

## **CHAPTER II**

### **GROWTH, DEVELOPMENT AND ORGANIZATION STRUCTURE OF FOUNDRY INDUSTRY**

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## **CHAPTER II**

### **GROWTH, DEVELOPMENT AND ORGANIZATION STRUCTURE OF FOUNDRY INDUSTRY**

#### **2.1 PROFILE OF SANGLI DISTRICT:-**

Sangli District situated in Western Maharashtra lies on border lines of Karnataka State. It is a famous and leading district in Maharashtra. It is also well known for its social, political and economic activities since independence. It achieved rapid development in agricultural & industrial sector. Both sectors are equally back bone of Sangli District.

##### **2.1.1 INDUSTRIAL SECTOR :-**

The Sangli District is also leading district in co-operative movement. The co-operative sector was exported all corner of Sangli district in rural and urban area. There are number of companies in private sector. The private sector, having a number of small, medium & large scale industries and they are manufacturing various goods & services. As per the records in the MIDC office, there are 1070 small scale industries in MIDC area and 394 in industrial estates.

Turning to our study it appears from the secondary data available from MIDC Sangli office that there are 8 MIDC's in the Sangli District scattered over Sangli-Miraj-Kupwad, Kadegaon, Islampur, Palus, Jath, Kavthe-Mahankal, Vita & Shirala.

The below table No. 2.1 shows the number of industry situated in different area.

TABLE NO. 2.1

## TALUKA-WISE MIDC IN SANGLI DISTRICT

Sr. No.	Type of Unit	Jath	Shirala	K.M.Mahankal	Palus	Kadegaon	Vita	Islampur	Sangli-Miraj-Kupwad	Total
1	Engineering or foundries	13	4	15	3	29	4	63	308	439
2	Chemical	6	2	4	1	4	4	16	22	59
3	Textile	2	1	2	1	4	4	6	25	45
4	Food	7	3	6	4	16	2	6	23	70
5	Cement Product	3	2	4	2	13	3	9	13	58
6	Plastic	2	1	2	2	3	2	5	102	119
7	Rubber	4	2	3	1	6	1	12	22	51
8	Electronics	5	1	4	2	9	2	17	16	56
9	Misc.	4	3	6	3	11	3	13	130	173
	Total	46	19	46	20	96	22	160	661	1070

Source - MIDC office, Sangli.

The secondary data available from DIC office Sangli that the industrial area of Sangli also scattered over in different co-operative Industrial Estates. There are total six co-operative industrial estates in Sangli District. Following Table No. 2.2 Shows the different co-operative industrial estate and number of industries in that estate.

TABLE NO. 2.2  
INDUSTRIAL ESTATES IN SANGLI DISTRICT

Sr. No.	Name of Co-Operative Industrial Estate	No. of Industries
1	Vasantdada Industrial Estate Co-operative society Ltd. Sangli.	160
2	Govindravji Marathe Industrial Estate co-operative Society Ltd. Miraj	60
3	Vita Gramin Vikas Co-op. Industrial Estate Society Ltd. Palus.	24
4	Dr. Patangrao Kadam Co-op. Industrial Estate Society Ltd. Palus.	117
5	Tasgaon Industrial Estate Co-op. society Ltd. Tasgaon.	17
6	Sanjay Industrial Estate Co-op. Society Ltd.	16

Source – DIC Office, Sangli.

## **2.2 MEANING AND OPERATIONS OF FOUNDRY INDUSTRY-**

### **2.2.1 MEANING OF FOUNDRY INDUSTRY**

Foundry has been shaping metals since the earliest days of civilization. A wide variety of sizes and shapes of simple and intricate nature can be produced in different metals.

Founding or casting is the process of producing metal/alloy component parts of desired shapes by pouring the molten metal/alloy into a prepared mould (of that shape) and then allowing the metal/alloy to cool and solidify. The solidified piece of metal is known as casting.

Casting is one of the basic tools of shaping metals and alloys.

The basic simplicity of the founding process proved to be a boon for the growth of foundry industry and today a wide variety of products (or components) form of domestic use to space vehicles are produced in foundries.

Foundry may be defined as a commercial set-up for manufacturing casting. Foundry may also be known as collection of materials, fuel, fluxes, and tools (machines) to produce castings, foundry can shape parts weighting form a few grams t hundreds of tons.

The growing demand high precision castings and of intricate designs at lower costs has helped considerably in the development of foundry industry. Hardly there is any product today, which does not have one or more cast components. A few applications of founding or casting are mentioned below –

- i) Transportation vehicles cast metal parts account for more than 90% of an automobile engine.
- ii) Machine tool structures
- iii) Turbine vanes

- iv) Power Generators.
- v) Mail Housing
- vi) Railway Crossing
- vii) Pump filter
- viii) Paper Mill Stock breaker ports
- ix) Aircraft jet, engine blades
- x) Agricultural parts
- xi) Communication, Construction & Atomic Energy Application.

### **2.2.2 OPERATIONS OF FOUNDRY INDUSTRY:-**

In Foundry industry manufacturing of casting takes places. That making of casting involves following steps.

- 1) Make the Pattern of wood, metal and plastic.
- 2) In case of Sand Casting, Select, test and prepare the necessary sand mixtures for Mould and Core making.
- 3) With the help of patterns, prepare the Mould and necessary cores.

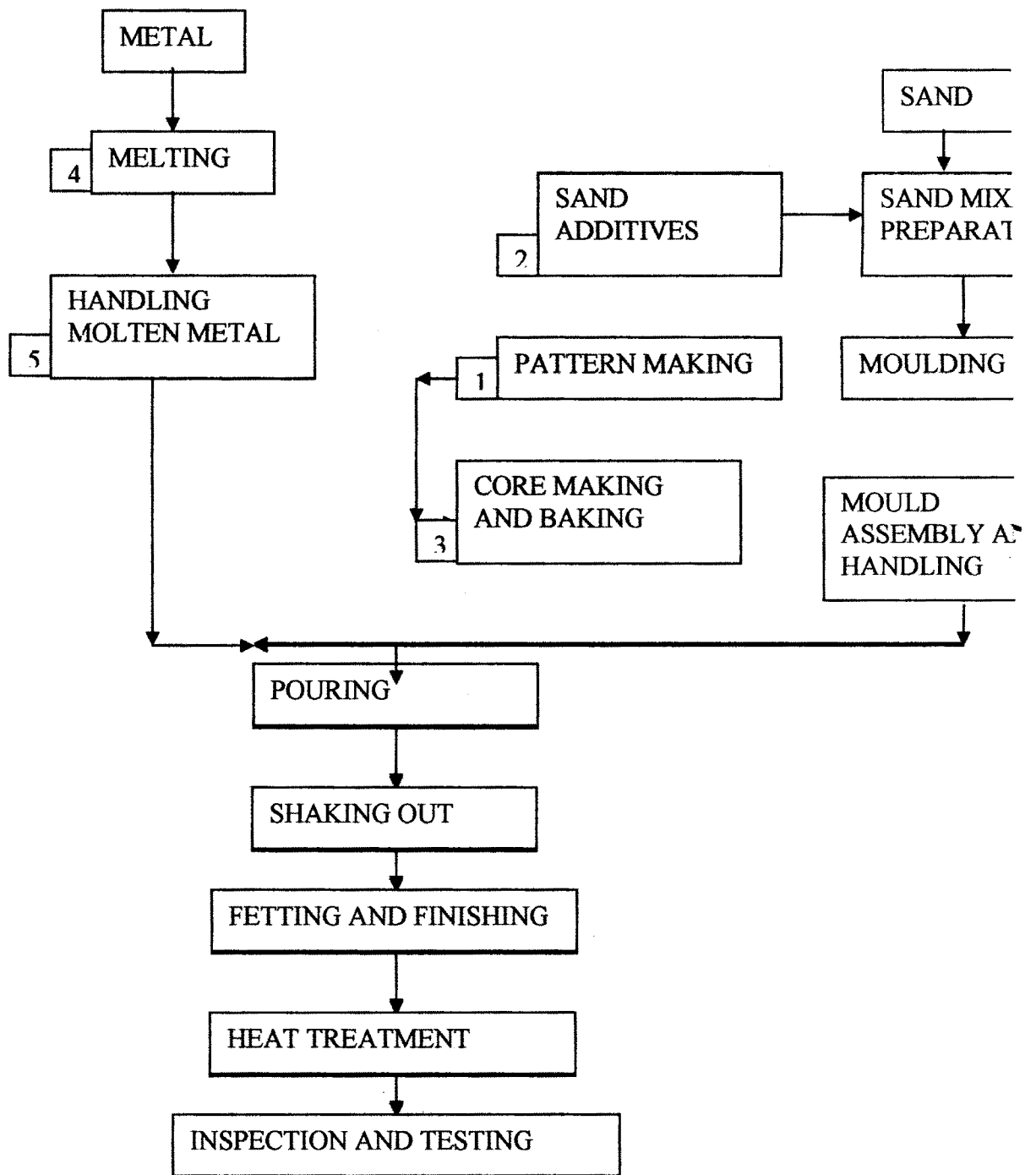
A Mould is a container (of sand or metal) having a cavity of the shape to be cast.

A core is body (of sand) which is employed to produce a cavity in the casting.

- 4) Melt the metal/alloy to be cast.
- 5) Pour the molten metal/alloy into the mould and remove the casting from the metal solidifies.
- 6) Clean and finish the casting.
- 7) Test and inspect the casting.
- 8) Remove the defects, [if any].

- 9) Relieve the casting stresses by Heat Treatment.
- 10) Again inspect the casting.
- 11) The casting is ready for shaping.
- 12) Shaping the casting by using different machines such as Shimoga Lathe Machine, Lathe Machine, 7B Taret Lathe Machine etc.

The above mention steps shown in following Chart:-



## **2.3 PROFILE OF PALUS TALUKA:-**

Before 1999 Palus was in the Tasgaon Taluka. But on 1<sup>st</sup> July 1999 Palus was established as separate taluka. In Palus Taluka there are 35 villages and 34 Grampanchayat. There is no separate grampanchayat for the village Gondilwadi, it comes under Palus Grampanchayat.

It is famous and leading taluka for industrial and agricultural development in Sangli District.

In industrial sector there are famous industries in Palus Taluka, that are in Bhilwadi-Chitale Dairy, in-Sandgewadi Kirsha Wine Park and in Kirloskarwadi-Kirloskar Brother Ltd.

In agricultural sector there are most of farmers exporting their grapes to Europe. Both the sectors are equally back bone of Palus Taluka.

### **2.3.1 GEOGRAPHICAL AREA:-**

Palus Taluka situated in Western area of Sangli District. It is situated on boundaries<sup>of</sup> Tasgaon Taluka which is on East of Palus, Miraj Taluka on South of Palus, Walwa Taluka on West of Palus and Kedegaon Taluka on North of Palus. It is situated in river basins of Yerala and Krishna. The river Krishna is one of the three largest scattered rivers of Southern India.

The total <sup>area</sup> of Palus Taluka is 27,445.83 hectares. As per the census of 2001 total population of Palus Taluka was 138988.

## **2.4 GROWTH AND DEVELOPMENT OF FOUNDRY INDUSTRY IN PALUS AREA:-**

The development of industrial sector in Palus area takes place when Late Mr. Vasantdada Patil was Chief Minister of Maharashtra. He



helps for industrial development by making necessary financial assistance.

#### **2.4.1 Pre-Independence:-**

Before independence in Palus and surrounding area, only one industry established that is “Kirloskar Brothers Ltd; Kirloskarwadi.” established by Late Mr. Laxmanrao Kirloskar in the year 1902.

Firstly he started to produce chairs, chaff cutter. He produces these equipments by reading the techniques from maxzins. He started to produce these equipment in Belgum. But due to pollution they force to leave the Belgum. After that they came in Maharashtra. Shahu Maharaj and Aundh Sarkar gave him place in Kirloskarwadi to start factory. They give him 65 Akers and also provide financial assistance and he start the Kirloskar Brother ltd.

#### **2.4.2 Post-Independence:-**

After independence the first foundry industry started in 1959 by the name “Vikas Industrial Co-Operative Organization Ltd. Palus”.

This organization was established by Mr. Sakharam Ganapati Yesugade, Mr. Shankar Keshav Patil, Mr. Ishwar Bhairu Shinde, Mr. Mahammad Dada Shikalgar, Mr. Rajaram Masu Sawant who were working in Kirloskar Brother Ltd. Kirloskarwadi. They started this industry on co-operative basis that the workers are the owners. The financial assistanace was provided by the Govt. and the share capital of its members.

The main customer for their products was Kirloskar Brothers Ltd.

After 1959 the second foundry industry started in the year 1981 by the name “Palus Engineering Pvt. Ltd. Palus. By Mr. Shankar Keshav Patil as a Chairman, with other 4 directors.

There is a wide gap between these two industries because of lack of entrepreneurship confidence, unavailability of adequate finance, Lack of skilled workers, Lack of business attitude, lack of communication and transportation facilities etc.

But in 1981 Palus Engineering Pvt. Ltd. Palus established. And after that foundry industries, Started on continuous basis. The main reason is Kirloskar Brothers Ltd. because it is the big customer of all foundry industries in Palus area.

### 2.4.3 TOTAL FOUNDRY INDUSTRIES IN PALUS AREA:-

Till 2007 in Palus surrounding area, there are 15 industries. Table No. 2.3 shows the name of the industry and its establishment year.

**TABLE NO. 2.3**

#### **FOUNDRY INDUSTRIES IN PALUS AREA**

Year of Establishment	No. of Industries	Name of Industry
1959	1	Vikar Industrial Workers Co-op. Organization Ltd.
1981	1	Palus Engineering Pvt.Ltd.
1986	1	G.B. Iron & Steel Industry
1992	1	Vikrant Metal Industries
1994	1	S.K.P. Industries
1995	1	Barvep-co. Cast alloys
2000	2	Kedar foundries & Malati industries
2001	1	Thorat Enterprises
2002	1	Shubham Industries
2005	1	Morya Allucast-Industry
2006	2	S.K. Cast Alloys and Pragati Industry
2007	2	Gagangiri Metal & Balaji Industries

From the above table no. 2.3 we can evaluate that the first foundry industry established in 1959 and after that second industry established in 1981. There is very wide gap between the establishment of foundry industries because of lack of entrepreneur confidence, finance,

infrastructure facilities etc. , but after that foundry industries are established on continuous basis.

Again there is a gap in establishments of foundries that in 1995-2000, because recession period. Peoples were not take any adventure for establishing foundries. And after 2000 again foundries are established on continuous basis.

#### **2.4.4 INFRASTRUCTURE FACILITIES:-**

For the development of industries, in proper way the basic infrastructure facilities are necessary. Basic infrastructure facilities such as water supply, roads, power supply, telecom facility, street lights, common facility center, dispensary and recreation facilities etc.

- 1)Water Supply:- The water facility for Palus MIDC area and for Dr. Pantangrao Kadam Co-op. Industrial Estate is supply from Dr. Pantangroa Kadam Water Supply Scheme.
- 2)Roads:-Well constructed roads are connected to main roads throughout industrial area.
- 3)Power Supply:- MSEB is a main supplier of electric power connections on demand of plot holders. There are sufficient transformers are installed.
- 4)Telecom facility:-The separate Electronic Telephone exchange is functioning in Palus industrial Area. The exchange is connected to the main telephone exchange of Palus.
- 5)Street Lights:-Street Lights are erected on almost all roads in industrial area. They are with 70 WHPSV on 9 m high steel tabular poles.
- 6)Dispensary:- In Palus industrial area, there is civil hospital Palus, which provides medical facilities for 24 hours at low charges for the patients.

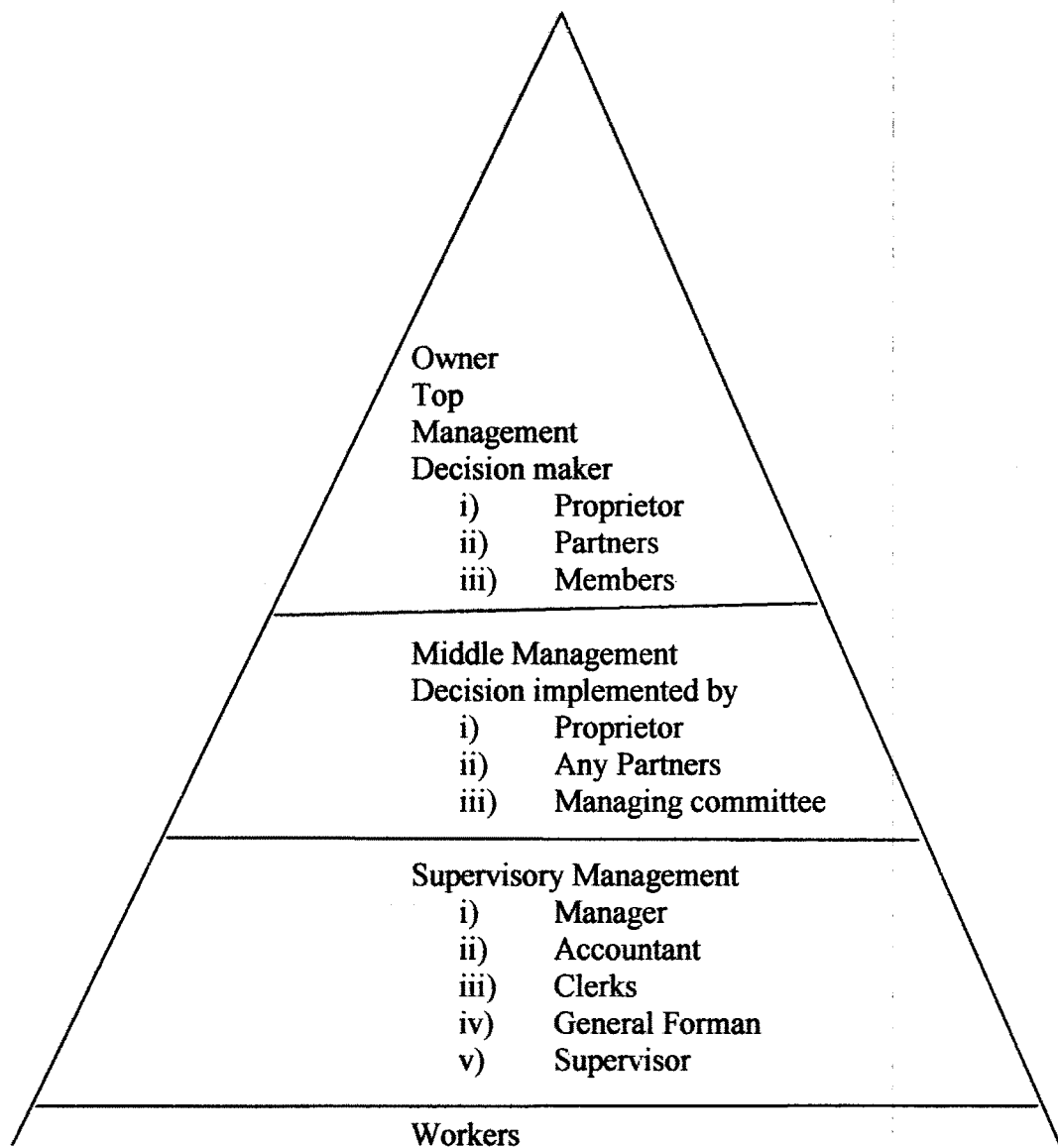
7)Recreation Facility:- Besides these above facility Palus industrial area is having number of other facilities such as STD/PCO Booths, canteen, restaurants, etc.

## **2.5 ORGANIZATIONAL STRUCTURE OF FOUNDRY INDUSTRIES:-**

Every business needs to be organized in proper way for better performance and it requires three essential factors such as man, material and machinery.

For better performances almost all small scale industries in general & foundry industries in particular a tried to bring down cost at minimum level on the one hand and to produce cheapest product of a better quality on the other hand foundry industries also identified as form of organization or a group to person. These persons have different position on the organization is the structure of the network relationship between the various positions of the persons in an organization.

The typical organization of foundry industry structure is presented as below:-



However, after the research, Researcher came to know that there are four main or important forms of organization in foundry industry.

They are

- 1) Proprietorship or sole Trading Concern
- 2) Partnership'
- 3) Private company
- 4) Co-operative.

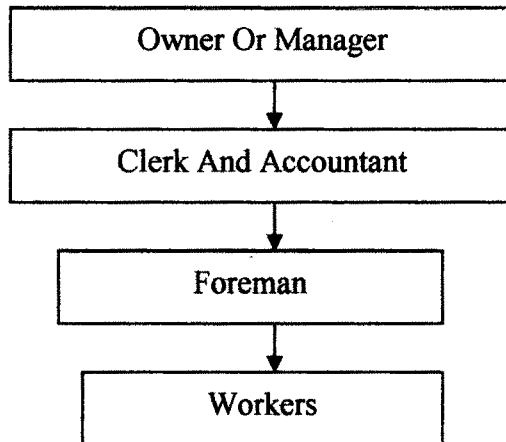
### **2.5.1 PROPRIETORSHIP OR SOLE TRADING CONCERN:-**

It reveals that individual is the sole owner of the unit. He alone is conducting the business himself. For the registration or to take the initiative no specific documents are required to create this type of organization except obtaining trade license from the local authorities. They introduce their own capital & also decide their own policy matter in business. They responsible for all profits & risks of the business. This type of organization is suitable for small scale trading & manufacturing industries.

There are total five foundry industries in the form of sole trading concern, that means 33.34% of total industries

#### **ORGANIZATIONAL STRUCTURE OF SOLE TRADING**

##### **CONCERN**



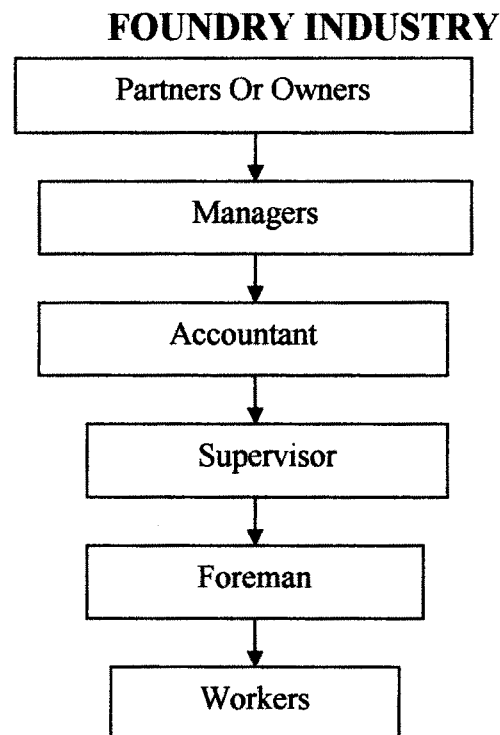
### **2.5.2 PARTNERSHIP:-**

We found, in the selected samples, another form of organization that is Partnership. This is next to proprietorship. This type of business is becoming more popular. This may be due to rapid industrialization which is resulted in huge investment while an individual entrepreneur is unable to make the amount.

In this form of business organization the business is owned and managed by two or more persons who have agreed to share the risks and profit of business carried on by all of them or any of them acting for all.

In the Palus are there are total seven foundry industries in the form of Partnership firms. The foundry industries in Partnership firm are 46.66% of total foundry industries.

### **ORGANISATIONAL STRUCTURE OF PARTNERSHIP**



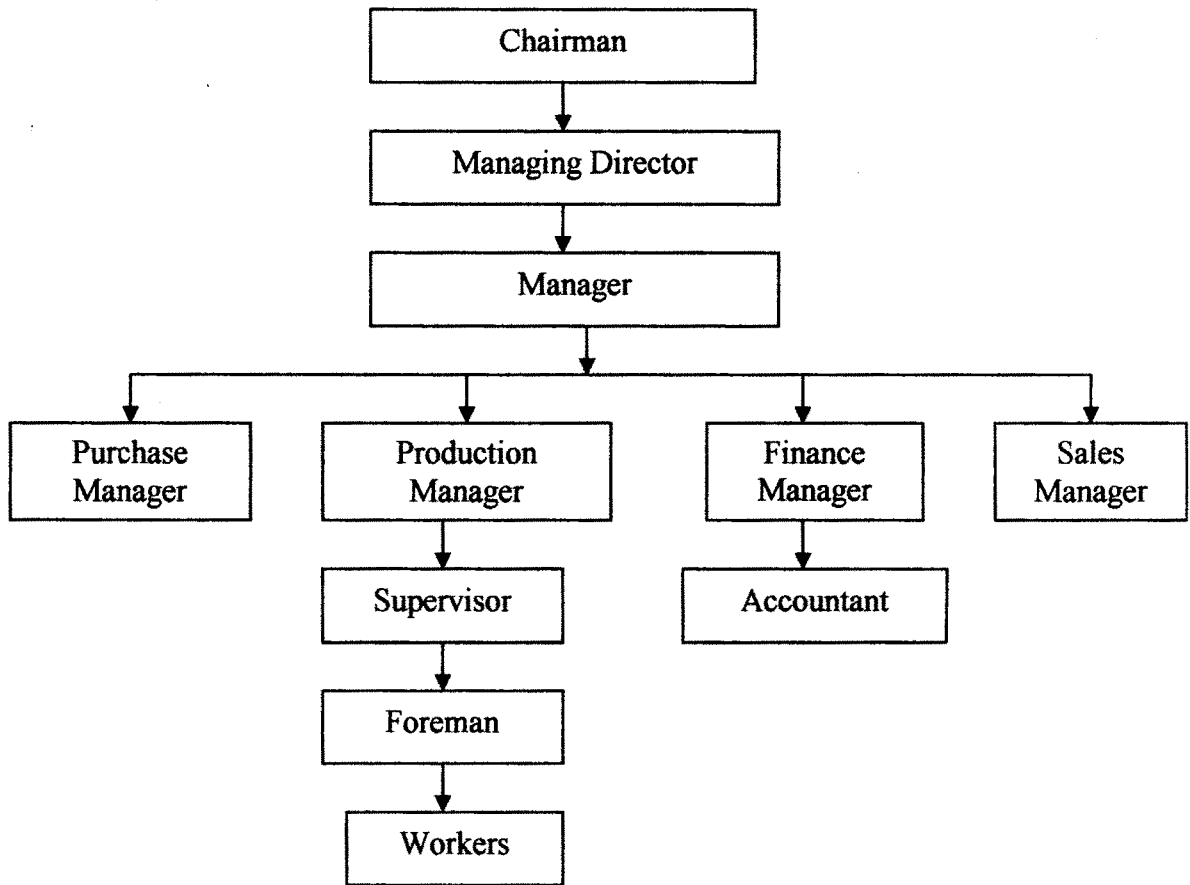
### **2.5.3 PRIVATE COMPANIES:-**

Private companies are those which are established by more than two persons and not exceed 50 persons, who contributed their own capital in the foundry. We found this type of business organization in Palus area. The members of these companies are the Board of Directors. They are the friends and relatives. There are total two foundry industries in Private Company.

They are 13.34% of total foundry industries in Palus area.



## ORGANIZATIONAL STRUCTURE OF PRIVATE COMPANIES



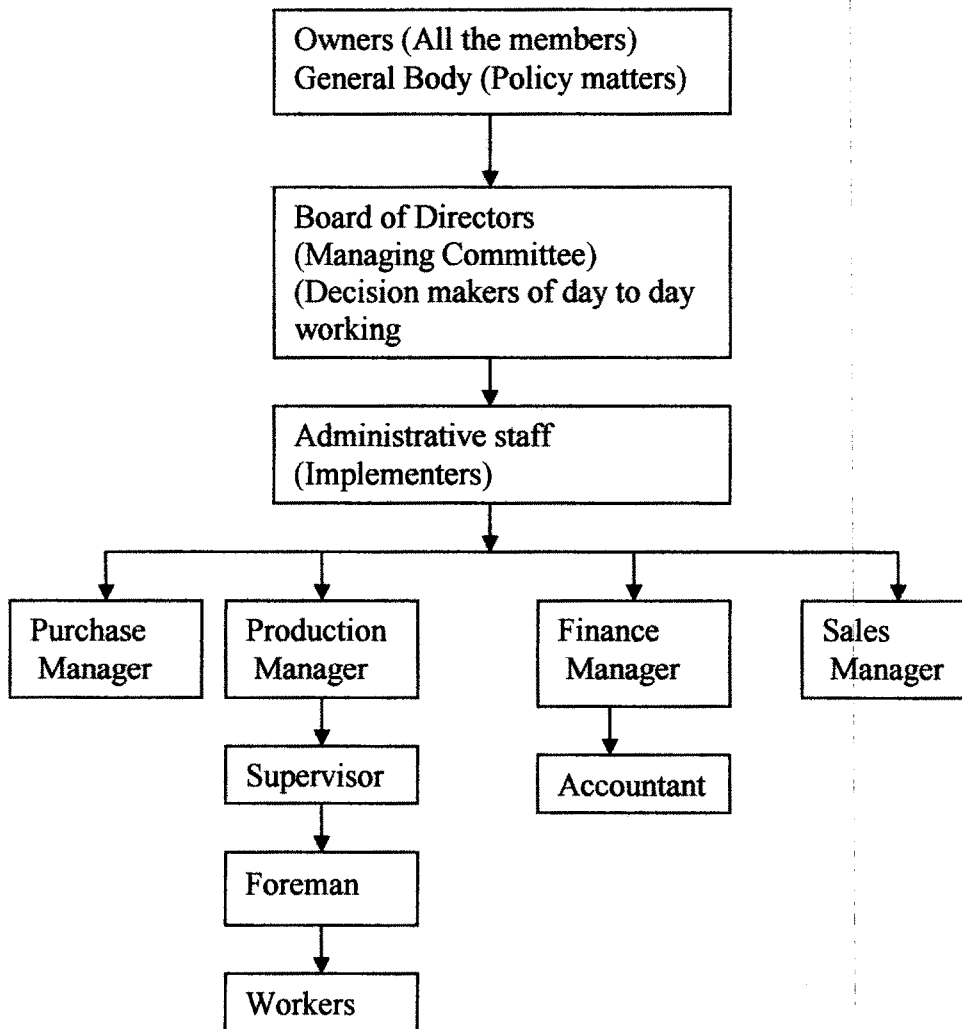
### 2.5.4 CO-OPERATIVE ORGANISATION:-

In foundry industry, another mode of organization which is very old that is co-operative society.

Co-operative organization means, it is a voluntary association of persons on the basis of equality formed for the promotion of their common interest. It is an attempt of the weaker section of the society, to join hands in order to protect their interest from the economically stronger section of the society. All members are treated equally and enjoy equal powers because there is principle of co-operative, that is one member one vote.

There are one foundry industry in co-operative form of business organization this is. It is 6.66% of total foundry industries in Palus area.

### **ORGANIZATIONAL STRUCTURE OF CO-OPERATIVE FOUNDRY INDUSTRY**



## 2.6 NATURE OF FOUNDRY INDUSTRY:-

The need industrial in sector was recognized after the independence and Govt. of India introduced its first industrial policy in 1948 and actual development was initiated during the planned economy. In the second five year plan the first foundry industry established in the year 1959. Afterward the real development of foundry industry took place after 1991 on continuous basis.

Year wise establishment of foundry industries in the following table in the five year plan.

**TABLE NO. 2.4**  
**YEAR WISE ESTABLISHMENT OFFOUNDRIES**

Year	No. of Units	Percentage
1956-1961	1	6.7
1961-1966	-	-
1967-1972	-	-
1972-1977	-	-
1977-1982	1	6.7
1982-1987	1	6.7
1987-1992	1	6.7
1992-1997	2	13.3
1997-2001	3	20.0
2001-2006	4	26.6
After 2006	2	13.3
Total	15	100%

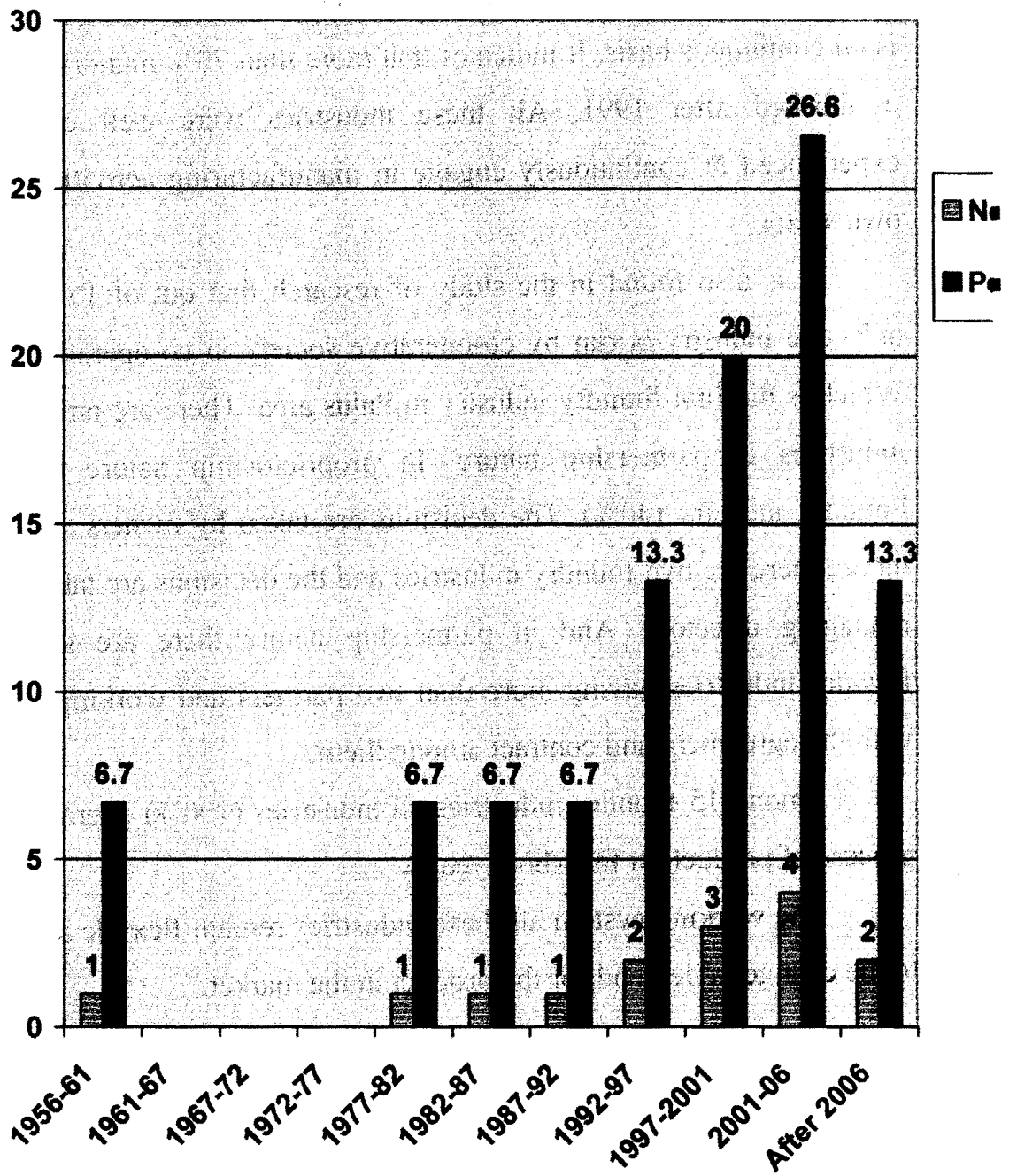
The table no. 2.4 shows the various foundry industries established during the plan period. Since 1992 the establishment of foundry industry is on continuous basis. It indicates that more than 70% foundry industrial established after 1991. All these industries were well established, experienced & continuously engage in manufacturing activities in their own sector.

It is also found in the study of research that out of 15 industries only one industry is run by co-operative society in co-operative sector. Which is the first foundry industry in Palus area. There are only foundry industries in partnership nature. In proprietorship nature there six. Foundry industry (40%). The decisions are taken by owners. In Private nature there are two foundry industries and the decisions are taken by the managing directors. And in partnership nature there are six (40%) foundry industries having more than two partners and working together with the agreement and contract among them.

Among 15 foundry industries all industries (100%) operating their process of production for whole year

The working system all these industries remain flexible according to the change in demand for the product in the market.

## YEAR WISE ESTABLISHMENT



### 2.6.1 OWNERSHIPWISE FOUNDRY INDUSTRIES:-

After classifying the 15 foundries on the basis of ownership we found following situation of foundries which is shown in Table No. 2.5

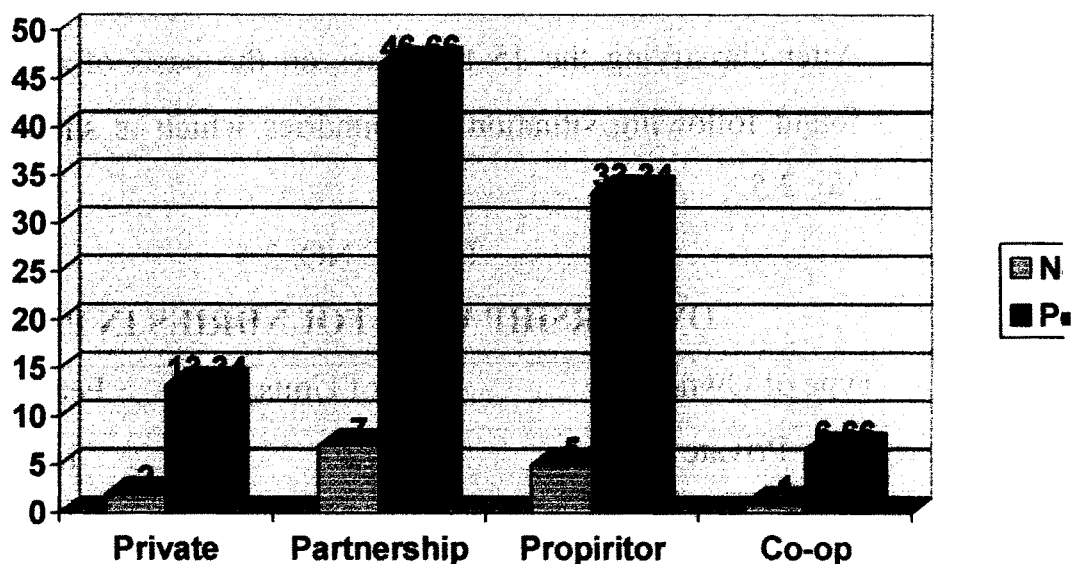
TABLE NO. 2.5

#### OWNERSHIP WISE FOUNDRIES IN PALUS.

Type of Ownership	No. of Units	Percentage
Private	2	13.34%
Partnership	7	46.66%
Proprietorship	5	33.34%
Co-operative	1	6.66%
Total	15	100%

Out of 15 industries 13.34% industries are working in private sector. They are controlled. Managed by an owners of the company and they also act as a Board of Directors, managers of the company. We also found that there are 46.66% industries are in partnerships firm & also 33.34% in sole trading concern. There is only one industry 6.66% operates in co-operative sector which is the first and very old foundry established by the some workers of Kirloskar Brothers Ltd.

## OWNERSHIP WISE FOUNDRIS IN PALUS AREA



### 2.6.2 OWNERSHIP WISE REGISTRATION OF FOUNDRIES:-

Registration of units under Industrial act is indispensable since 1948. accordingly almost all industries have registered their units under District Industrial Centre(DIC). The ownership wise registration is shown in the table no. 2.6.

**TABLE NO. 2.6**

#### OWNERSHIP WISE REGISTERED UNITS

Type of Ownership	Registered with DIC	No. of Units
Private Company	2	2
Partnership Firm	7	7
Proprietorship	5	5
Co-operative	1	1
<b>Total</b>	<b>15</b>	<b>15</b>

Above table shows that all 15 industries registered with DIC. That is 2 (13.34%) private company, 7 (46.66%) partnership firms, 5 (33.34%) proprietorship & 1 (6.64%) co-operative company. All types of industries that are Private Company, Partnership Firm, Proprietorship are registered with DIC Sangli. Only one co-operative type foundry industry registered with DIC Satara. Because that time Sangli District was not established as a separate district. That is foundry in co-operative form.



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