

**GOA UNIVERSITY**

**GOA BUSINESS SCHOOL**

**MASTER OF BUSINESS ADMINISTRATION**

**INTERIM REPORT – I**

**HIMGIRI CASTINGS PVT. LTD.**



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**DONE UNDER GUIDANCE OF PROF. NILESH BORDE**

## **Acknowledgement**

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I express my warm thanks to Prof. Nilesh Borde for his support and guidance. I would also like to thank my friend Mr. Kapil Sinaidessai for helping me out and solving difficulties.

Thank You.

## **About Himgiri Casting Pvt. Ltd.**

Himgiri Castings was founded in 1987 with the single-minded objective of producing top-grade Grey and Ductile Iron Castings for various engineering needs. Over the years, our fastidious approach to delivering 'NOTHING BUT THE BEST' has fuelled our growth from a modest Indian company into one that commands respect on the international stage. From producing 1,200MT of iron castings two decades ago to crossing the 28,000MT mark today, you could say that we've well and truly arrived. Our milestones include an expanded manufacturing capacity and a workforce that has more than doubled during this time. Today we cater to an international customer base out of our 65,000sq.m plant in Goa and 1,00,000 sq.m plant in Gujarat, both of which are ISO 9001:2015 certified.

Company's Machine Shop is considered on par with the best in the world and boasts HMC, VMC and CNC machines. Even as you read this, our 700-strong workforce is dutifully scanning a range of 900 products right from automobile and railway components and engineering castings to valve bodies and pipe fittings to ensure 100% perfection. Ultimately, no matter how far we've come or how big we've grown, the one thing that hasn't changed is our commitment to delivering the best and to moulding the future.

## **SWOT analysis of Himgiri Castings Private Limited.**

### **Strengths**

Wide geographic presence – the company has extensive dealer network and associates network that not only help in delivering efficient services to the customers

The company has a good image in the market and has been serving its customers offering them complete satisfaction for more than 30 years.

The company has skilled employees. Talent management and skill development of the employees - Human resources are integral to the success of the company.

### **Weaknesses**

There is a high turnover skilled workers happening in the organisation which results in increase in cost to look for new workers.

Opting for roadways while delivering products to its domestic customers which takes longer process in terms of time to deliver the product to its customers.

### **Opportunities**

The company currently focused and get major part of revenue from export activities but they can also focus on getting the domestic demand.

Rapid Expansion of Economy as the US economy is improving faster than any other developed economy, it will provide Bharat Forge an opportunity to expand into the US market.

### **Threats**

Shortage of skilled human resources - Given the high turnover of employees and increasing dependence on innovative solution, company can face skilled human resources challenges in the near future.

Increase in competition from its competitors is also a major threat for the company. Competitors are also adopting to advanced technologies to satisfy the demands of its customers on timely basis.

## VRIN Analysis

Resources	Value	Rare	Imitation	Organization	Competitive Advantage
Global and Local Presence	Yes, as it diversify the revenue streams and isolate company's balance sheet from economic cycles	Yes	Can be imitated by competitors	Yes, it is one of the most diversified companies in its industry	Providing Strong Competitive Advantage
Ability to Attract Talent in Various Local & Global Markets	Yes, himgiri Castings strategy is built on successful innovation and localization of products	Yes, as talent is critical to firm's growth	Difficult to imitate	To a large extent yes	Providing Strong Competitive Advantage
Access to Cheap Capital	Yes	No	Can be imitated by competitors	Not been totally exploited	Not significant in creating competitive advantage
Brand awareness	Yes	Yes, himgiri Castings has one of the leading brand in the industry	No	himgiri Castings has utilized its leading brand position in various segments	Sustainable Competitive Advantage
Pricing Strategies	Yes	No	Pricing strategies are regularly imitated in the industry	Yes, firm has a pricing analytics engine	Temporary Competitive Advantage
Access to Critical Raw Material for Successful Execution	Yes	Yes, as other competitors have to come to terms with firm's dominant market position	Can be imitated by competitors	Yes	Providing Sustainable Competitive Advantage
Talent to Manage Regulatory and Legal Obligations	Yes	No	Can be imitated by competitors	Yes	Not critical factor
Financial Resources	Yes	No	Financial instruments and market liquidity are available to all the nearest competitors	Company has sustainable financial position	Temporary Competitive Advantage
Track Record of Project Execution	Yes, especially in an industry where there are frequent cost overrun	Yes	No, none of the competitors so far has able to imitate this expertise	Yes, company is successful at it	Providing Strong Competitive Advantage

## **PESTEL Analysis**

### **Political**

The strong political structures and institutions support growth and development for the forging industry. Government stability also allows businesses like forging industry International Scope Expansion to expand regionally as well as internationally.

Trade relations with other countries because of political stability and strength allows businesses like Forging industry International Scope Expansion to maintain offshore business affiliations easily and smoothly. High government stability can also attract resources for industrial development as a whole, which in turn will boost player performance and improve overall competitive positioning.

Government subsidies and favourable tax rates will also allow forging industry International Scope Expansion to maintain competitiveness by controlling its costs of doing business. Desirable tax policies that support business growth and development will allow businesses like Forging industry International Scope Expansion to expand and thereby add to creating economic value for the country as well.

Government and political institutions and bodies need to monitor competition in the industry. This will ensure that companies are using fair play for their products, and also business tactics and strategies. Competition regulation will also help the government monitor, restrict and regulate imports to help local businesses grow and expand. Competition regulation is important for the protection of all groups and stakeholders, as well as for maintaining the rights and interests of the related stakeholders.

Companies like Forging industry International Scope Expansion can take advantage of trade blocks and trade treaties that have been formed and signed by the respective country of origin. Trade blocks can facilitate businesses like Forging industry International Scope Expansion by lowering resource costs, lowering the cost of doing business, as well as increasing the supply of talented people

## **Economic**

A moderate inflation rate is needed in the economy for Forging industry International Scope Expansion to flourish. A moderate inflation rate will also help the business grow and work positively towards increasing consumer confidence and consumer spending trends. As a result, the economy will get a boost and the overall disposable income will also increase'

A higher inflation rate would lead to a lower disposable income, and thus could lead to lower overall expansion, which could harm businesses and companies, as well as lower consumer confidence. A lower inflation rate will lead to a high increase in disposable income, and thereby could increase competitiveness, especially through pricing strategies which could lead to unethical price wars that take undue advantage of the consumer.

A moderate interest rate will help businesses and Forging industry International Scope Expansion in taking loans from the banks. This business loan would be used for purposes of growth and development. Business loans would also help in the development and building of the industry infrastructure at a large level. With lower to moderate interest rates, personal loans will translate into higher purchases and consumption patterns by consumers. This in turn would lead to a boost in sales, consumption, and penetration of businesses like the Forging industry International Scope Expansion.

Consumer spending trends are critical for companies like Patagonia Gold Plc, and their performance. Higher consumer spending trends are preferred as they lead to higher purchases and consumption of products sold by Forging industry International Scope Expansion. The higher consumer spending is also reflective of higher purchasing power, which is important for increasing overall consumption patterns, and the health of the economy. These higher consumer trends can be positively influenced through product quality and marketing strategies. In addition, these trends are also influenced by other economic indicators such as inflation rate, interest rate, and unemployment trends.

Higher unemployment trends could also be reflective of a gap in labor skills and knowledge – which again would harm consumers through higher prices of the products. The higher prices would be associated with the increased cost of doing business when labor would be imported from other sources for purposes of work.

## **Social**

A higher portion of the younger population is beneficial for Forging industry International Scope Expansion as it will allow the company a larger consumer population base. In addition, a younger population will also promise Forging industry International Scope Expansion with more skilled and educated workers and human resources, thereby adding breadth and depth to the talent pool

Higher education in the population is desirable for multiple reasons that will benefit Forging industry International Scope Expansion. Higher education means more talented, skilled, and knowledgeable persons in the talent pool for Forging industry International Scope Expansion

An increasing portion of the population is adopting health and wellness trends. The health and wellness trend has also translated into consumption decisions and patterns

Forging industry International Scope Expansion has introduced health aspects in its marketing, and also add features of health in its products as per consumer research and behavioral assessments.

## **Technological**

The country has a strong infrastructure with regards to technology. There is a high rate of technological development and advancement. Increasingly, businesses like Forging industry International Scope Expansion are incorporating technological up-gradations and innovation to increase business efficiency and affectivity. There is a high rate of innovation across all industries, which makes companies including Forging industry International Scope Expansion competitive as well as progressive

The improved technological infrastructure also helps in attracting foreign direct investment, which in turn leads to further development and advancement. The improved technological infrastructure also helps in attracting foreign direct investment, which in turn leads to further development and advancement

## **Environmental**



There is an increased focus on environmental sustainability and recycling. Consumers are becoming more aware, and demanding ways for recycling products to be disposed off. Consumers are also increasingly demanding recycled products for consumption. Forging industry International Scope Expansion has launched specific sites for disposing off products to be recycled. Forging industry International Scope Expansion, like many other players, is also introducing a novice product line of recycled products for consumers to benefit from.

6.2. Waste management

## **Legal**

There are strict regulations about the health and safety of employees at the workplace. Respected associations and institutions regularly check with businesses about the implementation of safety nets, drill, and precautionary measures at the workplace.

Safety and health involve not only physical wellbeing but also the emotional and mental wellbeing of employees. Forging industry International Scope Expansion has placed high importance on the safety and health of its employees, and continually strives to improve it further

Countrywide regulations demand businesses to form legal contracts about employment. These contracts are authorized by the respected governmental bodies and involve all aspects of employment. Employability contracts ensure a healthy relationship between all parties involved, and also ensures that there is no misunderstanding or colluding. Forging industry International Scope Expansion practices employment laws, and briefs its employees about the same during the recruitment process

The HR department of the Forging industry also regularly conducts workshops and training sessions for employees to engage them, and make them aware of the employment laws, along with other legal formalities.

## **The porter five forces model**

### **Competitive Rivalry**

Competition is intense among major players as it consist of many organisation in this industry making it as a monopolistic market

Companies basically compete on pricing, experience in a particular field, product quality, and capability of handling projects. Small companies are also trying to revamp their scale and size

### **Threat of New Entrants**

Threat is low considering the capital intensive nature of the industry and reputation attached to the existing players.

### **Substitute Products**

Threat is low because of the nature of the industry.

Even if the buyer wants to revamp or renovate its existing stock, it is likely to go to the same players.

### **Bargaining Power of Suppliers**

Bargaining power of suppliers is low due to cut-throat competition.

Suppliers have a strong hand in the high-end technology segment.

### **Bargaining Power of Customers.**

Bargaining power in techoriented segments is low.

Competition in power generation and T&D equipment sector gives bargaining power

# **A STUDY ON INVENTORY MANAGEMENT IN HIMCAST PVT. LTD.**

## **INTRODUCTION**

### **About Himgiri Casting Pvt. Ltd.**

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Today the company cater to an international customer base out of our 65,000sq.m plant in Goa and 1,00,000 sq.m plant in Gujarat, both of which are ISO 9001:2015 certified. Our Machine Shop is considered on par with the best in the world and boasts HMC, VMC and CNC machines. Even as you read this, our 700-strong workforce is dutifully scanning a range of 900 products right from automobile and railway components and engineering castings to valve bodies and pipe fittings to ensure 100% perfection. Ultimately, no matter how far we've come or how big we've grown, the one thing that hasn't changed is our commitment to delivering the best and to moulding the future.

Inventory refers to the stock files of the products a firm is offering for sale and components that make up the product. The assets which firm store as inventory in anticipation of need are:

- raw material, work in progress/ semi-finished goods, finished goods.

Inventory management is very important for every company. It enables the business to meet expectations of the customers by making the products readily available.

## **PROJECT QUESTION**

- What is the working cycle of inventory?

- What is the percentage of cost of material to the total percentage of cost of production?
- How many times the inventory was consumed during the recorded years?
- What is the inventory turnover ratio for recorded years?

## **PROJECT OBJECTIVE**

- To measure the number of times inventory is consumed in a given time period.
- To study and calculate conversion period of debtors and creditors.
- To find out net operating cycle
- To analyse its inventory management methods with the help of ABC analysis.

## **PROJECT METHODOLOGY**

- **Project data**
  - Data used for analysis is been used from the company and data related to ratios is been used from prowessiq software.
- **Period of the study**
  - This study covers a period of financial year 2020-21.
- **Tools of analysis**
  - ABC analysis, numerical data and graphical representation will be used to analyse the data.

## **PROJECT DESIGN**

The project requires data of inventory, which is data of finished goods, semi-finished goods, raw material, stores and spares and packaging materials. For proper analysis, accurate steps will be followed along with graphical representations, followed by its interpretations. Then based upon the results/ observation, proper suggestion and conclusion will be derived.

## The operating cycle at Himcast PVT. LTD.

An operating cycle refers to the time it takes a company to buy goods sell them and receive cash from the sales of said goods. In other words, it's how long it takes a company to turn its inventories into cash.



The total cost of production incurred during the financial year 2020-21 was Rs 1,57,06,00,000/- and the cost of raw material consumed was Rs 98,39,00,000/-. And the rent cost incurred with respect to storing of inventory was Rs 4,00,000/-

The percentage of cost of material to the total percentage of cost of production	=	$\frac{\text{cost of material consumed} + \text{rent}}{\text{total cost of production}}$	
		$\frac{983900000 + 400000}{1570600000}$	62.7%

The percentage of cost of material to the total percentage of cost of production is 62.7%.

## Inventory at Himcast PVT LTD

A term inventory refers to the stock file of the products a firm is offering for sale and the components that make up the product. In other words, inventory is composed of assets that will be showed in future in the normal course of the business operations.

The assets which firms store as inventory in anticipation of need are:

- Raw materials
- Stores and spares
- Packaging materials
- Work in process (Semi Finished goods)
- Finished goods

The raw material inventory contains item that are purchased by the firm from other and are converted into finished goods through the manufacturing (production) process. They are an important input of the final product.

Stores and spares are the spare parts which are necessary for the production process. They include equipment, spare parts, tools, components of equipment etc. The packing inventory is the inventory of the materials that are used by the company to pack the goods.

The working process inventory consists of items currently being used in the production process. They are normally semi-finished goods that are at various stages of production in a multi stage production process.

A finished goods represented final or completed products which are available for sale .The inventory of such goods consists of items that have been produced but are yet be sold.

**Following data represent the total amount of inventory held by Himcast Pvt. Ltd., for the financial year 2020-21-**

<b>Inventories</b>	<b>191.3</b>	<b>100.00%</b>
<b>Raw material</b>	32.6	17.04%
<b>Packing material</b>	1.7	0.89%
<b>Stores &amp; spares</b>	15.2	7.95%
<b>Finished goods</b>	60.4	31.57%
<b>Semi-finished goods</b>	81.4	42.55%



The above pie chart represent that majority of the part of inventory are semi-finished goods, that is 42%. 32% of the inventory is finished goods, followed by raw materials which covers 17% of total inventory. 8% of the inventory are stores and spares and lastly, 1% of inventory are packing material.

### The Conversion Period

<p>The raw material conversion period in days</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <math display="block">\frac{\text{Raw material inventory} \times 330}{\text{Raw material consumption}}</math> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 5px;"> <math display="block">\frac{32.6 \times 330}{633}</math> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> 17 Days </div> </div>
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<p>The work in process conversion period in days</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <math display="block">\frac{\text{work in process inventory} \times 330}{\text{Cost of production}}</math> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 5px;"> <math display="block">\frac{81.4 \times 330}{1500.67}</math> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> 18 days </div> </div>
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The finished good conversion period in days	$\frac{\text{finished goods inventory} \times 330}{\text{Cost of goods sold}}$	
	$\frac{60.4 \times 330}{1380.30}$	15 days

The above mentioned figures in equations are in millions rupees.

It takes the company 17 days to convert its raw material into work in progress. Then it takes 18 days to convert inventory from work in progress into finished goods. It takes 15 days to convert finished goods to convert into sales.

**Inventory conversion period = Raw material conversion period + work in process conversion period + Finished good conversion period**

**Inventory conversion period = 17 + 18 + 15 = 50 days**

The debtor conversion period in days	$\frac{\text{debtors} \times 330}{\text{Credit sales}}$	
	$\frac{236.9 \times 330}{1294}$	61 days

The creditor's deferral period in days	$\frac{\text{Creditors} \times 330}{\text{Credit purchase}}$	
	$\frac{99.3 \times 330}{1567.85}$	21 days



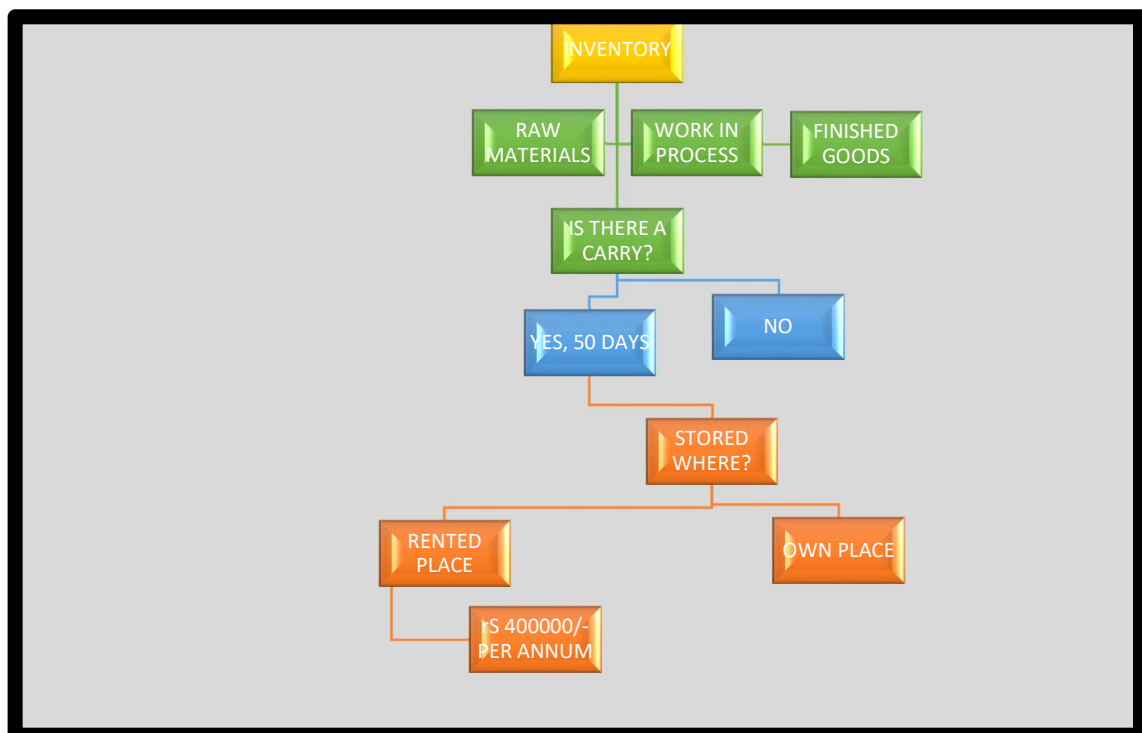
The above mentioned figures in equations are in millions rupees.

$$\begin{aligned}\text{Gross operating cycle} &= \text{inventory conversion period} + \text{debtor conversion period} \\ &= 50 \text{ days} + 61 \text{ days} = 111 \text{ days}\end{aligned}$$

$$\begin{aligned}\text{Net operating cycle} &= \text{gross operating cycle} - \text{Creditor's period} \\ &= 111 \text{ days} - 21 \text{ days} = 90 \text{ days}\end{aligned}$$

The net operating cycle tells about payment between paying for inventory and cash collected through the sales. Here, the net operating cycle for Himcast Pvt Ltd is of 90 days.

Following is the flow chart for inventory and its ancillary costs



## ABC Analysis

ABC analysis classifies various inventory into three sets or groups of priority the allocates managerial efforts in proportion of the priority

- The most important item are classified into “class – A”
- Those of intermediate importance are classified as “class - B”
- Remaining items are classified into ‘class - C’.

The financial manager has to monitor the items belonging to monitor the items belonging to different groups in that order of priority and depending upon the consumptions.

Items or the products of the company of forging and moulding, which are made up of scrap and pig iron. Their products are pipe joining, railway bodies, and other joining equipment. Their customers for this items are from abroad countries like The USA, Europe, Spain, Italy, Germany, and Australia.

Their items has 3 standards of quality- original, +zinc and bare items. Example, item name DMB10, then it is further classified as original that is, DMB10, DMB10Z (that is +zinc) and DMB10B (that is bare)

The products having the addition of Zinc material in it are little costlier than that if original and the items which are bare are less costly than that of original because in bare items consist of less materials than that of original product.

## Analysis part

Sr. No	Nos	ITEM CODE	Price per item	units sold	amount	percentage	total
1	Units	DMB880B	6546	13268	₹ 8,68,52,328.00	5.92%	5.92%
2	Units	DMB1020	8580	7112	₹ 6,10,20,960.00	4.16%	10.09%
3	Units	SPR440	15950	2784	₹ 4,44,04,800.00	3.03%	13.11%
4	Units	DMB160	3938	10260	₹ 4,04,03,880.00	2.76%	15.87%
5	Units	DMB880	7579	4988	₹ 3,78,04,052.00	2.58%	18.45%
6	Units	DMT1020	14586	2174	₹ 3,17,09,964.00	2.16%	20.61%
7	Units	SPR160B	10460	2994	₹ 3,13,17,240.00	2.14%	22.75%
8	Units	DMT440	10360	2848	₹ 2,95,05,280.00	2.01%	24.76%
9	Units	SPR80B	8455	3278	₹ 2,77,15,490.00	1.89%	26.65%
10	Units	SPR80	9790	2810	₹ 2,75,09,900.00	1.88%	28.53%
11	Units	SPB880	10266	2678	₹ 2,74,92,348.00	1.88%	30.40%
12	Units	SPR440Z	17545	1516	₹ 2,65,98,220.00	1.81%	32.22%
13	Units	SPR440B	13775	1924	₹ 2,65,03,100.00	1.81%	34.02%
14	Units	SPR160	12111	1998	₹ 2,41,97,778.00	1.65%	35.67%
15	Units	SPB160	5335	4454	₹ 2,37,62,090.00	1.62%	37.30%
16	Units	DMT880	12885	1742	₹ 2,24,45,670.00	1.53%	38.83%
17	Units	SPR1020	9867	2110	₹ 2,08,19,370.00	1.42%	40.25%

18	Units	SPB440	8255	2446	₹ 2,01,91,730.00	1.38%	41.62%
19	Units	SPR1020B	8522	2318	₹ 1,97,53,996.00	1.35%	42.97%
20	Units	DMT1020Z	16045	1134	₹ 1,81,95,030.00	1.24%	44.21%
21	Units	DMB80	2189	8254	₹ 1,80,68,006.00	1.23%	45.44%
22	Units	DMT440B	8948	2004	₹ 1,79,31,792.00	1.22%	46.67%
23	Units	DMT440Z	11396	1556	₹ 1,77,32,176.00	1.21%	47.88%
24	Units	SPR880	9856	1678	₹ 1,65,38,368.00	1.13%	49.00%
25	Units	SPR80Z	10769	1532	₹ 1,64,98,108.00	1.13%	50.13%
26	Units	DMK440	26070	630	₹ 1,64,24,100.00	1.12%	51.25%
27	Units	SPB880Z	11293	1450	₹ 1,63,74,850.00	1.12%	52.37%
28	Units	SPB320	4426	3690	₹ 1,63,31,940.00	1.11%	53.48%
29	Units	DMT160B	5782	2800	₹ 1,61,89,600.00	1.10%	54.59%
30	Units	SPR320	8690	1754	₹ 1,52,42,260.00	1.04%	55.63%
31	Units	SPB160Z	5868	2560	₹ 1,50,22,080.00	1.02%	56.65%
32	Units	DMB1020B	7410	1868	₹ 1,38,41,880.00	0.94%	57.59%
33	Units	DMT160	6695	2062	₹ 1,38,05,090.00	0.94%	58.54%
34	Units	SPR160Z	13323	1024	₹ 1,36,42,752.00	0.93%	59.47%
35	Units	SPR10B	3230	4198	₹ 1,35,59,540.00	0.92%	60.39%
36	Units	SPR880B	8512	1564	₹ 1,33,12,768.00	0.91%	61.30%
37	Units	DMT880Z	14173	864	₹ 1,22,45,472.00	0.84%	62.13%
38	Units	DPB1020B	5283	2264	₹ 1,19,60,712.00	0.82%	62.95%
39	Units	SPB1020	11622	1024	₹ 1,19,00,928.00	0.81%	63.76%
40	Units	SPR1020Z	10854	1094	₹ 1,18,74,276.00	0.81%	64.57%
41	Units	SPB440Z	9080	1304	₹ 1,18,40,320.00	0.81%	65.38%
42	Units	DMB440B	5263	2108	₹ 1,10,94,404.00	0.76%	66.14%
43	Units	DMK880	16500	666	₹ 1,09,89,000.00	0.75%	66.89%
44	Units	DMT80	3722	2874	₹ 1,06,97,028.00	0.73%	67.61%
45	Units	DPB880	5404	1978	₹ 1,06,89,112.00	0.73%	68.34%
46	Units	DMK1020	25300	422	₹ 1,06,76,600.00	0.73%	69.07%
47	Units	DMB320	3267	3268	₹ 1,06,76,556.00	0.73%	69.80%

The above items/ products makes up to 70% of total annual consumption value fall under “Class A” category.

Sr. No	Nos	ITEM CODE	Price per item	units sold	amount	percentage	total
1	Units	SPB80	2966	3536	₹ 1,04,87,776.00	0.72%	0.72%
2	Units	SPB320Z	4868	2082	₹ 1,01,35,176.00	0.69%	1.41%
3	Units	DMT320	5554	1818	₹ 1,00,97,172.00	0.69%	2.10%
4	Units	DPB1020	6117	1466	₹ 89,67,522.00	0.61%	2.71%
5	Units	SPR880Z	10842	824	₹ 89,33,808.00	0.61%	3.32%
6	Units	SPR320Z	9559	872	₹ 83,35,448.00	0.57%	3.88%
7	Units	DMB10	1078	7606	₹ 81,99,268.00	0.56%	4.44%

8	Units	SPR20	2618	3092	₹ 80,94,856.00	0.55%	5.00%
9	Units	DMT160Z	7365	1064	₹ 78,36,360.00	0.53%	5.53%
10	Units	DMT880B	11128	698	₹ 77,67,344.00	0.53%	6.06%
11	Units	DPB880B	4667	1658	₹ 77,37,886.00	0.53%	6.59%
12	Units	DMT80B	3214	2220	₹ 71,35,080.00	0.49%	7.07%
13	Units	SPB40	2325	3012	₹ 70,02,900.00	0.48%	7.55%
14	Units	DPB440	4345	1604	₹ 69,69,380.00	0.48%	8.03%
15	Units	DPB440B	3752	1804	₹ 67,68,608.00	0.46%	8.49%
16	Units	SPR320B	7505	890	₹ 66,79,450.00	0.46%	8.95%
17	Units	DMT320B	4797	1388	₹ 66,58,236.00	0.45%	9.40%
18	Units	DMT20	2095	3156	₹ 66,11,820.00	0.45%	9.85%
19	Units	DMB320Z	3594	1818	₹ 65,33,892.00	0.45%	10.30%
20	Units	DMB10B	931	6974	₹ 64,92,794.00	0.44%	10.74%
21	Units	SPB80Z	3262	1986	₹ 64,78,332.00	0.44%	11.18%
22	Units	DMT80Z	4094	1572	₹ 64,35,768.00	0.44%	11.62%
23	Units	DMK160	12419	500	₹ 62,09,500.00	0.42%	12.04%
24	Units	DPB880Z	5944	1012	₹ 60,15,328.00	0.41%	12.45%
25	Units	SPB20	1669	3342	₹ 55,77,798.00	0.38%	12.83%
26	Units	DMT320Z	6110	912	₹ 55,72,320.00	0.38%	13.21%
27	Units	SPR20B	2261	2418	₹ 54,67,098.00	0.37%	13.59%
28	Units	DMK80	8558	638	₹ 54,60,004.00	0.37%	13.96%
29	Units	SPB880B	8866	612	₹ 54,25,992.00	0.37%	14.33%
30	Units	DMB10Z	1186	4530	₹ 53,72,580.00	0.37%	14.70%
31	Units	SPB1020Z	12784	416	₹ 53,18,144.00	0.36%	15.06%
32	Units	DMB20	1232	4270	₹ 52,60,640.00	0.36%	15.42%
33	Units	DMB320B	2822	1806	₹ 50,96,532.00	0.35%	15.77%
34	Units	DMB160B	3401	1496	₹ 50,87,896.00	0.35%	16.11%
35	Units	DPB160B	2425	2056	₹ 49,85,800.00	0.34%	16.45%
36	Units	SPR20Z	2880	1708	₹ 49,19,040.00	0.34%	16.79%
37	Units	DMB80B	1891	2580	₹ 48,78,780.00	0.33%	17.12%
38	Units	DMK440Z	28677	170	₹ 48,75,090.00	0.33%	17.45%
39	Units	DPB1020Z	6729	692	₹ 46,56,468.00	0.32%	17.77%
40	Units	SPR40B	1159	3966	₹ 45,96,594.00	0.31%	18.08%
41	Units	DMB440	6094	740	₹ 45,09,560.00	0.31%	18.39%
42	Units	DMK320	9900	432	₹ 42,76,800.00	0.29%	18.68%
43	Units	DMT40B	2520	1694	₹ 42,68,880.00	0.29%	18.97%
44	Units	SPB10	1461	2902	₹ 42,39,822.00	0.29%	19.26%
45	Units	SPB40Z	2557	1658	₹ 42,39,506.00	0.29%	19.55%
46	Units	DPB160	2808	1508	₹ 42,34,464.00	0.29%	19.84%
47	Units	SPB1020B	10037	418	₹ 41,95,466.00	0.29%	20.13%

The above items/ products makes up to 20% of total annual consumption value fall under “Class B” category.

Sr. No	Nos	ITEM CODE	Price per item	units sold	amount	percentage	total
1	Units	DMT40	2918	1434	₹ 41,84,412.00	0.29%	0.29%
2	Units	DMH880	6443	646	₹ 41,62,178.00	0.28%	0.57%
3	Units	DMT20Z	2304	1748	₹ 40,27,392.00	0.27%	0.84%
4	Units	DMH1020	7293	538	₹ 39,23,634.00	0.27%	1.11%
5	Units	SPR10	3740	1034	₹ 38,67,160.00	0.26%	1.38%
6	Units	DPB440Z	4779	778	₹ 37,18,062.00	0.25%	1.63%
7	Units	DMT20B	1809	2046	₹ 37,01,214.00	0.25%	1.88%
8	Units	SPB440B	7129	518	₹ 36,92,822.00	0.25%	2.13%
9	Units	DMK880Z	18150	192	₹ 34,84,800.00	0.24%	2.37%
10	Units	SPB20Z	1836	1864	₹ 34,22,304.00	0.23%	2.60%
11	Units	DMK320B	8550	398	₹ 34,02,900.00	0.23%	2.84%
12	Units	DMB20Z	1356	2444	₹ 33,14,064.00	0.23%	3.06%
13	Units	DMB40	1716	1782	₹ 30,57,912.00	0.21%	3.27%
14	Units	DPB320	2330	1284	₹ 29,91,720.00	0.20%	3.48%
15	Units	DMB20B	1064	2802	₹ 29,81,328.00	0.20%	3.68%
16	Units	DMB160Z	4332	678	₹ 29,37,096.00	0.20%	3.88%
17	Units	SPB160B	4607	618	₹ 28,47,126.00	0.19%	4.07%
18	Units	DMH440	5180	532	₹ 27,55,760.00	0.19%	4.26%
19	Units	DPB80	1561	1668	₹ 26,03,748.00	0.18%	4.44%
20	Units	SPB10Z	1607	1590	₹ 25,55,130.00	0.17%	4.61%
21	Units	DMK40	5916	420	₹ 24,84,720.00	0.17%	4.78%
22	Units	DPB10B	664	3680	₹ 24,43,520.00	0.17%	4.95%
23	Units	DMK440B	22515	108	₹ 24,31,620.00	0.17%	5.11%
24	Units	DMK160B	10726	218	₹ 23,38,268.00	0.16%	5.27%
25	Units	SPB80B	2561	898	₹ 22,99,778.00	0.16%	5.43%
26	Units	DPB160Z	3089	718	₹ 22,17,902.00	0.15%	5.58%
27	Units	DMT40Z	3209	672	₹ 21,56,448.00	0.15%	5.73%
28	Units	DMK10	3729	574	₹ 21,40,446.00	0.15%	5.88%
29	Units	DMH160	3348	634	₹ 21,22,632.00	0.14%	6.02%
30	Units	DPB80B	1348	1544	₹ 20,81,312.00	0.14%	6.16%
31	Units	DMK880B	14250	144	₹ 20,52,000.00	0.14%	6.30%
32	Units	DMT10	1833	1098	₹ 20,12,634.00	0.14%	6.44%
33	Units	DPB40B	1057	1808	₹ 19,11,056.00	0.13%	6.57%
34	Units	SPR40	1342	1370	₹ 18,38,540.00	0.13%	6.70%
35	Units	DMH320	2777	638	₹ 17,71,726.00	0.12%	6.82%
36	Units	SPR10Z	4114	422	₹ 17,36,108.00	0.12%	6.93%
37	Units	DMB40Z	1888	890	₹ 16,80,320.00	0.11%	7.05%
38	Units	DMK80Z	9414	174	₹ 16,38,036.00	0.11%	7.16%
39	Units	SPB40B	2008	796	₹ 15,98,368.00	0.11%	7.27%
40	Units	DMB440Z	6704	238	₹ 15,95,552.00	0.11%	7.38%
41	Units	SPB20B	1442	1078	₹ 15,54,476.00	0.11%	7.48%
42	Units	SPB320B	3822	398	₹ 15,21,156.00	0.10%	7.59%
43	Units	DPB320Z	2562	578	₹ 14,80,836.00	0.10%	7.69%
44	Units	DPB80Z	1717	818	₹ 14,04,506.00	0.10%	7.79%
45	Units	DMH80	1861	752	₹ 13,99,472.00	0.10%	7.88%
46	Units	DPB320B	2012	678	₹ 13,64,136.00	0.09%	7.97%

47	Units	DMT10B	1583	814	₹ 12,88,562.00	0.09%	8.06%
48	Units	DMH880Z	7087	180	₹ 12,75,660.00	0.09%	8.15%
49	Units	DMK1020B	21850	58	₹ 12,67,300.00	0.09%	8.24%
50	Units	DPB40	1224	996	₹ 12,19,104.00	0.08%	8.32%
51	Units	DMK160Z	13661	88	₹ 12,02,168.00	0.08%	8.40%
52	Units	DMH1020B	6299	186	₹ 11,71,614.00	0.08%	8.48%
53	Units	DPB20	879	1312	₹ 11,53,248.00	0.08%	8.56%
54	Units	DPB10	769	1470	₹ 11,30,430.00	0.08%	8.64%
55	Units	DMK1020Z	27830	40	₹ 11,13,200.00	0.08%	8.71%
56	Units	DMH40	1459	740	₹ 10,79,660.00	0.07%	8.79%
57	Units	DMK20	2626	386	₹ 10,13,636.00	0.07%	8.85%
58	Units	DMB40B	1482	658	₹ 9,75,156.00	0.07%	8.92%
59	Units	SPR40Z	1477	632	₹ 9,33,464.00	0.06%	8.98%
60	Units	DMT10Z	2016	462	₹ 9,31,392.00	0.06%	9.05%
61	Units	DPB20B	759	1218	₹ 9,24,462.00	0.06%	9.11%
62	Units	DMH880B	5564	162	₹ 9,01,368.00	0.06%	9.17%
63	Units	DMH1020Z	8023	112	₹ 8,98,576.00	0.06%	9.23%
64	Units	DMK80B	7391	98	₹ 7,24,318.00	0.05%	9.28%
65	Units	DMH20	1048	638	₹ 6,68,624.00	0.05%	9.33%
66	Units	DMH160Z	3683	172	₹ 6,33,476.00	0.04%	9.37%
67	Units	DMH440Z	5698	108	₹ 6,15,384.00	0.04%	9.41%
68	Units	DMK40B	5110	118	₹ 6,02,980.00	0.04%	9.46%
69	Units	DPB10Z	846	694	₹ 5,87,124.00	0.04%	9.50%
70	Units	DPB20Z	967	596	₹ 5,76,332.00	0.04%	9.53%
71	Units	DMK10Z	4102	134	₹ 5,49,668.00	0.04%	9.57%
72	Units	DPB40Z	1346	398	₹ 5,35,708.00	0.04%	9.61%
73	Units	DMH320Z	3055	174	₹ 5,31,570.00	0.04%	9.65%
74	Units	SPB10B	1262	418	₹ 5,27,516.00	0.04%	9.68%
75	Units	DMH80Z	2047	246	₹ 5,03,562.00	0.03%	9.72%
76	Units	DMK320Z	10890	46	₹ 5,00,940.00	0.03%	9.75%
77	Units	DMH10	917	538	₹ 4,93,346.00	0.03%	9.78%
78	Units	DMH440B	4474	108	₹ 4,83,192.00	0.03%	9.82%
79	Units	DMT1020B	12597	38	₹ 4,78,686.00	0.03%	9.85%
80	Units	DMH160B	2891	156	₹ 4,50,996.00	0.03%	9.88%
81	Units	DMH40Z	1605	238	₹ 3,81,990.00	0.03%	9.91%
82	Units	DMK10B	3221	118	₹ 3,80,078.00	0.03%	9.93%
83	Units	DMK20B	2268	164	₹ 3,71,952.00	0.03%	9.96%
84	Units	DMK40Z	6508	38	₹ 2,47,304.00	0.02%	9.97%
85	Units	DMH20Z	1152	174	₹ 2,00,448.00	0.01%	9.99%
86	Units	DMH40B	1260	150	₹ 1,89,000.00	0.01%	10.00%
87	Units	DMB880Z	8337	22	₹ 1,83,414.00	0.01%	10.01%
88	Units	DMB1020Z	9438	18	₹ 1,69,884.00	0.01%	10.02%
89	Units	DMH10B	792	178	₹ 1,40,976.00	0.01%	10.03%
90	Units	DMB80Z	2408	58	₹ 1,39,664.00	0.01%	10.04%
91	Units	DMH10Z	1008	112	₹ 1,12,896.00	0.01%	10.05%
92	Units	DMH80B	1607	66	₹ 1,06,062.00	0.01%	10.06%
93	Units	DMH20B	905	106	₹ 95,930.00	0.01%	10.07%
94	Units	DMK20Z	2889	18	₹ 52,002.00	0.00%	10.07%
95	Units	DMH320B	2399	18	₹ 43,182.00	0.00%	10.07%

The above items/ products makes up to 10% of total annual consumption value fall under “Class C” category.

From the above analysis, it can be observed that 47 out of 188 products fall under “Class A”, which make up to 25% of total products available. “Class B” consist of 25% of total products. And lastly 50% of total products fall under “Class C”

## **Project Findings and Conclusion.**

During internship, they made me to work in stores department and purchase department. My major work was related to inventory, that is dealing with raw materials, work in process and finished goods. In total cost of production, the cost of material is a major component and because it is strategically important, I decided to study this further.

From the analysis, it was found that the percentage of cost of material to the total percentage of cost of production is 62.7% which consist of material cost and material ancillary cost. Further, I categorised inventory into 5 categories, namely, raw material, which make 17.04% of total inventory, stores and spares which makes 7.95% of total inventory, packing materials which makes 0.89% of total inventory, work in process 42.55% and finished goods which make 31.57% of total inventory.

I also calculated material conversion period at each stage- from raw material to WIP, from WIP to Finished good and from finished goods to sales. From the analysis, it was found that it takes 17 days to convert raw materials to work in process. It takes 18 days to convert work in process to finished goods and lastly it takes 15 days to convert finished goods to sales. Adding all the days, it gives me complete inventory turnover period which is 50 days. Further, with the help of analysis a calculation was made with respect to debtor conversion period and creditor conversion period which are 61 and 21 days respectively. With the availability of the said data, the calculation of net operating cycle was done, which is 90 days.

ABC classification was done to identify products which are valued and demanded in the market. The products were classified into Class A, Class B and Class C based upon its demand and income generated to the company. Class A consist of 25% of total products generating 70% of total income from sales of goods. Class B consist of 25% of total products which create 20% of income from sales of goods and lastly it was identified that 50% of items created 10% of total income from sales of goods.



## **Recommendation to the company**

The company's net operating period is of 90 days, which is 3.6 times a year, which is not favourable.

A strict control is exercised on the items which represent a high percentage of the material cost. Managerial time is spend on A items whereas C items and B items can be handled by clerical staffs. Equal attention to all the items of stores is not desirable because it is expensive. ABC analysis should be followed to give due attention to the items which they deserve keeping in view their value of consumption.

Investment in the inventory is reduced to the minimum possible level because a reasonable quantity of A items representing a significant portion of the material cost is purchased. To reduce investment in material.

Storage cost is reduced as a reasonable quantity of materials, which account for high percentage of value of consumption will be maintain in the stores.

ABC analysis allow management to save time because attention can be given to some of the items rather than all the items.

## **Learning derived**

Working in a company which is into forging and moulding industry was a new experience for me. The organisation also consist of friendly and supportive staffs. The major tasks performed by me are-

I was first taught and told to make purchase order and prepare its invoice and get verified with my guide during the internship. I also performed the task of accepting sales order and then reporting to sales manager about the same.

I also made cargo insurance of the product which they deliver to its customers. Also, I was taught to update the stock list using ERP software and lastly I learned creating items and its codes under sales manager's supervision.