stairways..Powered pallet jack, sometimes referred to as a "(walkie) pallet truck"

B. Ramana (Quantitative Analysis of AGV System in FMS Cell Layout)[4]

Industrial Robot - "Intelligent" industrial

robots utilize sensory information for complex control actions. Can be powered manually, electrically, or pneumatically.

Bartholdi, III, J.J., and Hackman, S.T., 20119 (Warehouse & Distribution Science)[5] Unit load formation equipment is used to restrict materials so that they maintain their integrity when handled a single load during transport and for storage. If materials are self-restraining (e.g., a single part or interlocking parts), then they can be formed into a unit load with no equipment.

Hariharan Pethaperumal and Nagappan Shivkumar (Department of Chemistry, AMET University, Kanthur Chennai-603112, India) [6]

Material handling problems in construction sites contribute to the maximum number of accidents. And MMHE's play a critical role for the safety management process in these construction sites. The selection and procurement of construction and material handling equipment is important and should be done carefully as it is base for operation and easier maintenance .Implementation of effective safety measures is necessary on a continual basis for the construction sites, which will greatly enhance the safety system and protect the construction workers from injuries and fatalities.

Surinder kumar and Tilak Raj (Department of mechanical engineering, YMCA University of science and technology Faridabad, Haryana, India)[7]

A pair wise comparison was carried out between the various alternative for each consider attribute and finally weights were obtain. This weight are then Utilize for deciding the ranking of material handling equipment as A1(Automatic conveyor), A2(Robot) and A3(AGV). In the consider example, it is found that the material handling equipment A3(AGV) is the best alternative among the consider alternative.

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(A review of material handling and weight lifting)[8] The material handling and weight lifting machine is the most useful machine for lifting the weight and handling the material from one place to another. Weight lifting machine is usefull in domestic as well as industrial purpose.

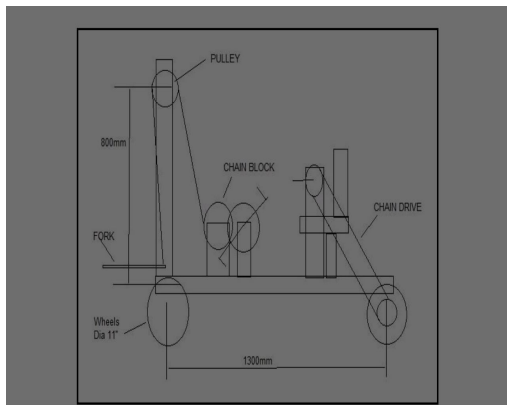
Mr. Pranay S. Chaudhari¹, Prof. V.A. Kolhe², Prof. S.B. Ambekar³

(A Review Paper on Flexible Spring Conveyor System for Material Handling System)[9] Keeping flow

properties of bulk solids like bulk density, angle of repose and particle shape and size in mind, Flexible Spring Conveyor system can be a good substitute to manual material handling in small scale industries. In economic point of view this system can be greatly useful and concept is highly appreciated by industries as far as its other advantages like accuracy in discharge end, adaptability in existing plant layout, overall cost and easy maintenance over conventional conveyors is considered.

Sandip Patil , Ayubkhan Pathan ,Manohar Chavan ,Sajid Shikalgar ,Prof. B. Nangare Patil (Department Of Mechanical Engineering, Adarsh institute Of Technology ,Shivaji University)[10] Small scale industries are going towards high quality of product with minimum cost also they are trying to reduce a material handling cost to increase the overall profit. So for effective material handling human powered forklift would be the excellent option to reduce energy consumption and a lot. It has enormous advantage over others.

III. DIAGRAM



HUMAN POWERED FORKLIFT

IV. CONCLUSION

Different MHSs were considered and discussed. They were mentioned as theoretical, ultimate, and technologically workable. However, the suggestion was that companies should focus on and implement a MHS that is cost effective and is able to function at the present time without any obstacle and failure. There are various principles and factors on which Selection material handling system depends. By studying these parameters, selection of proper material handling system can be done.

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