CHAPTER I

INTRODUCTION
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1.1 : PREVIEW OF THE STUDY

The foundry is a commercial setup for manufacturing castings. Casting is one of the most ancient methods of metal shaping. Foundry practice include production process as melting of metal, manufacture of moulds, pouring of the metal into moulds, solidification, shakeout and fettling of the castings. Castings have several characteristics that clearly define their role in modern equipment used for transportation, communication, power, agriculture, and construction and in industry. Cast metals are required in various shapes and sizes and in large quantities for making machines and tools, which in turn work to provide all the necessities and comforts of life.

"Other metal shaping processes, such as hot working, forging, machine welding, and stamping, are of course necessary to fulfill a tremendous range of needs"\(^1\).

Replacement of old process and equipments by new ones is called as modernization of foundry, which result in the production of required quality castings with lower costs.

"In foundry, modernization helps in improving quality of castings, boosting the production, reducing production cost, increasing safety to the workers, better working conditions and improved job satisfaction"\(^2\).

Working capital management is significant in financial management due to the fact that it plays a pivotal role in keeping the wheels of a business enterprise running. Working capital management is concerned with short term financial decisions. The need for skilled working capital management has thus become greater in recent years. A firm invests a part of its permanent capital in fixed assets and keeps a part of it for working capital i.e. for meeting the

day to day requirements. The goal of working capital management is to manage the firm's current assets and current liabilities in such a way that a satisfactory level of working capital is maintained. The requirement of working capital varies from firm to firm depending upon the nature of business, production policy, market conditions, seasonality of operations, conditions of supply etc.

Working capital management if carried out effectively, efficiently, and consistently will ensure the health of an organization. A company invests its funds for long term purposes and for short-term operations. "Working capital refers to a firm's investment in short-term assets viz, cash, short-term securities, amounts receivables and inventories of raw materials, work in process and finished goods. It refers to all aspects of current assets and current liabilities.\(^3\) The efficient working capital management is necessary to maintain a balance of liquidity and profitability. Working capital is defined as 'the excess of current assets over current liabilities' for proper management of working capital it is required that a proper assessment of its requirement is made. Working capital is also known as circulating capital, fluctuating capital and revolving capital.

There is a need for working capital in foundry industries in the form of current assets to deal with the problem arising out of the lack of immediate realization of cash against goods sold. Therefore, sufficient working capital is necessary to sustain sales activity. Technically this is referred to as the operating or cash cycle. "The continuing flow from cash to suppliers, to inventory, to accounts receivable and back into cash is called the operating cycle."\(^4\) To complete this flow, there is a need for working capital in foundry industries. The operating cycle can be said to be at the heart the need for working capital in foundry industries.

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\(^3\) Ravi M. Kishore, *Financial Management*, Taxman Allied services (P) Ltd, New Delhi, 2005 pp287,288

1.2 : NEED FOR THE STUDY

Foundry industry is a basic industry which depends extensively upon metal and metal products. Foundry industries need adequate working capital to sustain sales activity.

The need for working capital to run the day to day business activities cannot be over emphasized. Indeed firms differ in their requirement of the working capital. Sales do not convert into cash instantly. There is invariably a time lag between the sale of goods and the receipt of cash. There is therefore a need for working capital in the form of current assets to deal with the problem arising out of the lack of immediate realization of cash against goods sold. Therefore sufficient working capital is necessary to sustain sales activity. Following Chart 1.1 shows the operating cycle of foundry industries.

Chart- 1.1 : Operating cycle of foundry industries

The operating cycle thus creates the need for current assets (working capital) and hence a need for a regular supply of working capital in foundry industries.

The firm is forced to have current assets. Since cash inflow and cash outflows do not match, firms have to necessarily keep cash or invest in short
term liquid securities so that they will be in a position to meet obligations when they become due. Similarly firms must have adequate inventory to guard against the possibility of not being able to meet a demand for their products. Adequate inventory therefore provides a cushion against being out of stock. If firms have to be competitive they must sell goods to their customers on credit which necessitates the holding of accounts receivable. It is in these ways that adequate level of working capital is absolutely necessary in foundry industries for smooth sales activity. In view of the above problems, the present study is needed.

1.3 : REVIEW OF LITERATURE

The various Government committees, experts, researchers etc, have published their reports, findings, recommendations etc, by way of books, reports, research papers and articles. From time to time an attempt is made in the following paragraph to review a few important works relevant to this study carried out by the researchers in the past. Ofcourse, the objective is to identify the research gap that existed peruse.

Bhattacharyah.H, in his book “Working Capital Management Strategic and Techniques”, in Indian context observed that an average Indian company maintained twenty six percentages of receivables to total assets that is higher than the suggested standard and that of USA based manufacturing firms.

Chadha B.L., in his paper titled “Working Capital Finance by Banks and Banker – Customer Relationship”, opines that especially the borrowing

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units, while graduating from small scale to medium scale face certain difficulties and these units usually require working capital frequently.

Chundawat D.S., and Bhanawat S.S, analysed “The Working Capital Management Practices in IDBI Assisted Tube and Tyre Companies”, for the period 1994-1998 by using some relevant ratios and concluded that the working capital management of IDBI assisted companies was more effective than the industry as a whole.

Chitins K.M., in his paper titled “Working Capital for Industries a Bankers Approach”, highlights the capital finance for industries and mentions that the quarterly information system evolved by Tandon Committee and notified by Chore committee requires that the borrowing unit enjoying working capital facilities of Rs.50 lakhs and above has to submit quarterly operating statements to the bank on the basis of which operative working capital limit for the ensuring quarter is fixed up and monitored by the banks.

Dutta. J., observed that "the various components of working capital of HPMC", had not been used efficiently and net working capital position had worsened continuously during the period of study (1991 to 1998).

Gitman L.J., in his article “principles of managerial financial explanation for trade credit”, suggested that an average manufacturing firm could not afford to have more than sixteen percentage of receivables to total assets.

Kapur .V.K., observes that in respect of “Role of Commercial Banks in Working Capital Management”, the Tandon group is only an indication of things to come. It is fairly obvious that as the demand for bank funds from

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new industries and other priority sectors of the economy grows. More and more regulations would be imposed by the financial institutions and the reserve bank of India to ensure proper and productive end use of funds in the coming years.

Khandalwal N.M, in his book "Working Capital Management in Small Scale Industries", investigated that working capital management process and practices among small scale industry in the state of Rajasthan, between 1975-76 and 1979-80, relieved that the management of receivables was highly in effective and disorderly. It was also found that receivables were about fifty percentages of total current assets in this industry. It was also observed that the reasons behind the sickness of units were in efficient management of working capital.

Mallikarjunapa. T., in his paper titled "Inventory and Receivable Position of Small Scale Units - a case study", observes that there are four types of inventories named flabbry inventory, profit making inventory safety inventory, normal inventory, and observed that majority of industrial units are maintaining inventory levels much lower than the norms prescribed by the tandon committee.

Main and Clifford, in their article "Accounts Receivables Management Policy: Theory and Evidence", observed that advanced economy like us, the percentage of receivables to total assets was twenty percentages in an average manufacturing firm.

Oppedhl and Richard, in their article "Working Capital Management", had examined in many studies that receivables management

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was a neglected area that affects the decisions of working capital management. In conclusion, one may find that receivables management is found disorganized in the financial management of corporate world. Considering this fact that pharmaceuticals industry is poised for unprecedented growth, it is relevant to examine the trends of receivables management in the light of various developments taking place in the economy.

Prasad. R.\textsuperscript{12}, conducted a research study on the "Working Capital Management in Paper Industry", In the study, the sample consisted of 21 paper mills from large, medium and small scale for a period of 10 years and reported that the chief executives properly recognized the role of efficient use of working capital in liquidity and profitability, but in practice they could not achieve it. The study also revealed that fifty percent of the executives followed budgetary method in planning working capital and working capital management was in efficient due to sub optimum utilization of working capital.

Parashar. S.P.\textsuperscript{13}, in his article titled "Aftermath of Tandon Committee", Briefly indicates the possible directions which may be followed in order to relieve the mounting pressure of working capital scarcity from our industries. He recommends that industry must think of strategic and operational policy measures to increase the internally generated cash surpluses. And experienced during the study that the cash flow situation in a majority of companies could be dramatically improved by paying a little more attention to the scientific planning and control of current assets viz receivables, inventories, and cash.

\textsuperscript{13} Parashar.S.P.,"Aftermath of Tandon Committee", The Indian management, 23 (12), Dec 1984, PP. 4-8.
Prasad.R.S., in his Research entitled "Working Capital Management in Indian Paper Industry", has emphasized on individual current assets like cash, receivables, and inventory. This study revealed that there was a close relation between profitability and working capital efficiency. It also makes clear that difficulty in collection of receivables and inadequate working capital were serious problems in running the business.

Rao. K.V. and Rao C., attempted to probe into the capacity of various “Techniques in Evaluating Working Capital Efficiency of Business Enterprise”, and observed the advantages and disadvantages of conventional techniques of working capital analysis and noted that some of the conventional techniques could comprehend the working capital behavior well, while others failed in discharging properly.

Roy.G.D. and Bhattacharya.S.K., emphasized that to facilitate growth and to generate income a reasonable size of working capital is to be maintained and the minimization of maintenance cost of working capital is must. In this context they further state that self finance i.e. finance through “Depreciation Provision” is an important means to lessen the burden of risk and is a less costly source of financing working capital.

Dr. Rai. R.C., in the paper “Necessity of Statements of Changes in Financial Position Funds of Low”, has mentioned that the funds flow statement refers to the movement of funds in and out of the working capital area. And observes that this movement of funds happens when changes occurring in non current accounts are offset by the corresponding changes in current assets and vice-versa.

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Sarvanan P\textsuperscript{18}, made "A Study on Working Capital Management in Ten Selected non-Banking Financial Companies", For this employed several statistical tools on different ratios to examine the effective management of working capital. And concluded that the sample firms had placed more importance upon the liquidity aspect compared to that of the profitability.

Shaller, Douglas, R\textsuperscript{19}, in this article titled "Working Capital Finance Consideration in National Income Theory", attempts to explore working capital finance considerations in national income theory and enumerated the aggregate supply equilibrium model and emphasized on the working capital finance in the model with output constrained price setting firms.

Srivastava, S.S. and Yadav, R.A.\textsuperscript{20} "Developed a Multiple Discriminant Model", in determining effectiveness of working capital management using four ratios and a sample test of 40 textile companies of which 20 'not effective' (sick) and 20 effective' (healthy) they empirically found that their model correctly classified 95 percent of the companies in the sample.

Sushil, K. Jain,\textsuperscript{21} in his article titled "Working Capital Management", states that in respect of efficient and effective management of working capital, the financial manager of an industrial unit should pay special attention to the levels of and financing of each component of working capital. To decide the levels and to decide the financing of the components of working capital further states that the risk - return, cost benefit implications must be evaluated.

Suk et al.\textsuperscript{22} in his article "Working Capital Practices of Japanese Firms in the US", were found that they differed in working capital management practices in terms of lower levels of inventory and high level of accounts receivables. This study revealed that US firms piled up their inventories, Japanese firms had higher percentages of receivables to total assets.

Thus it is clear from the above review of previous research and studies that no significant work is done on management working capital in foundry industries in the present study area.

1.4 : STATEMENT OF THE PROBLEM

Foundry work is a branch of engineering that deals with the melting of metals and pouring of molten metal into moulds from which castings are obtained. Foundry industry is a basic industry which depends extensively upon metal and metal products.

Foundry units constitute backbone of economy in terms of generating employment opportunities to both literate and illiterate. They are beset with several problems like, mismanagement of working capital, lack of working capital, inadequacy of working capital, improper planning and control of working capital etc. which made the foundry units operationally inefficient, non-viable and commercially non profitable over the period.

In this context, need based working capital policies, proper estimation of working capital requirement and control of working capital are the only solutions. Therefore, the present study which predominantly focuses on analysis of working capital and evaluation of their working capital planning and management practices is a modest attempt in that direction. Hence, the title of the present study is "Management of Working Capital in Foundry Industries: A Case Study of Belgaum District".

1.5 : OBJECTIVES OF THE STUDY

The present study has been undertaken with the following objectives.

1. To examine the structure and financing policies of working capital.
2. To study the basis for determining the size of working capital.
3. To study the sources of working capital for the Foundry Industries.
4. To evaluate the management of inventory in the Foundry Industries.
5. To evaluate the management of receivable in the Foundry Industries.
6. To evaluate the management of cash in the Foundry Industries.
7. To offer useful suggestions for better management of working capital.

1.6: HYPOTHESES OF THE STUDY

With a view to achieve the objectives, the study has developed the following list of hypotheses.

1. The requirement of working capital varies from units to unit based on operating activities.
2. There is inadequacy of working capital in the units.
3. The method of working capital management adopted by the units are different from each other.
4. The effectiveness of the working capital management depends on the planning and control of working capital.

1.7: RESEARCH METHODOLOGY

Area of study

The present study is confined to Belgaum District. 100 foundry units have been selected as representative units of all the taluks where the industries are existed based on random sampling method. A list of foundry units was obtained from District Industries Center Belgaum.
Sources of Data

Both primary and secondary data are used for the study. Primary data are obtained through questionnaire. A pre structured questionnaire was personally administered to the sample foundry units to collect the data. Secondary data are obtained from various sources like, text books, journals, reports, foundry directory, district industries center, Belgaum district. And the general information about the district is obtained from the district statistical office Belgaum.

Analysis of Data

The method of analysis followed is purely analytical. The data thus collected have been properly classified, analysed, and interpreted by using simple statistical tools like, percentages, Z test and trend analysis. Diagrammatic presentation has also been applied to make the data easily assimilable.

1.8: LIMITATIONS OF THE STUDY

The limitations of the present study are as follows:

1. Non availability of necessary and relevant data.
2. Financial analysis are based on historical data and information.
3. The period for the study is restricted to five years.
4. The results of the study are based on samples, hence the result cannot be generalized.
1.9 : ORGANISATION OF THE STUDY

The whole study has been divided into seven chapters.

Chapter-One covers Introduction – Preview of the study, Need for the study, Review of Literature, statement of the problem, objectives of the study, hypothesis, research methodology, limitations, and organization of the study.

Chapter-Two deals with Foundry Industry: An Overview – History and Development of Foundry, Types of Foundries, Technology in Foundry Industries, Plant Layout for Foundries, Raw Materials for Foundry, Production Process in Foundry Industries, and Quality Control System in Foundry Industries.

Chapter -Three covers Problems and Prospectus of Foundry Industries In Belgaum District – Profile of Belgaum District, Industrial Scenario, Growth of Foundry Industries, Distribution of Foundry Industries, and Problems of Foundry Industries.

Chapter- Four deals with Conceptual and Contextual Analysis of the Theory Of Management Of Working Capital – Introduction, concepts of working capital, operating cycle, kinds of working capital, importance of Working Capital, Composition of working Capital, Financing of working capital, determinants of working capital needs, control of working capital, and advanced concepts and techniques of working capital.

Chapter- Five deals with Management of Working Capital Practices in Foundry Industries In Belgaum District.

Chapter-Six Covers 'Ratio Analysis'.

Chapter-Seven includes Findings, Suggestions, And Conclusion, of the study.