



A STUDY ON INVENTORY MANAGEMENT AT KESORAM CEMENTS LTD

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Abstract

Inventory is needed for the definite consumption demand of materials, and to take care of the uncertainty involved in the usage or availability of the materials. Sometimes other authors described as the “decoupling function” of the inventory which means that the various dependent of each other. If an inventory of materials is maintained at the different stages of production.

Inventory management is concerned with keeping enough product on hand to avoid running out while at the same time maintaining a small enough inventory balance to allow for a reasonable return on investment. Proper inventory management is important to the financial health of the corporation. Excessive level of inventory, results in large inventory carrying costs, including the cost of capital tied up in inventory warehouse fees, insurance etc.

An inventory of finished goods allows separation of production from selling. With a stock of finished merchandise on hand, a firm can fill orders as they are received rather than depend upon the completion of production to satisfy customer demands.

The Indian cement industry is the second largest in the world after Chinas. In terms of quality, productivity, and efficiency it compares with the best anywhere. It is almost entirely home grown, built indigenously and using locally sourced inputs. In other words, the hard ware and software that run the industry in all mostly Indian barring one (or) two exceptional years, its performance in the last two decades has been quite consistent and commendable in terms of Modernization, expansion, growth in production, improvements in productivity and cost efficiency.

OBJECTIVES OF THE STUDY

- To examine the organization structure of inventory management in the stores of Kesoram Cements.
- To discuss pattern, levels and trends of inventories in Kesoram Cements.
- To understand the various inventory control techniques followed by studied by Kesoram Cements.
- To access the performance of inventory management of the Kesoram Cements by selected accounting ratios.
- To know the inventory control techniques of Kesoram Cements.
- To present the conceptual framework relating to management of working capital.
- To examine the size of invest and turnover of working capital in an overall manner including financing of current assets.
- To know the inventory management practices of Kesoram Cement with a view to determine the extent of blocking up of money inventory.
- To assess the receivables management practices of Kesoram Cement in terms of its size, turnover and collection policies.

To offer suitable suggestions for the efficient management of working capital in Kesoram Cement, keeping in view the inadequacies highlighted by the study

SCOPE OF THE STUDY

The scope of the project is totally conducted at kesoram industries limited, basanthnagar, karimnagar and the project duration is also very limited and the project work is done on the inventory management of kesoram limited.



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This study includes 'ABC' and EOQ analysis of raw materials for the three financial years. This study provides insight to the management of high value items and movement of them.

METHODOLOGY OF THE STUDY

The present study is based on both

- Primary Data
- Secondary Data

Primary Data

Firsthand information was collected from experts of finance department on their course of actions towards collections and observations.

Secondary Data

- Company annual reports, records, from the stores department.
- Company website (www.kesoramindustries.com).

METHODOLOGY

For the purpose of material control various inventory control tools have been used for arriving materials at stock levels viz., EOQ for main raw materials. EOQ analysis has been undertaken to determine the value and importance of an item in the production cycle.

LIMITATIONS OF THE STUDY

The study has the following limitations,

- The study is limited only for a period 5 years i.e., from 2008-09 or 2013-14.
- The limitations of ratio analysis can be applicable of the study.
- There may be approximation in calculating ratios and taking the figure from the annual reports.
- Time factor is major constraint for the study.
- Some of the financial matters are not revealed by the company as they are kept confidential.
- I considered few raw materials only gypsum, clinker raw meal, limestone, slag, clay.
- Since the procedure and policies of the company will not allow disclosing confidential financial information, the project has to be completed with the available data given to us.
- All inventory management techniques were not studied.

ABOUT KESORAM INDUSTRIES LTD

Kesoram cement industry is one of the leading manufacturers of cement in India. It is a day process cement plant. The plant capacity is 8.26 lakhs tones per annum. It is located at Basanth Nagar in Karim Nagar district of Andhra Pradesh, Basanth Nagar is 8km away from the ramagundem railway station linking madras to New Delhi. The chairman of the company is sty. B.K Birla.

REVIEW OF LITERATURE

The investment inventory constitutes the most significant part of current assets / working capital in most of the undertakings. Thus, it is very essential to have proper control and management inventories.

The purpose of inventory management is to ensure availability of materials in sufficient quantity as and when required and also to minimize investment in inventories.

MEANING AND NATURE OF INVENTORY

Raw Material

Raw material from a major input into the organization. They are required to carry out production activities uninterruptedly. The quantity of raw materials required will be determined by the rate of consumption and the



time required for replenishing the supplies. The factors like the availability of raw material and Government regulations etc., too affect the stock of raw materials.

Work In Progress

The work in progress is that stage of stocks which are in between raw material and finished goods. The quantum of work in progress depends upon the taken in the manufacturing process. The quantum of work in progress depends upon the time taken in the manufacturing process. The greater the time taken in manufacturing, the more will be the amount of work in progress.

Consumables

These are the materials which are needed to smother the process of production but they act as catalysts. Consumables may be classified according to their consumption add critically. Generally, Consumable stores dose not supply problem and firm a small part of production cost. There can be instances where these materials may account for much value than the raw material. The fuel oil they a substantial part of cost.

Finished Goods

These are the goods, which are ready for the consumers. The stock of finished goods provides a buffer between production and market, the purpose of marinating inventory is to ensure proper supply of goods to customers.

Spares

The stock policies of spares fifer from industry to industry. Some industries like transport will require more spares than the other concerns. The costly spares parts like engines, maintenance spares etc., are not discarded after use, rather they are kept in ready position for father use.

All decisions about spares are based on the financial cost of inventory on such spares and the cots that may arise due to their non-availability.

Benefits of Holding Inventories

Although holding inventories involves blocking of a firm's and the costs of storage and handling, every business enterprise has to be maintain certain level of inventories of facilities un-interrupted production and smooth running of business. In him absence of inventories a firm will have to make purchase as soon as it receives orders. It will mean loss of time and delays in execution of orders which sometimes may cause loss of customers and business.

A firm also needs to maintain inventories to reduce ordering cost and avail quantity discounts etc.

There are three main purpose of holding inventories.

1. The transaction motive: which facilities continuous production and timely execution of sales order?
2. The precautionary motive: which necessitates the holding of inventories for meeting the unpredictable changes in demand and supplies of materials?
3. The speculative motive: which induces to keep inventories for taking advantage of price fluctuations, saving in re-ordering costs and quantity discounts?

Objectives of Inventory Management

Definition of inventory management: inventory management is concerned with the determination of optimum level of investment for each components of inventory and the operation of an effective control and review of mechanism.

The main objectives of inventory management are operational and financial.

- The operational objective mean that the materials and spares should be available in sufficient quantity so that work is not disrupted for want of inventory.
- The financial objective means that inventory should not remain idle and minimum working capital should be locked in it.



The following are the objectives of Inventory Management

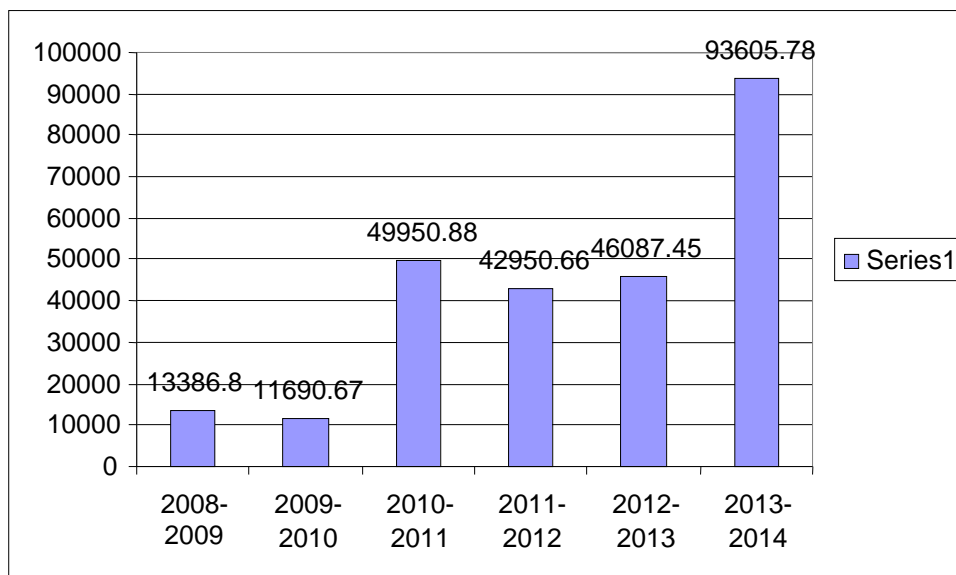
1. To ensure continuous supply of materials, spares and finished goods so that production should not suffer at any time and the customers demand should also be met.
2. To avoid both over-stocking and under-stocking of inventory.
3. To maintain investment in inventories at the optimum level as required by the operational and sales activities.
4. To keep material cost under control so that they contribute in reducing the cost of production and overall costs.
5. To eliminate duplication in ordering or replenishing stocks. This is possible with the help of centralizing purchases.
6. To minimize losses through deterioration, pilferages, wastages and damages.
7. To ensure perpetual inventory control so that materials shown in stock ledgers should be actually lying in the stores.
8. To ensure right quality goods at reasonable prices. Suitable quality standards will ensure proper quality of stocks. The price-analysis, the cost analysis and value-analysis will ensure payment of proper prices.
9. To facilitate furnishing of data for short-term and long term planning and control of inventory.

ANALYSIS OF DATA

1. Investment on Raw Materials

The investment on raw material over a period of 6 year from 2008 to 2014 is presented in the following table.

Year	Raw material (in lacks)
2008-2009	13386.80
2009-2010	11690.67
2010-2011	49950.88
2011-2012	42950.66
2012-2013	46087.45
2013-2014	93605.78



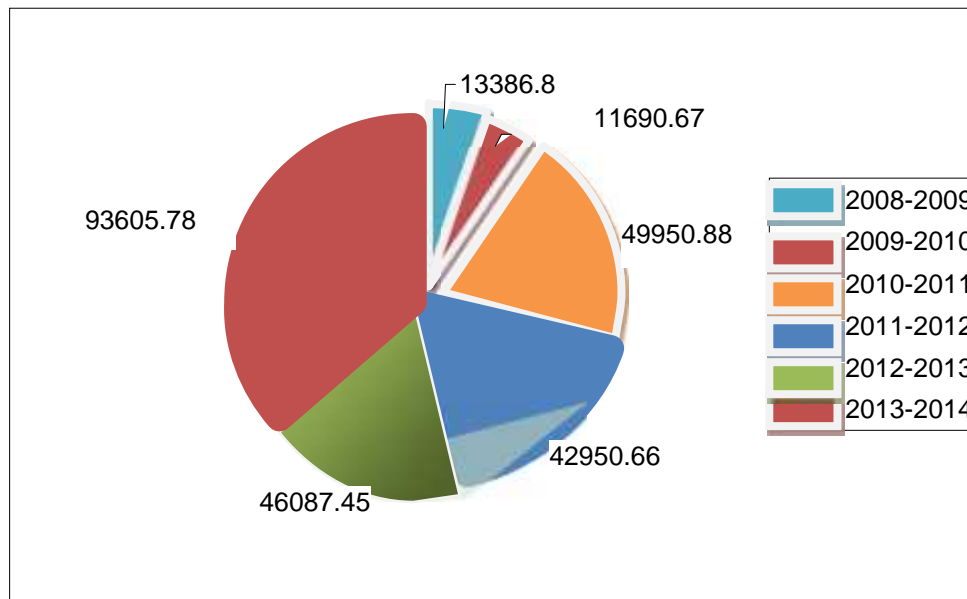
2. TREND ANALYSIS

Trend analysis technique is applied to know the growth rate in investment of raw material of Kesoram Cement over the review period which is shown in the following table.



Trend analysis

Year	Raw material (in lacks)	Trend (%)
2008-2009	13386.80	100%
2009-2010	11690.67	87%
2010-2011	49950.88	373%
2011-2012	42950.66	315%
2012-2013	46087.45	344%
2013-2014	93605.78	699%



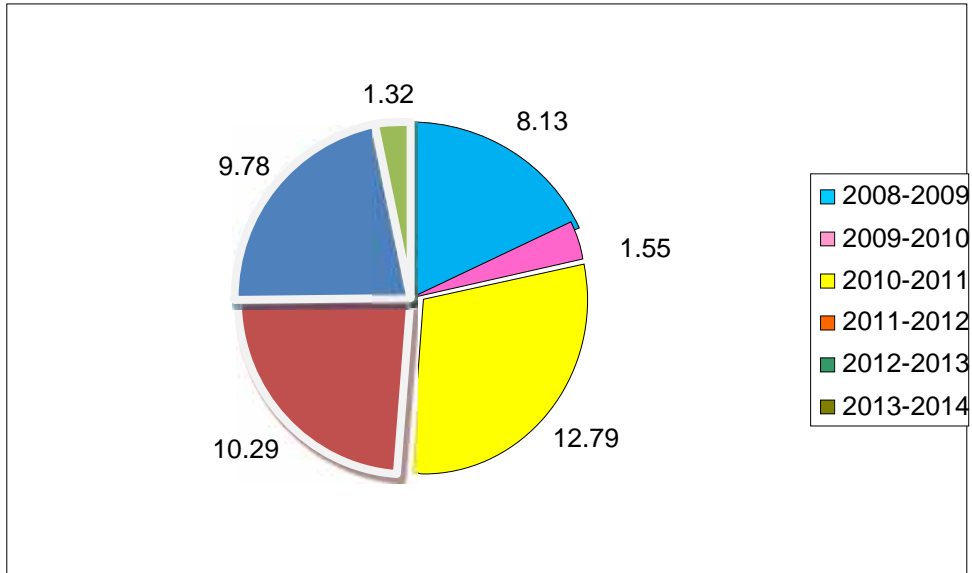
3. INVENTORY TURNOVER RATIO

This ratio indicates the number of times the stock has been turned over during the period & evaluated the efficiency with which a firm is able to manage its inventory. This ration is calculated by applying the following formula

$$\text{Inventory turnover ratio} = \text{Cost of goods sold} / \text{Average inventory}$$

Inventory Turnover Ratio

Year	Cost of goods sold	Avg.inventory	Ratio
2008-2009	60150.35	7402.31	8.13
2009-2010	59021.41	37975.30	1.55
2010-2011	121551.71	95065.28	12.79
2011-2012	127533.58	12390.06	10.29
2012-2013	130392.68	13338.01	9.78
2013-2014	211636.92	160035.93	1.32



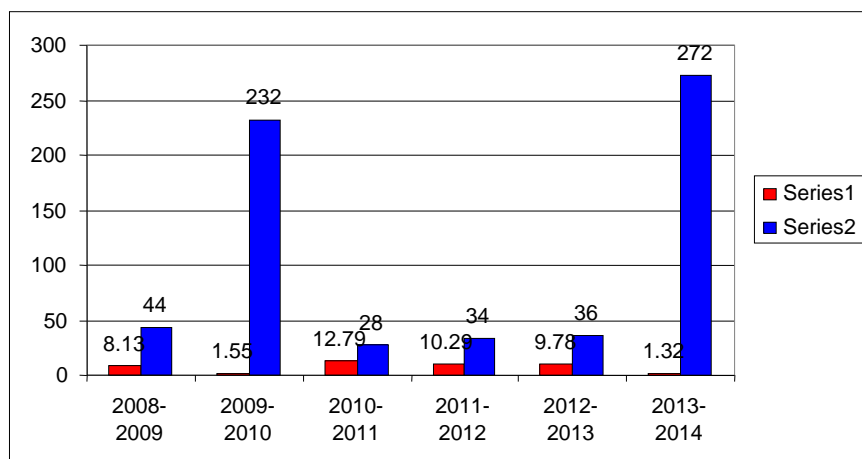
4. INVENTORY CONVERSION PERIOD

It may also be of interest to see average time taken for clearing the stocks. This can be possible by calculating inventory conversion period. This period is calculated by dividing the numbers of the days by inventory turnover. This formula may be as:

$$\text{Inventory conversion period} = \text{Days in a year} / \text{Inventory turnover ratio}$$

Inventory Conversion Period: (in corers)

Year	Cost of goods sold	Avg. inventory	Ratio	ICP(days)
2008-2009	60150.35	7402.31	8.13	44
2009-2010	59021.41	37975.30	1.55	232
2010-2011	121551.71	95065.28	12.79	28
2011-2012	127533.58	12390.06	10.29	34
2012-2013	130392.68	13338.01	9.78	36
2013-2014	211636.92	160035.93	1.32	272



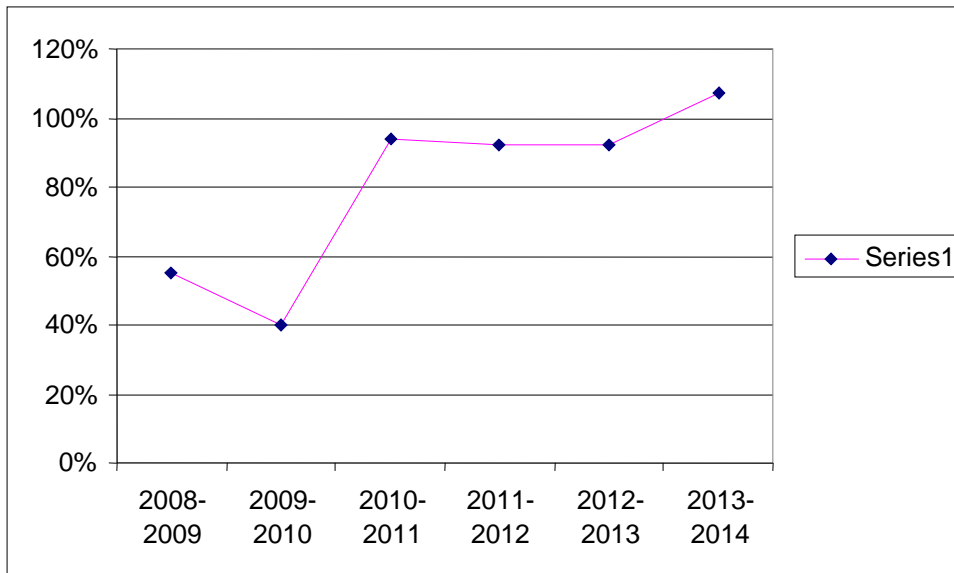


5. PERCENTAGE OF INVENTORY TURNOVER CURRENT ASSETS

In order to know the percentage of inventory over current assets the ratio of inventory to current assets is calculated and which is presented in the following table ,

Inventory turnover current assets ratio= Inventory/current ratio*100

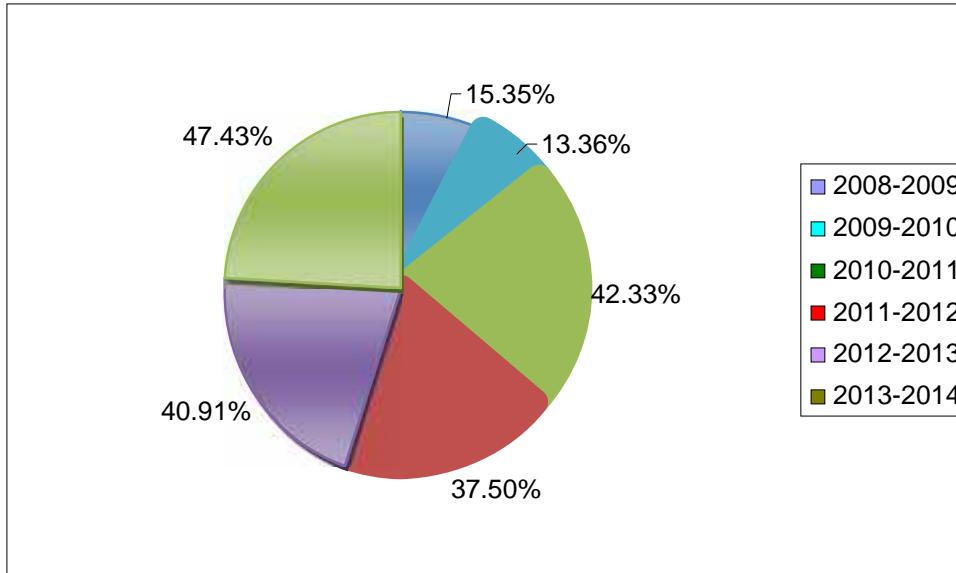
Year	Inventory	Current assets	Ratio (%)
2008-2009	13386.80	24172.33	55%
2009-2010	11690.67	28770.78	40%
2010-2011	49950.88	53063.75	94%
2011-2012	42950.66	45598.02	92%
2012-2013	46087.45	46713.32	92%
2013-2014	93605.78	86811.49	107%



6. PERCENT OF INVENTORY OVER TOTAL CURRENT ASSETS & FIXED ASSETS:

Inventory / current + fixed assets

Year	Inventory	Current assets+ Fixed assets	Ratio
2008-2009	13386.80	87167.64	15.35%
2009-2010	11690.67	87468.76	13.36%
2010-2011	49950.88	117985.89	42.33%
2011-2012	42950.66	112647.26	37.50%
2012-2013	46087.45	112637.07	40.91%
2013-2014	93605.78	197330.5	47.43%



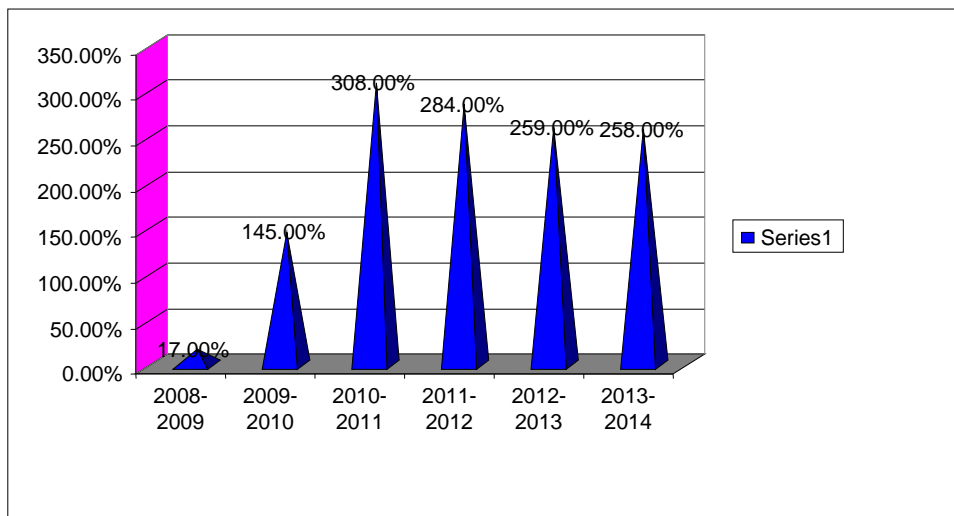
7. PERCENT OF INVENTORY OVER TOTAL CURRENT LIABILITIES

In order to know the percentage of Inventory over current liabilities the ratio of Inventory to current liabilities is calculated and which is presented in the following table.

Percent of Inventory over total current liabilities ratio = $\text{Inventory} / \text{Current liabilities} * 100$

Percent of Inventory over total current liabilities

Year	Inventory	Current liabilities	Ratio
2008-2009	13386.80	7862.11	17%
2009-2010	11690.67	8042.62	145%
2010-2011	49950.88	16204.14	308%
2011-2012	42950.66	14876.45	284%
2012-2013	46087.45	17728.22	259%
2013-2014	93605.78	36253.41	258%





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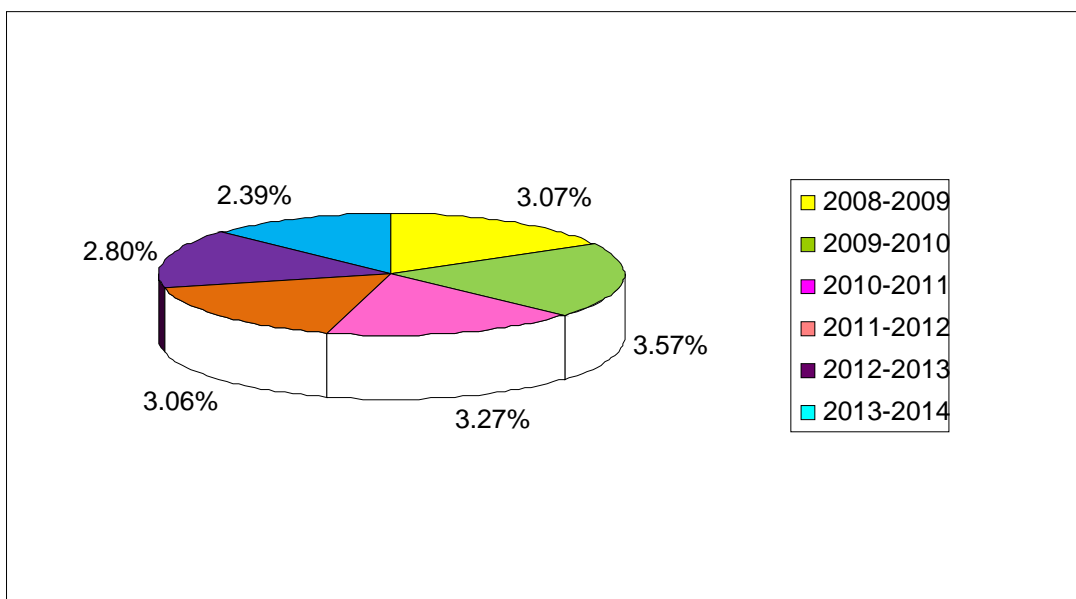
8. CURRENT RATIO

In order to know the current ratio the percentage of current assets to current liabilities is calculated and which is presented in the following table.

Current Ratio = Current Assets/Current Liabilities

Calculation of Current ratio

Year	Current assets	Current liabilities	Ratio
2008-2009	24172.33	7862.11	3.07%
2009-2010	28770.78	8042.62	3.57%
2010-2011	53063.75	16204.14	3.27%
2011-2012	45598.02	14876.45	3.06%
2012-2013	49713.32	17728.22	2.80%
2013-2014	86811.49	36253.41	2.39%



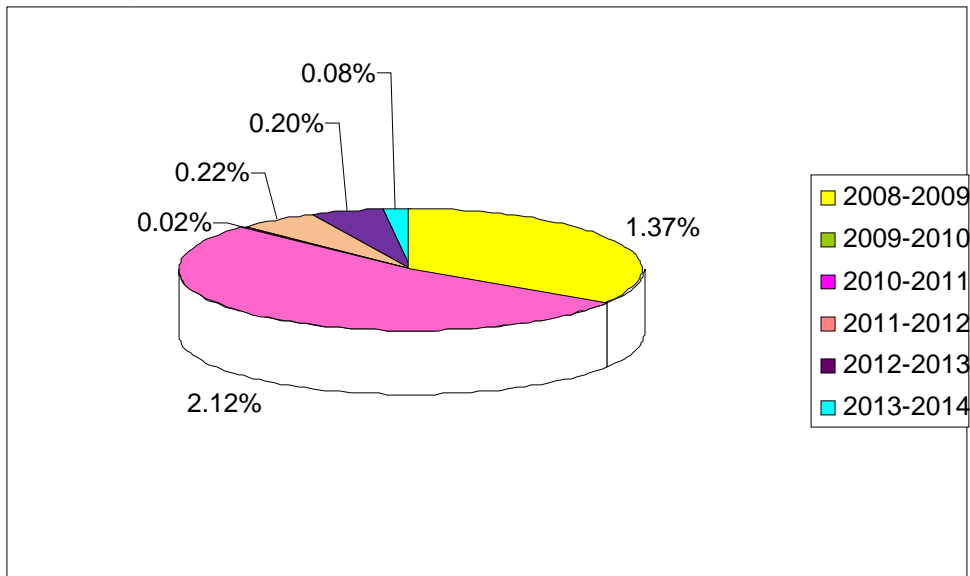
9. QUICK RATIO

The quick ratio is the relationship between quick to current liabilities quick assets is more rigorous test of liability position of a firm it is computed by applying the following formula.

Quick ratio= current assets-current liability.

Where quick assets = current assets- inventory

Year	Quick assets	Current liabilities	Ratio
2008-2009	10785	7862.11	1.37%
2009-2010	17080	8042.62	2.12%
2010-2011	3112	16204.14	0.02%
2011-2012	3347	14876.45	0.22%
2012-2013	3625	17728.22	0.20%
2013-2014	3207	36253.41	0.08%



FINDINGS

1. Though the production is higher in the year 2008-09 and the sales were very high i.e., as per inventory conversion period it took 272 days. This shows that there is demand for cement and the funds unnecessarily tied up. So, proper demand forecasting should be done and according to that it may be manufactured.
2. The investment on raw material should be made as per the requirement. Unnecessary investment may block up the funds.
3. Neither too high nor too may inventory turnover ratios reduce profit and liquidity position of the industry. So, proper balance should be made to increase profits and to ensure liquidity.
4. The raw material should be acquired from the right source at right quality and at right cost.

The process that was being used by Kesoram Cement with the purchasing department should undergo changes, so that, it seeks enhance the celerity of the delivery of a product without compromising its quality by improving the utilization of material, labour and equipment.

SUGGESTIONS

If it did, payment was authorized to be made at the appropriate time. If it didn't match, the order would be returned until if it is agreed by the Kesoram Cements.

1. If it institutes "invoice less purchasing" where the supplier did not need to send an invoice to be paid.
2. This generally simplifies the process for all concerned. As a result it would be able to reduce the work of its accounts payable department.
3. To reduce the work, the purchasing department may enter the purchasing order into a database and did not send a copy to anyone. When the merchandise arrived, the receiving clerk would enter the database and determine whether the order agreed with the electronic purchase order.

CONCLUSIONS

1. Over all the inventory of Kesoram Cements is up to the mark.
2. The production of clinker and cement during 2010-11 was 7,47,436 and 7,77,092 respectively which is higher as compared to 2012-13 which is 6,87,373 and 7,27,447 respectively.
3. Investments on raw material are 93605.78 lakhs which is very high as compared to 2012-13 which is only 460870.45 lakhs.
4. The inventory turnover ratio shows that the stock has been converted into sales is only 1.32 times.



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5. In the year 2010-11 the stock was cleared within 28 days where as it took 232 days in the year 2011-12 which took more days for clearing stock.
6. Year 2010-11 is not showing sample profits. This is because of cement prices have been continuously under pressure due to persistent mismatch between supply and demand.
7. The quantity of limestone in the year 2013-14 is 9,53,940 and its value is 13,85,34,812 but where as in the year 2010-11 the quantity was 9,74,490 and the value is 12,21,61,492.
8. In this type of process, it requires more number of employees and supplier should also wait for until the accounts are matched.
9. This process takes an input, adds value to it and provides an output to an internal or external customer.

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