Study on Working Capital Management at a Steel Plant

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Comments by the Faculty

Managing the capital needed for day to day activities, is one of the important aspect in any business. An organization that maintains positive working capital balances both incoming and outgoing payment, to optimize net working capital and free cash flow. Decisions relating to working capital and short-term financing are referred to as working capital management. These involve balancing the relationship between a firm's short-term assets and its short-term liabilities. Working capital management ensures that the firm continues its operations smoothly and that maintains sufficient cash flow to balance both maturing short-term debt and upcoming operational expenses.

The current internship was carried at XYZ* plant in the finance department. The intern Ms.Nisha Y, has got an opportunity to work on working capital management (WCM) of the plant and help the finance department to manage their calculations related to WCM. Her objectives include finding day-to-day finance, checking the efficiency and trend of working capital over last five years. She has got an opportunity to access the data of the company and analyse the same using financial tools related WCM. This has helped her in understanding the company's financial data as well as work with the day-to-day inventory, creditors, debtors etc. She also learnt how to apply different ratios in relation with WCM. The recommendations given by her have been received by the organization well and have scope for adoption.

Finally, one can conclude that a project has helped the student to apply concepts learnt, in the company and experience the changes that took place in the market. Also, the intern could understand how important it is to integrate other departments with the finance department, while studying the WCM. For example, she could relate the inventory management of the production department while calculating the working capital.

(* The company's name has been changed to maintain the confidentiality.)

Srilakshminarayana G

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Company Profile

XYZ is the first integrated plant in the public sector in India, was set up with German collaboration with an installed capacity of 1 million tonnes.

It was the first plant in India to incorporate LD technology of steel making. It is the only plant where 100% of slabs are produced through the cost-effective and quality-centric continuous casting route.

Introduction

One of the vital aspects of the corporate business life is its working capital requirement that refers to the amount of fund that is needed to meet its current day-to-day obligations. It is the most important requisite of every organization and it reflects the short-term financial strength of an organization. Working capital management is the process of planning and controlling the level and mix of the current assets of the firm as well as financing these assets. Specifically, it is required by the financial managers to decide what quantity of cash, other liquid assets, accounts receivable, and inventories the firm will hold at any point of time. The financial managers must decide how the current assets are to be financed.

Working Capital Management

A Fund required to manage day to day operations. It measures company's efficiency and operating liquidity. There is no hard and fast rule as to what Quantum of Working Capital has to be. It basically depends on two type of policy.

Relaxed Policy the greater the bank balance, inventory and Receivable will be – resulting of greater working capital need.

Tight policy means the company is put to inconvenience occasionally, but the Benefit of Lower quantum of Working capital.

The Position is Summarised as-

	Tight policy	**Relaxed Polic**
Impact on Sales	Likely to be Lower	Likely to rema
Impact on Production	Production Process being affected	Production Pr be affected
Inventory Level	Will be Lower	Will be Highe
Collection period	Will be Lower	Will be Highe
Receivable quantum	Will be Lower	Will be Highe
Working Capital Investment	Will be Lower	Will be Highe

Working Capital Involve Two Basic Question

1. What is the appropriate amount of working capital in Total and in Individual?
2. How is working Capital Financed?

   *XYZ- A fictitious name for the company.

Problem Statement

Decreases in the sources of funding to Finance day-to-day activity of an organization due to insufficient amount generated from its co-operation and depend more on external sources of funding.

Objectives of the Study

To study the working capital management of a steel plant. The study aims is to find out the day to day finance, efficiency and trend of working capital over the last five years of XYZ.

Methodology Adopted

The type of research is descriptive in nature and the study relies on data which is already available.

Source of Information

Secondary data collected from the organisation

Secondary data:

Secondary data are those which have already been collected by someone else & which have already been passed through statistical process. These data may either be published data or unpublished.

The published data include:

- Annual Report of XYZ.
- Periodicals, Journals& magazines of XYZ.
- Financial statements & other related documents.

The unpublished source includes:

- Data available in the system.
- Financial Ledgers, Journals.
- Document received along with Scholars.

Tool used for Data Collection

The Data has been collected mainly from company Balance Sheet and Profit and Loss Account for the past 5 years. Interview Schedule are taken to understand how the Finance Department is working and what are the various policies followed in the organization.

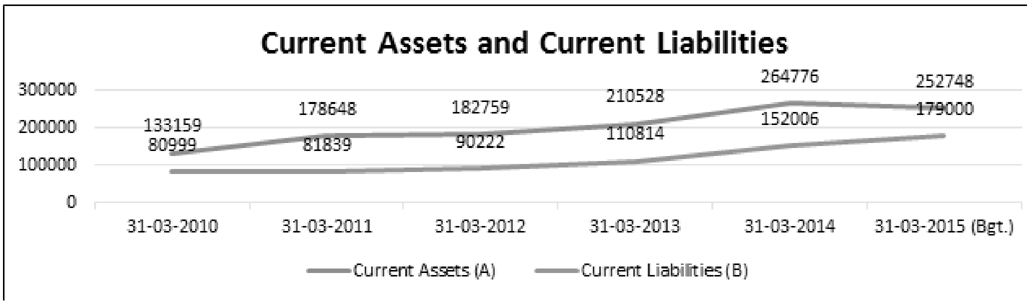
Tool and Techniques Used for Analysis

Various tools and techniques have been used to fulfil the aforesaid objective. A thorough study of the organization has been along with in depth study of the functioning of Finance and account Department of XYZ. Further for the analysis of Working Capital Management, study of working Capital Cycle/ Operating Cycle has been made along with operating cycle of XYZ. Therefore, Analysis of working capital has been done by taking into consideration past 5 year Current Assets and Current Liabilities. After this, component wise analysis has been done, to have indebt view of working Capital management, ratio analysis tool has been used for the evaluation of inventory, Cash management and receivable management at XYZ. Trend projection of working Capital Requirements has also been done to assess the Future requirement of Working Capital.

The key Working Capital Ratios- Analysis

Table 1: Current Assets and Current Liabilities (Rs. in lakhs)

Current assets and Current Liabilities						
Year	**31-03-2010**	**31-03-2011**	**31-03-2012**	**31-03-2013**	**31-03-2014**	**31-03-2015 (Bgt.)**
Current Assets (A)	133159	178648	182759	210528	264776	252748
Current Liabilities (B)	80999	81839	90222	110814	152006	179000



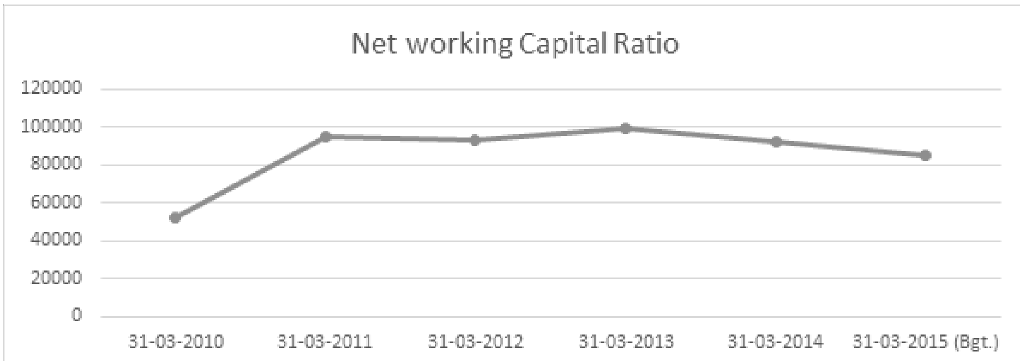
Graph 1: Current Assets and Current Liabilities

Sources: From the Data of the Annual Report XYZ (2013-14) the above Table 1 and Graph 1 are created by the Researcher.

Interpretation - The above graph depicts that the total current assets are more than the total liabilities in all years. In the year 2013-14 the current assets were having highest value i-e 2, 64,776 lakhs. Increase in current assets shows that the liquidity soundness of the concern. Thus higher efficiency can be gain by lowering inventory level and receivables and increase the time taken to pay the supplier.

Table 2: Net Working Capital Ratio

Net working Capital ratio						
Year	**31-03-2010**	**31-03-2011**	**31-03-2012**	**31-03-2013**	**31-03-2014**	**31-03-2015 (Bgt.)**
Current Assets (A)	133159	176648	183749	210528	244776	262825
Current Liabilities (B)	80999	81949	90222	110814	152816	178015
Net working Capital Ratio	52160	94699	93527	99714	91960	84810



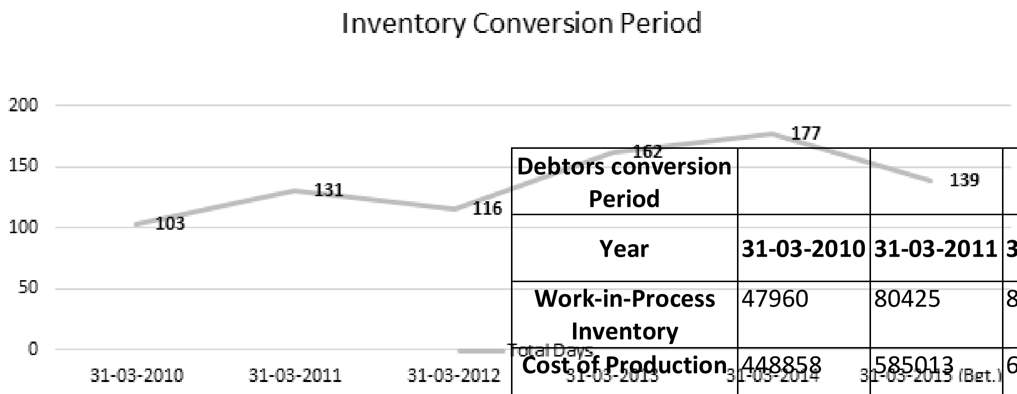
Graph 2: Net working Capital Ratio

Sources: ***From the Data of the Annual Report XYZ (2013-14) the above Table 2 and Graph 2 are created by the Researcher***.

Interpretation-The Working Capital of XYZ started increasing in 2011 and continued to increase. It shows that they experienced more growth and can expand and improve their operating using existing resources. But in 2015 decreased to 84810 lakhs as compared to the previous year. That means less funds which are necessary for growth in future and they have insufficient liquid resources to satisfy short-term liabilities and operational.

Table 3: Inventory Conversion Period

Inventory Conversion Period						
Year	**31-03-2010**	**31-03-2011**	**31-03-2012**	**31-03-2013**	**31-03-2014**	**31-03-2015 (Bgt.)**
RMCP	29	27	24	36	29	24
WIPCP	38	51	46	63	73	61
FGCP	36	53	46	63	75	54
Total Days	**103**	**131**	**116**	**162**	**177**	**139**

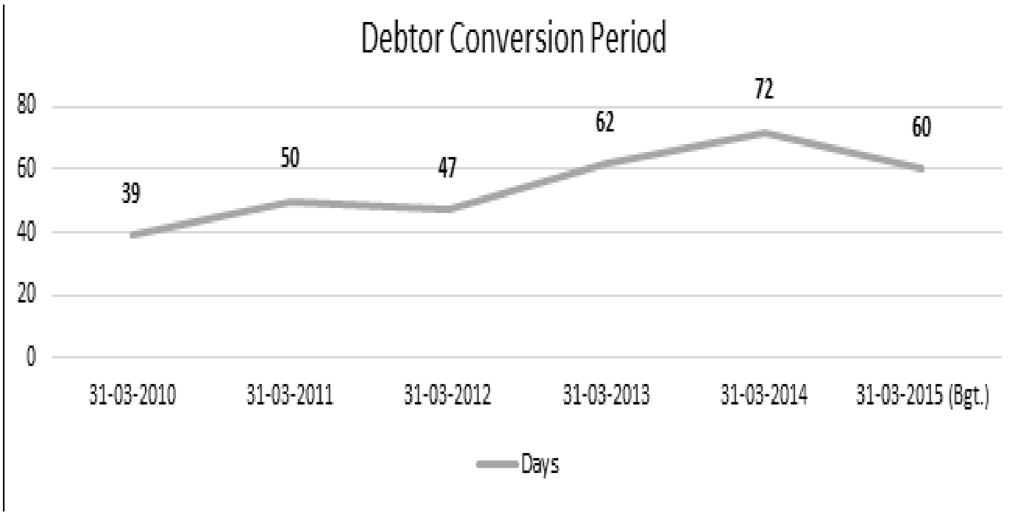


Graph 3: Inventory Conversion Period

Sources: ***From the Data of the Annual Report XYZ (2013-14) the above Table 3 and Graph 3 are created by the Researcher****.*

Table 4: Debtors Conversion Period

Debtors conversion Period					
Year	**31-03-2010**	**31-03-2011**	**31-03-2012**	**31-03-2013**	**31-**
Work-in-Process Inventory	47960	80425	85951	112988	152
Cost of Production	448858	585013	645589	650943	754
Days	**39**	**50**	**47**	**62**	**72**



Graph 4: Debtors Conversion Period

Sources: ***From the Data of the Annual Report XYZ (2013-14) the above Graph 4 and Table 4 are created by the Researcher***

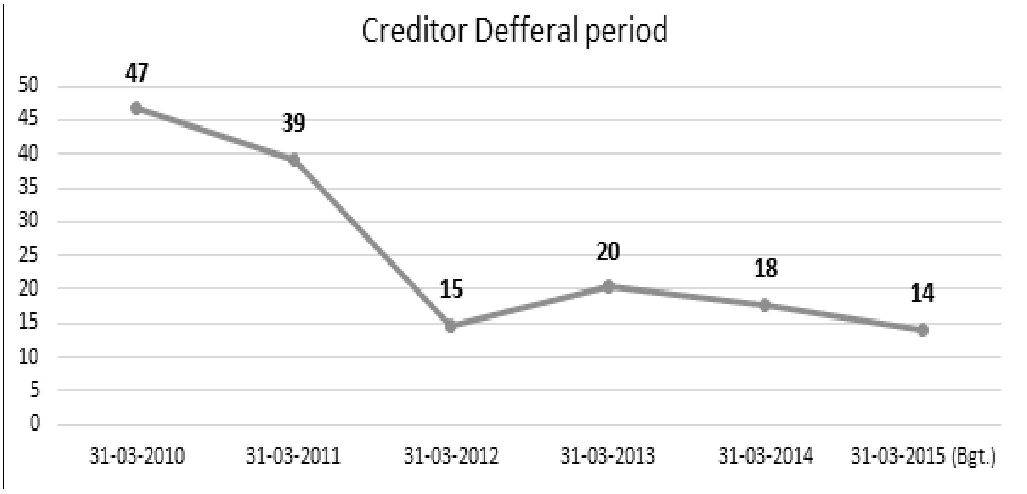
NOTE: Credit sale= Sale*30%

Analysis- Every company would seek to have its dues collected fast because of market condition, competitors or because of lack of follow up by the sales team.

Impact on company profitability- Company keep monitoring this regularly. Long delay in receipts of dues result in loss of interest on working capital and risks of bad debt is more.

Table 5: Creditors Deferral Period

Creditor Deferral Period						
Year	**31-03-2010**	**31-03-2011**	**31-03-2012**	**31-03-2013**	**31-03-2014**	**31-03-2015 (Bgt.)**
Account Payable/ Creditor	41701	44112	18980	22920	22786	22786
Net Credit Purchases	321419	404137	469025	406605	465417	583088
Days	**47**	**39**	**15**	**20**	**18**	**14**



Graph 5: Creditors Deferral Period

Sources: ***From the Data of the Annual Report XYZ (2013-14) the above Table 5 and Graph 5 are created by the Researcher***

Analysis- Measures how long business holds into cash. It helps in comparing one Company payment policies to another. So XYZ has got fewer days of payable and its ability to make payment. Greater its ability to delay payment and conserve cash.

Impact on company profitability- longer days take to pay to the creditor, the more money the company has on hand, which is good for working capital and free cash flow, but if company takes too long to pay to creditors then creditor is unhappy and refuse to give credit on future.

Table 6: Cash Conversion Cycle Calculation (No. of Days)

Year	**31-03-2010**	**31-03-2011**	**31-03-2012**	**31-03-2013**	**31-03**
Days inventory	104	128	115	161	1
Days Sales Outstanding	1.08	0.84	0.26	0.13	0
Days Payable Outstanding	47	39	15	20	1
Cash Conversion Cycle	**58.08**	**89.84**	**100.26**	**141.13**	**15**

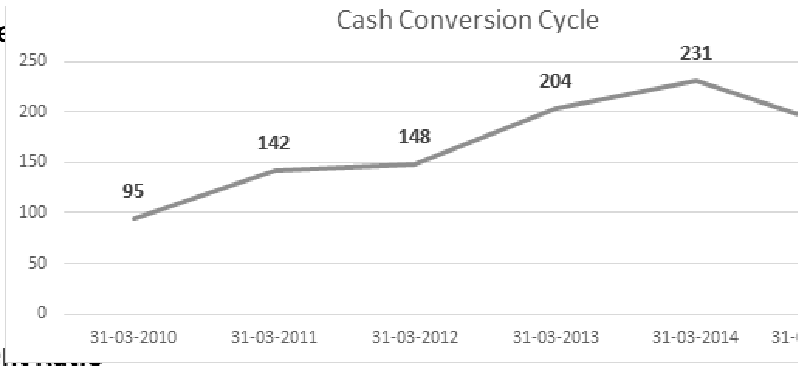
Graph 6: Cash Conversion Cycle Calculation (No. of Days)

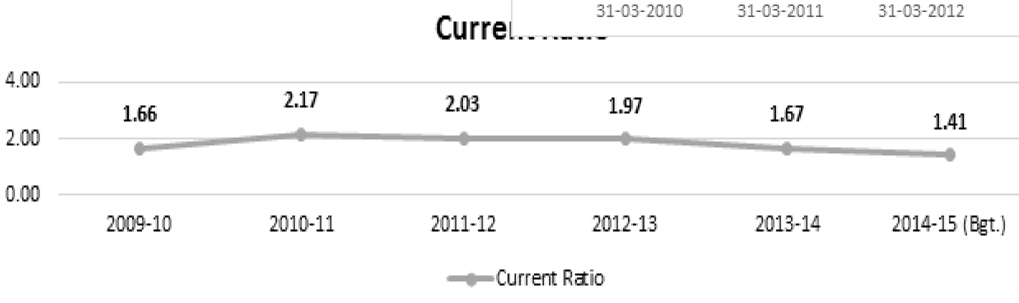
Sources: From the Data of the Annual Report XYZ (2013-14) the above Table 6 and Graph 6 are created by the Researcher

Analysis- It express the length of time, in days that it takes for a company to convert resources input into cash flow. It measures how quickly a company can convert its products into cash through Sales. Here, we can see that as compared to the previous year, XYZ is quite satisfied in converting its cash early.

Impact on company profitability- shorter life that means less time the capital is tied up in the business process, and thus better for the company bottom line.

Table 7: Current Ratio = Curre





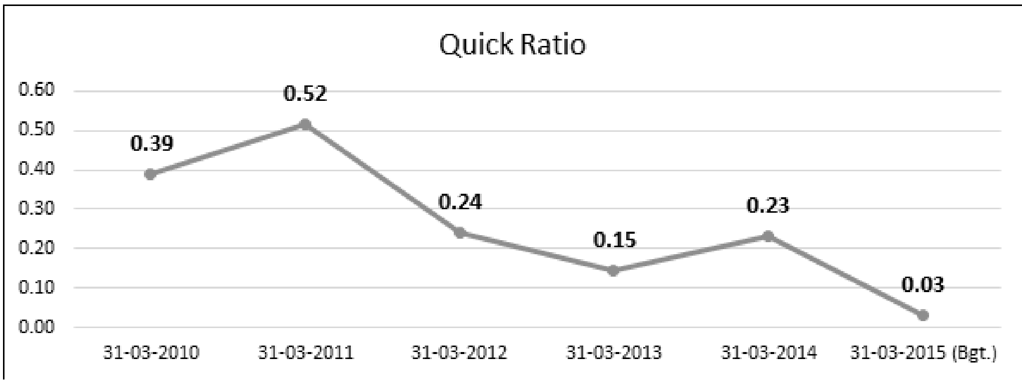
Graph 7: Current Ratio = Current Asset / Current Liabilities.

Sources: **From the Data of the Annual Report XYZ (2013-14) the above Table 7 and Graph 7 are created by the Researcher**

Interpretation: The Financial performance of a company ratio is nearer to standard ratio 2:1. It is noticed that for the period of 2011-12 the current ratio is increased as compared to the previous year, because of increase in current liability. So, the greater efficiency can be gain by lowering inventory level and receivable level increase the time taken to pay to the supplier and help in making short term decision. In 2014-15 (Bgt.) there is a decrease in the current ratio. So, decrease in the efficiency which company need to look into the matter and take proper action

Table 8: Quick Ratio

1-03-2012	**31-03-2013**	**31-**
182759	210528	2
90222	110814	1
160876	194433	2
21883	16095	3
0.24	**0.15**	



Graph 8: Quick Ratio

Sources: **From the Data of the Annual Report XYZ (2013-14) the above Table 8 and Graph 8 are created by the Researcher**

Interpretation

Generally, a high liquid ratio is an indication that the firm is liquid and has an ability to meet its current or liquid liabilities in time. On the other hand, a low Quick ratio represents that the firm's liquidity position is not good.

Here the Quick ratio is decreasing. That means company liquidity position is not good.

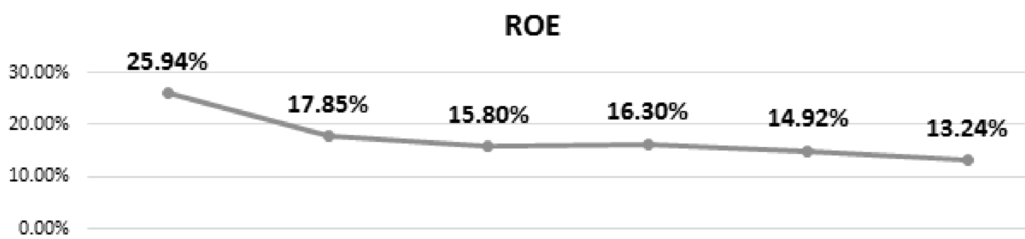
Effect of the working capital policy in ROE (Return on Equity)

- We use the Du Pont equation to demonstrate how working capital management. Effects the return on equity:
- A **relaxed policy** means a high level of assets and hence a low total assets turnover ratio; this results in a low ROE.
- A **restricted policy** - results in low current assets, a high turnover, and hence a relatively high ROE. But it exposed the firm to high risks, because of shortage of inventory lead to dissatisfaction to customer.

$$\text{ROE} = \text{Profit margin*total assets turnover* Equity multiplier}$$

$$= \frac{\text{Net income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

IMPACT OF ROE:



2013-12	2012-11	2011-
15.80%	16.30%	14.92

Graph-9

Sources: **From the Data of the Annual Report XYZ (2013-14) the above Table 9 and Graph 9 are created by the Researcher**

Increase in ROE: A restricted policy used means a low level of assets and hence a high total assets turnover ratio, as a results in a high ROE.

*Sources: **From the observation of Annual Report of XYZ (2013-14) the above Interpretation are done by the Researcher**.*

Key Finding from Analysis

How company decides about increment in the no of days or exceeding the no of days of a debtor to make a payment of credit sales-

It is basically depends on the Working Capital Finance Policy i.e. If the return from short term borrowing is more that the working capital then company have no issue of increase in the date of a debtor.

On the other hand if the return from short term borrowing is less than the working capital, then company want money from debtor today itself.

How much Cash to be hold? - More cash hold Investment decrease and return decrease. Less cash financial distress if any fluctuation on business. So try to moderate the cash.

Challenges in Working Capital Management -

1. Negative campaign
2. Currency fluctuation
3. Uncertainty in forecasting

Limitations

The following are the limitation of the study.

- The data used in this study have been taken from balance sheet & their related schedules of plant, as per the requirement and necessity, some data are grouped and sub grouped.
- The study has been conducted within the boundaries of steel plant.
- This study is limited to the available data so the result may change according to the changes in data.

Suggestions

The suggestions for effective management of Working Capital at Steel Plant are as follows:

- ➢ Improvement of working capital generally comes up by improving the operating decision
- Logistic- it work with production department to reduce the inventory and step to improve the speed of manufacturing
- Marketing -department work to speed the delivery of product to the customer.
- Finance- department, come into picture evaluating the firm operating activity and compare with the other firm and match the finance.
- ➢ Steel Plant should set planning standards for stock days, debtor & creditor days.
- ➢ Steel Plant is not Utilising its strength for capturing fund from market through debt instead using own fund or normal business activity. In the process it is losing its leveraging capability.
- ➢ The portion of inventory needs greater attention. The organization sometimes faces problems of excess of stock of one type of inventory. This is because of high lead time of certain casing & lamps making inventory storage period very high.
- ➢ Create awareness amongst the financial staffs that working capital management produces profit.

- Inventory management is a great concern for XYZ Steel Plant especially stores & spares. The stock control manager must take certain steps for proper procurement of inventories.

- Inventory management is a great concern of plant especially stores & spares. The stock control manager must take certain steps for proper procurement of inventories.

- The work-in progress increasing day by day. It implies wok-in process conversion period increases. It blocks much revenue which could otherwise have been generated through sale of finished product. Maintain work-in process inventory as low possible.

- Keep stock level as low as possible, consistent without not running out of stocks & not ordering stock in uneconomically small quantities.

- There is no specific rule as to how current assets should be financed. Keeping in view the constraints of financing current assets by short term finances should be invested in current assets.

- As far as possible follow just in time. So that delivery can be made on time.

Conclusion

Working capital required financing day to day operations of a firm. There should be an optimum level of working capital. It should not be too less or not too excess Working Capital of a Plant in the year 2010-11 has decreased 280.4 crores as compared to last year in which the working capital. It is concluded that despite to decrease in working capital the company has achieved profit because the company has maintained optimum level of working capital.

The company has also able to avail more credits. Further the company has also repaid a large amount of loan amounted to 246 lakhs which in turn reduced the working capital. But repayment of such huge amount of loan itself is a good indicator as it has saved the interest burden of the plant up to 50% & contributed towards profitability. There is increase in Reserve & Surplus of the Company which brought a huge amount of profit of Rs 3, 24,066 lakh to the organisation.

How can Company Lower Days Working Capital?

1. Reduced inventory by adopting just in time manufacturing processes.
2. Lowered receivable- by offering discount for early payment.
3. Do not Stretch “own Payment”.

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