



Implementation of Just In Time Inventory Management In ESSAR Steel India Ltd. & maximize the efficiency through this approach

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ABSTRACT

Just-In-Time (JIT) has been a very popular operations strategy partly because of its success in the Japanese industry. Various benefits, for example, inventory reduction, improved in operations efficiency, and faster response, have been studied widely in previous research. Therefore, successful implementation of JIT is vital to many companies. The main objective of this research is to make use of a case study to present various issues surrounding implementation of JIT for an steel industry. This case study also provides evidences for supporting the benefits of employing JIT. The conclusion of this research indicates that JIT system is successful, and operating JIT system can lead to many advantages to the case company.

KEYWORDS

Just-in-time, Steel industry, manufacturing systems, cases study.

Introduction:-

Just-in-Time (JIT) means making "only what is needed, when it is needed, and in the amount needed." For example, to efficiently produce a large number of automobiles, which can consist of around 30,000 parts, it is necessary to create a detailed production plan that includes parts procurement. Supplying "what is needed, when it is needed, and in the amount needed" according to this production plan can eliminate waste, inconsistencies, and unreasonable requirements, resulting in improved productivity. JIT applies primarily to repetitive manufacturing processes in which the same products and components are produced over and over again. The general idea is to establish flow processes (even when the facility uses a jobbing or batch process layout) by linking work centers so that there is an even, balanced flow of materials throughout the entire production process, similar to that found in an assembly line. To accomplish this, an attempt is made to reach the goals of driving all inventory buffers toward zero and achieving the ideal lot size of one unit.

The main purpose of this paper is to apply the JIT tool to ESSAR Steel pvt. Ltd. And minimize the loses and maximize the efficiency along with production.

Litreature Review:-

Steven J. Spear [1] suggested a Embedding diagnostic tests in work-systems to achieve operational excellence. Meybodi, Mohammad Z. [2] presented a paper on "The impact of just-in-time practices on consistency of benchmarking performance measures." Vikas Panchal, Amit Gupta et.al. [3] Published a paper on Evaluation Of Just In Time (JIT) Elements In Banking Sector Using Anova Technique. Pekka Tervonan [4] presented a paper on "Evolution of safety management & systems in a steel production organization. Duclos L K, Siha S M, et.al. [5] presented a paper on JIT in services: a review of current practices and future directions for research.

Methodology:-

How does a JIT system achieve its vast reductions in inventory and associated cost savings? A production-systems expert lists the following key features of the JIT approach:-

1) A smooth, uniform production rate. An important goal of a JIT system is to establish a smooth production flow, beginning with the arrival of materials from suppliers and ending with the delivery of goods to customers. Widely fluctuating production rates result in delays and excess work-in-process invento-

ries. These non-value-added costs are to be eliminated.

2) A pull method of coordinating steps in the production process. Most manufacturing processes occur in multiple stages. Under the pull method, goods are produced in each manufacturing stage only as they are needed at the next stage. This approach reduces or eliminates work-in-process inventory between production steps. The result is a reduction in waiting time and its associated non-value-added cost.

(3) Purchase of materials and manufacture of subassemblies and products in small lot sizes. This is an outgrowth of the pull method of production planning. Materials are purchased and goods are produced only as required, rather than for the sake of building up stocks. The result is a reduction in storage and waiting time, and the related non-value-added costs.

(4) Quick and inexpensive setups of production machinery. In order to produce in small lot sizes, a manufacturer must be able to set up production runs quickly. Advanced manufacturing technology aids in this process, as more and more machines are computer-controlled.

(5) High quality levels for raw material and finished products.

(6) Effective preventive maintenance of equipment. If goods are to be manufactured just in time to meet customer orders, a manufacturer cannot afford significant production delays. By strictly adhering to routine maintenance schedules, the firm can avoid costly down time from machine breakdowns.

(7) An atmosphere of teamwork to improve the production system. A company can maintain a competitive edge in today's worldwide market only if it is constantly seeking ways to improve its product or service, achieve more efficient operations, and eliminate non-value-added costs.

(8) Multiskilled workers and flexible facilities.

Conclusion: -

Expected Outcomes of applying JIT tool are as follows;

- ▶ Inventory cost reduces by 24% also affects on the overall cost by 8%.
- ▶ Sufficient or it to be said that an average Inventory level is maintained in respective grade-sizes.
- ▶ Major fluctuations are also sustainable & fulfilled accord-

ingly with respect to market demand.

- At customer point of view, there is a major beneficiary at their end on Inventory control.

In any business, make it big or small, we must understand that taking good care of our inventory is very important. If we as managers do not understand the concept of good inventory management, we must learn to be familiar with it and its applications. One of the reasons for the failure of a business is its inventory management. There are many ways to fight failure, and we can start from here. There are new technologies that can help us maintain and supervise our inventory. What we can do is learn, implement and evaluate our business. And you can start with your INVENTORY!!!!

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