

Materials Management in Hindustan Copper LTD. (A Study of Khetri Copper Complex, Khetri Nagar, Raj.)

***Dr. Om Prakash Sharma**

Abstract

Materials Management, which is a branch of management science, covers the facets of planning, scheduling, purchasing, transportation, stores-keeping, receiving, inspection, inventory control, value engineering, etc. Materials Management establishes the requirements, provides the availability, determines the value and price levels and controls the flow of materials from the initial development of the production requirement (coming from the receipt of the customer's order from marketing schedule of anticipated sales) until the final delivery of the product to the customer. The increasing pace of industrialization has highlighted several problems. The Materials Management Department of Hindustan Copper Ltd cannot be an exception of that. There are several numerous problems, big and small, faced by this Department. The Khetri Copper Complex, a major constitute unit of this public sector enterprise also faces such type of problems. To manage all such problems, effective and considerable suggestions has been discussed in this research study.]

INTRODUCTION:

There are several factors which affect the product cost. To minimize the product cost, it is essential to introduce the progressive and scientific management techniques of materials management. Today, the materials management techniques not only help in pruning the cost of product but also help in increasing the production and productivity of an organization. The scientific materials management checks wastage and avoidable expenditures and keeps the inventory at optimum level. In developing countries like India, there are several factors which are responsible for the increase of cost of production. Therefore, it is essential to curb such unwanted factors. This is possible only through application of scientific materials management. Proper planning and better materials management is of utmost importance. 'Material' is one of the basic components of production.

The Materials Manager regulates this flow in relation to changes in demand for finished goods, actual or predicted prices of materials, supplier performance on quality and delivery, availability of materials and other variables. Therefore, the materials manager has to ensure that right quantity of right material is procured in right time and at right price. No organization can afford to run its plants at very low inventory as it increases the chances of shut-down of plants due to stock-outs. Similarly, on the other hand hoarding tendency may block the precious capital of an organization which is also undesirable. Market surveillance is also very essential for newer and better substitutes at cheaper rates. Such efforts lead an organization towards achieving its objectives and profit making. The

Materials Management in Hindustan Copper LTD.
(A Study of Khetri Copper Complex, Khetri Nagar, Raj.)

Dr. Om Prakash Sharma

materials management which includes all the functions thus plays a vital role in the growth in an organization.

In view of above, all the advanced countries are giving considerable importance to the concept of Materials Management. Although the functions of materials management are not new in an organizational structure, yet performing the same in a systematic manner helps an organization in its smooth operation as well as bringing the production cost lower. Now days the scope and definition of Materials Management have been expanded viz: material budgeting, taking make or buy decision, vender rating, value engineering, production requirement planning, surveillance of market, negotiations, inventory management, codification, standardization, deciding for inward and outward transportation, imports and import substitution etc.

The present research work relates to the Materials Management and Stock Control at Khetri Copper Complex. Khetri Copper Complex (K. C. C.) being the largest constituent unit of Hindustan Copper Limited has a major role to play in as much as two-third of the total production is expected from this unit. KCC is known as an "INDUSTRIAL OASIS IN THE DESERT." It is more than obvious that the establishment of Khetri Copper Complex has been the most potent instrument of change in the entire district of Jhunjhunu (Rajasthan). Today there are about two dozen of ancillary industries located in the vicinity of Khetri Copper Complex. Apart from this, a number of other small units have also cropped up and are fully surviving on the complex. There has been an over-all development of this area due to this Complex.

At present KCC is a major constituent unit of HCL with an installed capacity of 31000 tones of electrolytic grade copper per annum. The Khetri Copper Complex is situated in the Jhunjhunu District of Rajasthan and is the largest integrated copper mining-cum-metallurgical unit in the country. The Complex comprises three mines (two underground viz: Khetri and Kolihan and one open cast viz: Chandmari). Dariba Copper Project in Alwar District, which is a mining-cum-concentration unit with an installed capacity of 100 tons per day, also forms a part of Khetri Copper Complex. The Ore Capacity of mines of KCC is 18 lakhs tones per annum. In the present era of globalization, to promote the export of Copper CC Rod and KCC Cathodes, the registration process of two international brands namely-'HINDCOP-CG' and 'HINDCOP-CK' has been started in Metal Market of London by HCL.

It may also be pointed out that in the past, a few studies have been conducted by government agencies and individual researchers on the size of inventories and the methods of materials management in selected central public enterprises. But all these studies have remained centered on the invariable views and conclusions. In this context, it can be stated that KCC, as a large sized public enterprise has wide scope for logical and depth research study in the field of Materials Management and Stock Control. In other words, we can say that KCC is a big organization for research work.

Although, the most of structural changes according to the present changed scenario have been made in Hindustan Copper Limited and it began the process of deregulation, liberalization, financial reforms and introduced many measures and instruments both at micro and macro levels for accelerating the pace of the growth of the Company but still there are certain bewildering problems

Materials Management in Hindustan Copper LTD.

(A Study of Khetri Copper Complex, Khetri Nagar, Raj.)

Dr. Om Prakash Sharma

being faced by the Department of Materials Management of the K. C. C., time and again viz : Stock-outs; Rush purchases; Excess lead-time; More rejections; Accumulated claims on suppliers and transporters; Standardization; Import- substitution; obsolete and surplus stocks; excess inventory etc.

All these problems not only speak of inefficiency of the Material management Stock Control of K C C but also hamper the production of strategic metal and also affect the cost of products. These are really puzzling problems which need immediate remedial action, so that the Complex can show better results in the present market driven economy. And it can fulfill the expectations which stakeholders like government as owner, employees, customers and the country at large have from H. C. L. This has prompted me to undertake the present research work.

OBJECTIVES OF THE STUDY:

- To have an overall appraisal of Materials and Stock position in Khetri Copper Complex and to assess the prospects for the improvement in the Materials management in the organization.
- To examine the role of materials and stock control in the production cost and utilization of physical resources of the KCC.
- To examine the managerial and controlling process of materials and inventories adopted in the KCC and assess the validity of criticism leveled against its process as it increase the product cost.
- To build - up a common model for the effective materials management for the large sized public enterprises like HCL.
- To enumerate the problems and difficulties being faced by the Materials management at KCC and their probable suggestions / solutions.

SAMPLE SELECTION AND SAMPLE FEATURES -

The universe for the present study is the Materials Management and Stock Control of Khetri Copper Complex. The sample consists of various user department of KCC. The sample has been chosen based on stratified random sampling method. Special care has been taken in choosing the sample so that the sample represents the features of the universe. Physical verification of various items in the Stores yards has also been conducted on random sampling basis.

METHODOLOGY:

In this research study the main techniques for investigations and fact findings are - Questionnaires; Literature Survey; and Experience Survey- Interviewed more than two dozen of managerial level persons who are engaged in Materials Management functions for the last two decades or so and have sufficient knowledge in the field of Materials Management. Beside this contacted other user departments to get their opinions. A questionnaire containing 44 questions was prepared and

Materials Management in Hindustan Copper LTD.

(A Study of Khetri Copper Complex, Khetri Nagar, Raj.)

Dr. Om Prakash Sharma

distributed among 80 persons working in KCC. This was relating to the activities of Materials management Department at KCC viz timely availability of quality materials in sufficient quantities from time to time, organizational structure of materials department, etc. 65 persons responded. The statistical fundamentals have been applied in analyzing the data. Only after proper analysis of data conclusions have been drawn for managerial decisions.

**MAIN PROBLEMS OF MATERIALS MANAGEMENT AT KHETRI
COPPER COMPLEX:**

- **IMBALANCED ORGANIZATIONAL STRUCTURE**
- **INCOMPLETE VENDERS' DIRECTORY**
- **STOCK - OUTS**
- **SHORTAGE OF TRAINED PEOPLE**
- **INCREASED LEAD TIME**
- **SURPLUS INVENTORIES**
- **ACCUMULATED CLAIMS**
- **EMERGENCY PURCHASES**
- **EXCESSIVE INVENTORIES**
- **TRANSPORTATION PROBLEMS**
- **LACK OF STANDARDIZATION**
- **NEED OF COVERED SHEDS**
- **CODIFICATION PROBLEMS**
- **IMPORT PROBLEMS. etc.**

SUGGESTIONS:

To manage the Materials Management and Stock Control on scientific basis, the following suggestions should be considered:

- Monthly review meeting should be held with all the user departments;
- Quarterly meetings should be organized at corporate level where the senior executives of Materials Departments of all the Projects of the company should participate to explain their problems;
- Any increasing in the inventory holding of any item should immediately be reported to the Head of the Complex with reasons of occurrence;
- From time to time the lists of non-moving, slow moving and absolute items should be prepared and circulated among the user departments to explore any alternative use of such items;
- To solve the problem of valuation for finished goods and work-in-process inventory, the following guidelines may be prescribed:

Materials Management in Hindustan Copper LTD.

(A Study of Khetri Copper Complex, Khetri Nagar, Raj.)

Dr. Om Prakash Sharma

- I. Normal factory costs should be included for ascertaining product cost; viz, raw material, direct labour and factory overheads. Some follow the practice of direct cost valuation, whereby all allocated overheads are left out. On the other hand, some include depreciation and working capital interest in the cost of the product cost only to the extent that they are normal and, acceptable.
- II. The direct labour cost and overheads portion of the product costs are usually built based on a whole year's figures, since allocation of a few month's costs may give a distorted picture. But raw material cost part of the product cost is usually taken based on the last suppliers of raw materials fed to production.
- III. Joint products are valued using the market price or cost concept, usually the lower of the two. By – products are not to be valued.
- IV. WIP should also be valued again at cost of production, however, invariably only direct costs should be considered. And due consideration should be given to the stage at which the inventory is lying. As the cost at the beginning of the process is significantly less than the cost in the penultimate state, many organizations average out the additional input cost and add it to the raw materials cost, which has already been issued at the beginning.
 - There should be a wise use of Computer in respect of following areas:
 - Vendors Directory;
 - List of Enquiries floated;
 - Purchase Order Directory;
 - List of items with their stock-control levels.
 - Monthly reports should be sent to head office regarding stock-holding.
 - There should be a better management of scrapes and rejected materials lying idle in the stores. Disposal of such items can fetch a good amount for the Company in addition to reduction in inventory holdings.
 - Hectic efforts should be made to maximize the import substitution;
 - Materials Management should also work in close coordination with Finance and other user departments; and
 - There should be centralized purchases for all the units of the Company.

CONCLUSION:

Since materials soak up a substantial portion of the working capital invested in an organization, it warrants considerable amount of attention from the corporate level of management. Normally the materials cost as percentage of total costs of a product is about 60 percent. Without scientific management of materials, it is difficult for any industry to survive in this competition age. Therefore, the Materials Management in any organization on rational basis has assumed greater importance throughout the world. If all the suggestions made in this study are implemented at Khetri Copper Complex, it is hoped that the Materials Management Departments would be able to get the rid of most

Materials Management in Hindustan Copper LTD.

(A Study of Khetri Copper Complex, Khetri Nagar, Raj.)

Dr. Om Prakash Sharma

of the problems up to a great extent. It would also go a long way in reducing the cost of finished product. It is hoped that the above suggestions will also be adopted by the other sister units of Khetri Copper Complex, to over-comes similar problems being faced by them. It is believed that this study will also serve as a useful guide, not merely the Hindustan Copper Limited, but also to the other large size public enterprises.

***Lecturer**
Department of Bus. Admn
Govt. College
Sumerpur, Pali (Raj.)

REFERENCES :**BOOKS**

- Nair N K : Materials Management, Mumbai, 2003
- Narain Laxmi : Principles and Practice of Public Enterprises Management, S Chand & Co. Ltd. 2006
- Niland, P. : Production Planning & Control, London,1990
- Prichard, J.W. : Modern Inventory Management, NewYork,2001
- Robinson,O.P. : Stores Organization & Operations,2005
- Verma M M : Essentials of Store-keeping 7 purchasing, S. Chand & sons, New Delhi, 2004

REPORTS & NEWSPAPERS

- Khetri Copper Complex: An Introduction
- K C C: Mining Magazine
- Performance & Projects – H C L
- Inventory Reports: H C L
- Annual Reports – Hindustan Copper Limited (1996-97 to 20011-12)
- Copper Calling – A house journal of H C L.
- The Indian Journal of Public Administration, New Delhi
- The Economic Times
- The Hindustan Times
- The Rajasthan Patrika; Nav Bharat Times, etc.

Materials Management in Hindustan Copper LTD.
(A Study of Khetri Copper Complex, Khetri Nagar, Raj.)

Dr. Om Prakash Sharma