# Chapter No.

# 1

# INTO THE SUBJECT

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## 1.1 Introduction:-

Small scale industries may sound small but actually play a very important part in the overall growth of an economy. Small scale industries can be characterized by the unique feature of labour intensiveness. The total number of people employed in this industry has been calculated to be near about one crore and ninety lakhs in India, the mian proponents of small scale industries.

The importance of this industry increases manifold due to the immense employment generating potential. The countries which are characterized by unemployment problems especially put emphasis on the model of small scale industries. It has been observed that Indian continent have gone long strides in this field.

This industry is especially specialized in the production of consumer communication. Small scale industries can be characterized with the special feature or adopting the labour intensive approach for commodity production of goods. The main advantage of such a process lies in the absorption of the surplus amount of labour in the economy that was not being absorbed by the large and capital intensive industries. This, in turn, helps the system in scaling down the extend of unemployment as well as poverty.

It has been empirically proved all over the world that small scale industries are useful in distributing national income in more efficient and equitable manner among the various participant in the process of good production than their medium or larger counter parts. Small scale industries help the economy in promoting balanced development of industries across all the regions of the economy.

This industry helps the various sections of the society to hone their skills required for entrepreneurship. Small scale industries act as an essential medium for the efficient utilization of the skills as well as resources available locally.

The village a small scale industries (VSI) is divided into eight sub sectors namely khadi village industries, handlooms, sericulture, handcrafts coir, small scale industries and powerloom industry while the last two represents the modem small industries, the other six sub sectors constitute traditional industries.

Modem small scale industries and powerloms use modem technologies and are mostly urban oriented usually generating full time employment and regular comparatively faster growth whereas traditional industries are mostly rural and semi-urban in character which sustain & create employment opportunities (both part time & full time), increase income generation and preserve art heritage of the country.

Small scale industries are more labour intensive. They also ensure better distribution of wealth & power. As a result state and central governments have given maximum encouragement to the development of village and small scale industries to overcome the problem of unemployment and increase production.

The powerloom industry is basically a small scale industry mostly situated in urban and semi-urban areas of our country. The meaning of powerloom industry can be explained by following definition;

**Powerloom industry: -** "Powerloom industry means the industry that undertakes the weaving of the cloth by the help of powerlooms. This industry is concerned mainly with the production or manufacturing of cloth"

- **Some of the important concepts regarding powerloom industry:-**

**1) Power:** - Energy or force that can be used to do work operated by mechanical power not by hand labours.

**2) Loom: -** Machine for weaving cloth.

**3) Powerloom:-**Powerloom is mechanical power weaving cloth operated by mechanical power.

**4) Powerloom worker**:-A Worker in powerloom industry is one who does the work of weaving as powerlooms 50 % or more than that within the year is called powerloom worker.

Powerloom units are very small and managed by owners themselves, in majority of cases. It is more or less like a family business for most of the units and thus lacks professionalism in management. Profit making and competing with the neighbors seems the main motto, which imparts short sighted vision to the powerloom sector.

Due to small size (i.e. about 10to 50 looms per unit), these decentralized units lack in professionally qualified staff for production and management. The manpower population in a unit of 20 looms could be about 8-10 operators with one

among them being senior and experienced master craftsman while others are less skilled. In case of problems arising during working of the machines, they have to depend on their problems for these operators as well as the master and faster craft man of powerloom units. The existing human resource has thus to be prepared to suit need the future. Powerloom industry occupies a significant place in the industrial economy of our country. The products of powerloom add colors and diversity in our daily lives, besides presenting regional designs and textures learnt the first lessons of industrialization with the growth of powerloom sector. The economic betterment brought about by the growth of powerloom has transformed small and insignificant villages into busy commercial centers.

But the powerloom industry in our country is expending in size but not in quality. Powerloom industry provides ready work to all those who are ready to work. But the industry has failed to improve the standard of living of the People employed .It is observed that labour is the most neglected factors in powerloom industry in our country, the working conditions have given birth to number of labour problems such as absenteeism, high labour turnover, late attendance and so on. In almost all powerloom owners do not pay any attention towards these workers. Majority of powerloom workers are required to work for 12 hours in a day. The working conditions are totally unsatisfactory. The powerloom workers in Vita do not get wages according to the Minimum Wages Act. Therefore present chapter deals with various aspects of powerloom industry and work environment in Vita. The present chapter is divided into two parts i.e. powerloom industry and work environment.

## 1.2 Powerloom industry in India:-

### 1.2.1 Evolution of weaving looms:

History of weaving looms can be traced back to 17th century. The first powerloom was invented by Edmund Cartwright in 1985. Originally Powerlooms were without shuttle and they were very slow. But as the industrial demands for faster production accelerate, faster looms without shuttle came in use in early part of 20$^{th}$ century. As developments and innovations take place, various types of looms were developed for faster production. Today, Air-jet, Water-jet, Rapier and

other computer operated looms are used to maximize production of special materials.

Though weaving is one of the important sectors for Indian textile industry it has not been given due attention like spinning sector. Moreover structure of the industry plays a major role in making it competitive. Nature of this sector is mainly unorganized. The sector consists of fragmented, small and often, un- registered units that invest low amount in technology and practices especially in the Powerloom, Processing, handloom and knits.

India has world's largest installed base for looms. There are approximately 5mn looms in the country. India has 1.8mn shuttle looms which is 45% of world capacity, and 3.90mn Handlooms which is 85% of world capacity.

The Powerloom sector produces more than 60% of cloth in India and textile ministry's says that more than 60% of the country's cloth exports originated from that sector. With its employment of 4.86mn workers, the powerlooms sector comprised approximately 60% of total textile industry employment.

As per textile ministry of India up till March 31, 2006, the powerlooms sector – which produces various cloth products, including grige and processed fabrics – consisted of 4,30,000 units with 1.94mn powerlooms the ministry projected the number of powerloom to rise to 1.95mn in 2006-07.

But modernization in looms is less and Indian industry still lags significantly behind US, China, Europe, Taiwan etc. Most of the looms we have currently in country are shuttle-fess. There are less than 15,000 modem looms, whereas traditional looms are in large numbers. Value addition and the manufacturing of fabrics according to customers compliances is not due to obsolete technology of looms

Shuttle less weaving looms are up to three times more sufficient than shuttle looms, but the penetration of modem shuttle less looms is very less. In 2001 there were some 27,000 shuttle less cotton looms in Indonesia, 21,000 in Thailand 10,000 in India. In world share of shuttle less looms India ranked 9$^{th}$.

In the country, there are over 17 lakh powerlooms. Among the major powerlooms units located in states are, Gujarat, Madhya Pradesh, Tamil Nadu, Uttar Pradesh and Maharashtra. Maharashtra accounts for around 7, 50,000 alone. The major powerloom clusters located in Maharashtra are, Solapur, Bhiwandi, Malegaon, Ichalkaranji and Nagpur region.

Meanwhile, more than 50 percent powerlooms have already downed shutters in bhiwandi, Some in Malegaon, and Solapur towns in Maharashtra and Kumarpalayam in Tamil Nadu.

### 1.2.2 Production Pattern in Powerloom Sector:

The Production pattern of some of the important powerloom centers in the country is as follows:

| Name of Powerlooms Centre | Type of Fabrics Produced | Estimated Looms |
|---|---|---|
| Surat | Nylon, Polyester/Viscose Filament Sarees, Dress | 3,50,000 |
| Ahmedabad | Sheeting, Long Cloth Poplin from cotton and | 30,000 |
| Ichalkaranji | Cotton dhoti, cambric and Poplin | 55.000 |
| Malegaon | Cotton grey sarees, poplin Cambric, Polyester/cotton | 60,000 |
| Solapur | Turkish towels/cotton Sheeting | 55,000 |
| Bhiwadi | Mulls, cambric, Dress Material, polyester | 4,50,000 |
| Bhilwara | Polyester /viscose suiting/shirting and cotton | 40,000 |
| Burhanpur | Cotton/grey fabric suiting Poplin, Cotton, dhotis/ | 40,000 |
| Salem/Erode | Cotton grey suiting, dyed/checked fabrics | 1,75,000 |
| Kampur | Dyed and heavy canvas Dosuti | 20,000 |
| Amritsar | Blankets, shawls, lohis twills. | 35,000 |

### 1.2.3 Exports by Powerloom Sector:

Export of textile to quota countries is governed, at present, under the agreement on textile & clothing (ATC) provisions. In order to achieve maximum utilization of the available export quotas, Ministry of textiles, Governments of

India issues the notification for each quota every year and distributes the annual quota level under different segments. Powerloom Exports Entitlement (PEE) Quota Systems is one of the systems of textile export quotas, such as past performance Entitlement (PEE), Manufacturers Exporters Entitlement (MEE), Ready Goods Exports Entitlement (RGE), Non Quota Exports Entitlement (NQE) etc. PEE Quota system was first introduces n 1992 for export by the powerloom holder under decentralized sector with reservation of 3% of annual export quota levels. The present criteria for allotment of PEE quota is the holding of minimum 12 powerloom by the applicant by himself and his family members in the same villages, town or city. With the increased demand for higher reservation of PEE Quota from the powerloom sector, the government further increased the percentage share for allocation of quota under this segment to 10% of the annual level from 1996 onwards. Guidelines for deciding the eligibility of PEE Quotes are issued by the Office of the textile Commissioner every year .What :s worth Mentioning here is that export performance of PEE Quota exporter is cour.ted in the following year toward Past performance Entitlement (PEE) and he can again apply for PEE Quota. The incremental Quota Entitlement help the small powerloom exporters to build up larger quota Entitlement and the profits therefore will help them modernize their units.

**1.2.4 Existing Technology level and challenges in Powerlooms industry in India:**

In spite of the basic strength, i.e. having a strong fiber and production base, the Indian textile industry has not been able to increase its share in the global market for textiles and clothing beyond 2.5%. This is mainly due to outdated technology that is used primarily in the weaving and processing sectors. The woeful lack of modernization is most visible in the powerloom sector, which accounts for a major portion of cloth produced in the country. Most of the looms installed in the country are low speed shuttle looms. While India may boast of the largest loom age do not permit high capacity utilization and production of defect-free quality fabric. Most of the mills have outlived their utility and normal life. Most of the looms in the country that come under the powerloom sector are more than 20 year old and more than 75 % of those are conventional type without any extra attachment such as weft shop motion, wrap stop motion, weft pick motion, weft realer etc. requited for producing fault-free fabric at higher efficiency.

The Indian loom industry is small scale unlike industry of china and Taiwan and therefore incurs high co-ordination cost. Higher power tariffs are also one of the biggest challenges this industry is facing. Unlike spinning industry weaving loom sector is mostly concentrated in small areas of nations, where fluctuation is a matter of routine. Productivity also gets affected time to time by fluctuation in power in such areas.

Through technology Up- gradation Scheme (TUFS) Governments is trying to modernize these sectors and make import of latest technology looms easier and affordable. Still India lags behind in productivity due to outdate technology and low penetration of shuttle less looms.

Advance technology installation demand skilled labour to understand and install such facilities, shortage of skill labour is also a roadblock in adaptation of new technology in weaving looms industry.

## 1.3 Powerloom industry in Maharashtra:-

Maharashtra has a flourishing economy which is based on the edifice of a strong infrastructure. The state has a sound economic and social infrastructure. The economic infrastructure includes the roads, airports, railways, ports, telecom and power. Education and training and health services are included in the social infrastructure.

Maharashtra accounts for about 17 percent of the foreign direct investment that is received by the country and 13 percent of the national industrial output. The state's favorable economic policies of 1970s have flourished the business and economy of Maharashtra, thereby making it the leading industrial state of the country. 46 percent of the gross domestic product of Maharashtra is contributed by the industry. The state governments have also contributed to the development of the economy and Infrastructure. But despite being a highly industrialized state, agriculture is the main occupation of the people of Maharashtra. Approximately 64 percent of the labour force of Maharashtra is employed in agriculture. The two main industries in Maharashtra are textiles and sugar. Textile industry includes powerloom industry. In Maharashtra Ichalkaranji and Malegaon are two important centers of powerloom industry because out of total production of grey cloth, 45%

production arises from these cities. The situation of powerloom industries in these cities is described as follows;

- **Industry in Ichalkaranji:**

Ichalkaranji is a hub for Indian textile industry. Ichalkaranji is the fastest growing industrial area in western Maharashtra. According to one study Annual turnover of Ichalkaranji is around Rs.15000 Crore. (3 BillionUSD).

Earlier, Ichalkaranji was famous for fabrics. Dhotis & sarees, but now, Ichalkaranji produces not only cotton but also suiting, Shirting, denim cloth, Ichalkaranji is equipped with approximately 1.5 lacs of powerlooms and 50,000 semi –auto looms and 8000, most modern fabric weaving machines. Approximately 15000000 Meters. of fabric is made every day. . There are 7 yarn spinning mills as well & 5 sugar factory in Ichalkaranji. The textile industrialization has also led the region in becoming one of the polluted areas in India.

- **Industry in Malegaon:**

Malegaon was a traditional handloom-weaving centre in Maharashtra. The area of powerlooms in Malegaon emerged after 1935. Earlier weaving was on handlooms. Most of the Preparatory work before weaving like starching the yarn, transferring it over the tubes, preparing tanabana was done by the women. Even after powerlooms were introduced, women continued to help their men folk in the weaving procedure.

With the introduction of powerlooms, the cloth industry in Malegaon flourished due to increased productivity. Many people brought powerlooms and very few were left with handlooms.

- **Challenges of powerloom industry in Maharashtra:**

With a cumulative turnover of Rs 20,000 crore, town ships of powerloom industries are today starting at an employee shortage as high as 50%, as demand picks up and migrant labours. Since September 2009, about 4lacs skilled workers have left the state, due to global economic crisis that hit textile manufacturing, before September, the total workforce stood at 12 lack .Today, at most locations, the looms are running only one shift of twelve hours for want of staff.

Bhiwandi, which alone contribute nearly 40% of the national production from loom sector and supports over 15 lakh families, is witnessing a fall in production by 20% purely for want of labour. It produces 420 lakh meters per day from seven lakh looms ranging from grey, printed fabric, dyred fabric, and cotton fabric to various mixes of cotton, synthetic, and other fibers.

To deliver the orders on time has become a major challenge. Merchants delay the payment if we slip on delivery. The industry was affected due to power shortage resulting long hours of load-shedding at some places even 10-12 hours a day. The decentralized manufacturing sector, with around 12 lakh powerlooms, contributes to 20% of the country's textile production.

## 1.4 Profile of Powerloom Industry in Vita:-

### 1. 4.1 Location and historical background of Vita:

Vita is one of the important cities in sangli District. It is situated 55 Km. away from the district place i.e. sangli. The town lies in slight depression; a bit of rolling ground dividing the Vita from Yerala River. Vita has nagar parishad which was established in 1984.Vita city has rich social & industrial background. Vita is tehsil territory .The population of Vita is 45748 (year 2009).Vita has long historical background. This city is famous for the business of goldsmith. The city has achieved dominant place in the industrial development of sangli district. The city is known mainly for powerloom industry and poultry farming. The famous revansiddth temple is 9 km away from Vita. The city has attached with atpadi, kadegaon, tasgaon & khatav taluka. The progress of city is awesome. The educational development of city is also satisfactory. There are total 5 colleges in Vita, one of which is engineering college. .

### 1.4.2 Growth of powerloom industry in Vita

Vita is becoming nowadays a hub of textile industry in sangli district. There is no authentic record to show when weaving of cloth started in Vita city. At the beginning the weaving process was done on 'Dabra loom'. This was traditional method of weaving cloth and such looms were used in Vita for weaving cloth upto 1940. Mr. Eknath Mahadev Rokade was the first person who installed first pair of handloom. These looms were superior than 'Dabra looms'. The coloured sarees were manufactured on these handlooms. Mr .Kalu Mhetre brought the first pair of

powerloom in Vita in 1949. This was beginning of powerloom industry in Vita. Due to unavailability of electric power, these looms were started on diesel engine. After successful entry of these powerlooms, the tendency of installing powerlooms was increased. After that growth of powerloom sector took up new height. Vita is the fastest growing industrial area in sangli district and is on the way of becoming second most dominating area in powerloom industry after Ichalkaranji.

Earlier Vita was famous for cotton fabrics and dhotis but now, Vita produces not only cotton cloths but also suiting& shirting .In 2008 MIDC was established in Karve near Vita city in which many entrepreneurs took step for installation of auto loom shed. This new era gave the shape of modernization to powerloom industry in Vita. At present there are approximately 6300 powerloom employing more than 1500 workers. There are 8 sizing units industry in Vita. Growth of powerloom industry in Vita can be seen from following table:

**Table no.1.1- Growth of powerloom industry in Vita city**

| Year | No. of powerlooms |
|---|---|
| 1970 | 815 |
| 1975 | 1066 |
| 1980 | 1640 |
| 1985 | 2500 |
| 1990 | 3115 |
| 1995 | 3990 |
| 2000 | 4720 |
| 2005 | 5840 |
| 2010 | 6300 |

Thus above table shows that powerloom industry in Vita has in the take off stage of development of this sector.

**1.4.3 Reasons for growth of powerloom industry in Vita**

There are various reasons of growth of powerloom industry in Vita. Especially in recent decade, this industry experienced a tremendous growth. The environment conducive for growth of powerloom industry can be explained by following points;

**1. Banking Facilities:**

Finance is lifeblood of any industry. Finance is required for various activities in industry. Powerloom industry requires finance for long term and short term purpose. The capital required by this industry is of two types, i.e. fixed capital and working capital. Fixed capital is required for installatiton of powerloom shed, purchase of powerlooms and other machines etc. while working capital is required for purchase of yarn, payment of wages of workers and other regular expences. In Vita city banking facilities are in adequate number. Various banks in Vita city are providing required finance for powerloom industry. Following banks are functioning in Vita city;

1) State Bank of India, Vita branch
2) Bank of India
3) Bank of Maharashtra
4) Sangli District Central Co-operative Bank Ltd.
5) Sangli Urban Bank Ltd.
6) Vita Merchants Co –operative Bank Ltd.
7) Choundeshwars Co-operative Bank Ltd.
8) Vita Urban Co-operative Bank Ltd.
9) IDBI bank

In addition to these Banks a large number of Pat-Sansthas and Money-lenders are providing finance to powerloon industry in Vita. But among these the role of Vita merchant co-operative Bank is very important in financing powerloom industry in Vita.

**2. Marketing of finished Cloth:**

A grey cloth is produced on the powerloom in Vita which is generally in raw process and requires further processing like dying, colorings etc. But as these facilities are not available in Vita, the produced grey cloth is sold to the merchants who are dealing in grey cloth business. There are few merchants who purchase all produced grey cloth from the owners of powerloom units. Majority of production is sold to merchants in Ichalkaranji city. The cloth is sold to merchants through brokers. It means that there is easy availability of marketing of grey cloth in Vita.

**3. Climate:**

Necessary climate is also available in Vita for weaving the cloths.

**4. Ownership & Management:**

The researcher observed that almost all units consists of ownership of different units under the same shed is in the name of one family member. Thus a joint family is the owner of all these units under one shed.

The researcher also observed that the powerloom units under the same shed are owned and managed by the same family. No separate accountant, manager or supervisor was appointed to manage the business of powerloom units. Different members of the same family work in almost all capacities such as manager. accountant, supervisor and even as a worker. Yong and old members of the outsiders are employed as workers.

**5. Electricity and water:**

M.S.E.B has provided electricity services to the powerloom unit. Water is also ample in Vita. However there is shortage of electricity supply. Nowadays this industry is suffering from problem of load-shading. In Vita there is absence of electricity for 5-6 hours daily. High load- shading is responsible for lower production. As a result the fixed cost of production increases.

**6. Labour Supply:**

Labour is the most crucial factor in powerloom destroy. Labour is the base of formation of any powerloom Unit. However there is very significant problem of labour shortage in powerloom industry in Vita city. Majority of workers in powerlooms industry in Vita are from village near from Vita. According to these workers, it is side business for them because they are not totally depending on work of this industry. They firstly concentrate on their main occupation i.e. Farming and the rest time is used for earning extra money from powerloom industry.

There are various reasons for labour shortage in this industry such as, bad working conditions, low wages, and poor social status of such worker, improper treatment from their owners etc. But among these low wages and bad working conditions are main reasons for labour shortage. In addition to this, there is huge difference of wage rate between Vita city and Ichalkaranji city. The workers in

Ichalkaranji get higher wages than worker in Vita city. This is also important reason of dissatisfaction of powerloom worker in Vita. There is also tendency of absenteeism and turnover among the workers in Vita. The worker prefers to work in powerloom shed where they get attractive drawing facility. This tendency of worker has increased practices of offering attractive drawing facility among powerloom owners. However this is possible for powerloom owner who have strong financial background. The owners who have weak financial background cannot afford to pay such amount of drawing to labours and thus they face the problem of labour shortage.

All these facts reveal that labour is most important factor for survival of this industry but this industry is facing problem of labour shortage. However if proper measures are taken, it will be possible to overcome such problem. Hence it is required to have proper work environment in this industry in Vita.

**7. Co- operative Societies of Powerloom industry in Vita:**

A number of Co-Operative Societies and Banks are busy in helping the powerloom sector. They are trying to extent the boundries of the business. In Vita there are following Co-Operative Societies working namely;

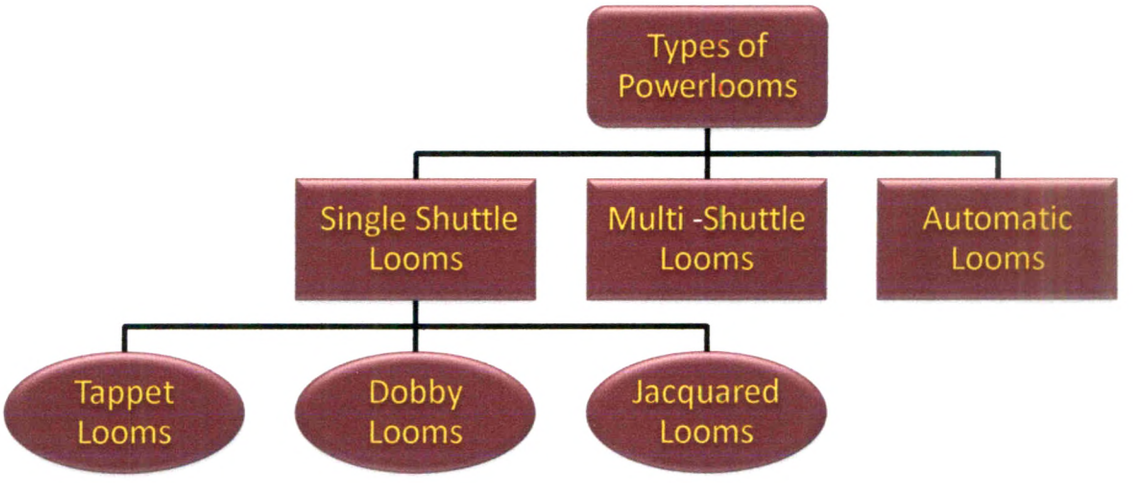
1. Vita Yantrmag Aoudhyogic Sahkari Sangh Ltd.
2. Anil yantrmag sangh
3. Kranti Vinkar utpadak Sahkari Sanstha Vita.

All above mentioned societies are established by powerloom owner except Kranti Vinkar utpadak Sanstha. Kranti Vinkar is the socialism oriented, because all the labour who are working at santha's loom must be shareholder. At present Vita Yantrmag Society, Anil yantramag sangh & Kranti Vinkar Society are leading societies in Vita City. Especially Vita Yantrmag Society has very bright future because of their well planning and working efficiency and their attitude toward the job. This Sangh is today's leading society in Vita. It was established in 28$^{st}$ oct. 1971 having 1660 members. Maximum members are the powerloom owners. There is no certainty in price of yam at market due to these uncertainty or price fluctuations which are harmful to owner of looms and society also. Society provides yarn to members but does not purchase produced cloth. Such produced cloth is sold at various convenient market places.

## 1.5 CLASSIFICATION OF POWERLOOMS:

Powerlooms may be classified into three types namely, (A) Single Shuttle Loom (B) Multi Shuttle Looms and (c) Automatic Looms. These looms and their sub-types are discussed as follows;

**Chart No. 1.1 -Classification of Powerloom**




**A) Single Shuttle Looms:**

This is type of powerloom in which there is only one shuttle box at each end. It is used for weaving unicolour weft cloth. There are two types of single shuttle looms i.e. one with under picking system and other with over picking system. Single shuttle looms can be further classified as i) Tappet looms ii) Dobby looms and iii) Jacquard looms

**i) Tappet looms:**

Tappet Looms are so named by reason of the mechanism employed to control the healds. This class includes the plain loom fitted with inside tappets to from two to eight heald shafts, or with outside tappets to accommodate up to twelve shafts. The latter type of loom is often styled the Branford tappet loom, as it is largely used in that other district. The plain loom fitted with the woodcraft and other styles of tapped is also included in this class. Many tappet looms are mounted with boxes, usually circulars boxed, at one or both sides. Generally speaking, such looms are employed to weave calico, plain dress goods, Hinges plain coatings, serge's, Melton's, beavers- in short, any class of fabric which does not require a

large number of healds, and in which the weave is complete on not more than 12 picks.

**ii) Dobby Loom:**

A dobby loom is a type of floor loom that controls the whole warp threads using device called a dobby. Dobby is short for "draw boy" which refers to the weaver's helpers who used to control the wrap threads by pulling on draw threads

A Dobby loom is an alternative to a treadle loom. Each of them is a floor loom in which every warp threads on the loom is attached to a single shaft using a device called heddle. A Shaft is sometimes known as a harness, but this terminology is becoming obsolete among active weavers. Each shaft controls a set of threads. Raising or lowering several shafts at the same time gives a huge variety of possible gaps or 'sheds' through which the shuttle containing the weft threads can be thrown.

A manual dobby uses a chain of bars or lags each of which has pegs inserted to select the shafts to be moved. A computer assisted dobby loom uses a set of solenoids or other electronic devices to select the shafts. Activation of these solenoids is under the control of a computer program. In either case the selected shafts are raised or lowered by either leg power on a dobby pedal or electronic or other power sources. On a treadle loom each foot-operated treadle is connected by a linkage called a tie –up to one or more shafts. More than one treadle can operate a single shaft. The tie-up consists of cords or similar mechanical linkages tying the treadles to the lams that actually lift or lower the shafts.

Another Advantage to a dobby loom is the ability to handle much longer sequences in the pattern. A weaver working on a treadle loom must remember the entire sequence of tread lings that make up the pattern, and must keep track of where they are in the sequence at all times. Getting lost or making a mistake can ruin the cloth being woven. On a manual dobby the sequence that makes a makes up the pattern is represented by the chain of dobby bars. The length of the sequence is limited by the length of the dobby chain. This can easily be several hundred dobby bars, although an average dobby chain will have approximately fifty bars.

**iii) Jacquard Loom:**

The jacquard Loom is a mechanical loom invented by Joseph Marie Jacquard in 1801, that simplifies the process of manufacturing textiles with

complex patterns such as brocade, damask. and matelasse. The loom is controlled by punched card with punched holes, each row which corresponds to one row of the design. Multiple rows of holes are punched on each card and the many cards that compose the design of the textile are strung together in order. It is based on earlier inventions by the Frenchmen Basile Bouchen (1725), Jean Baptiste Falcon (1728) and the Jacques Vaucanson (1740).

Each hole in the card corresponds to a "Bolus" hook, which can either be up or down. The hook raises or lowers the harness, which carries and guides the warp thread so that the wefts either lie above or below it. The sequence of raised and lowered threads of threads, allowing more than one repeat of a pattern. A loom with a 400- hook head might have four threads connected to each hook, resulting in a fabric that is 1600 wrap ends wide for repeats of the weave going across.

The term "Jacquard loom" is a misnomer. It is the "Jacquard head" that adapts to a great many dobby looms such as the "Dornier" brand that allow the weaving machine to them create the intricate patterns often in Jacquard weaving.

Jacquard looms, whilst relatively common in the textile industry, are not as ubiquitous as dobby looms which are usually faster and much cheaper to operate. However unlike Jacquard looms they are not capable of producing so many different weaves from one punched card, and can have thousands of hooks.

The Jacquard loom was the first machine to use punched cards to control a sequence of operations. Although it did no computation based on them, it is considered an important step in the history of computing hardware. The ability to change the pattern of the looms weave by simply changing cards was an important conceptual precursor to the development of computer programming, especially; Charles Babbage planned to use cards to store programs in his Analytical engine.

**B) Multi-Shuttle looms:**

Multi box motion is applied to the loom when yarn is to be variously wefted i.e. check cloth a proper mixing of the weft yarn is to be achieved. There are two types of multi box motions i.e. a) Rising or Falling box type and b) Circular box type.

**C) Automatic looms:**

These types of looms are modern versions of powerlooms. In this type of looms the proportion of the weft replacement in the exhausted shuttle and the threading of the shuttle are done by the machine itself automatically. To make the

loom more versatile, it is also provided with automatic left off motion, warp stop motion, improved cloth roller system with dofting arrangement when the loom is running. These looms can be classified into a) cop bobbin charging b) shuttle changing and c) shuttle less loom

## 1.6 Processes in Powerloom Operations:

The major components of the loom are the wrap beam, heddles, harnesses, shuttle, reed and take-up roll. In the loom, yarn processing includes shedding, picking, battening and taking –up operations. These processes are explained by following graph;

**Chart No. 1.2 Processes in Powerloom Operations**


**1) Shedding:**

Shedding is the raising of the wrap yarns to form a shed through which the filling yarn, carried by the shuttle, can be inserted. The shed is the vertical space between the raised and upraised wrap yarns. On the modern loom, simple and intricate shedding operations are performed automatically by the heddle or healed frame, also known as a harness. This is a rectangular frame to which a series of wires called heddle or healds, are attached. The yarns are determines which harness controls which wrap yarns, and the number of controlling the headdles are dobbies and a jacquard head.

**2) Picking:**

As the harnesses raise the heddle or healds, which raise the wrap yarns, the shed is created the filling yarn is inserted through the shed by a small carrier device called a shuttle. The Shuttle is normally pointed at each end to allow passage through the shed. In a traditional shuttle loom, the filling yarn is wound on to a quill, which in turn is mounted in the shuttle. The filling yarn emerges through a hole in the other is known as a pick. As the shuttle moves back and forth across the shed, it weaves an edge, or selvage, on each of the fabric to prevent the fabric from raveling.

**3) Battening:**

As the shuttle moves across the loom laying down the fill yarn, it also passes through openings in another frame called a reed ( which resembles a Comb),with each picking operation, the reed presses or battens each filling yarn against the portion of the fabric that has already been formed. The point where the fabric is formed is called the fell, conventional shuttle looms can operate at speeds of about 150 to 160 picks per minute.

**4) Taking –up:**

With each weaving operation, the newly constructed fabric must be wound on a cloth beam. This process is called taking –up. At the same time, the warp yarns must be left off or released from the wrap beams. To become fully automatic, a looms needs a filling stop motion which will break the loom, if the weft thread breaks.

For all this things happen, the yarn has to be prepared. The weft, or filling must be wound tightly on the correct size pirns, quills or bobbins, weaving happens at great speed so the yarn must be at the correct tension when it leaves the shuttle. The warp passes through the heddles which stretch it at each pick, and through the reeds which are abrasive. The warp is thus, that is coated with a mixture that can include china clay and flour, to give it extra strength and to act as a lubricant. It is dressed or wetted while passing through the loom. The warp, hundreds of ends of yarn rolled in parallel, comes on a wooden beam. Before weaving can commence each end must be passing through the heddles and reeds: a process known as looming. An automatic loom requires 0.125 hp to 0.5 to operate.

**In a nutshell.....**

The powerloom sector occupies a pivotal position in the Indian textile industry. Though current growth of the this sector has been restricted by technological obsolescence structure , low productivity and low-end quality products, in future technology would play a lead role in this sector and will improve quality and productivity levels.

Innovations would also be happening in this sector, as many developed countries would be innovating new generation machineries that are likely to have low manual interface and power cost. Indian textile industry should also turn into high technology mode to collect the scale operations and quality.

To reap benefits of these developments Indian Powerloom industry has to prepare itself for drastic technological changes and will have to focus on area such as technology up gradation, modernization of powerloom services centers and testing facilities: Clustering of facilities to achieve optimum levels of production: welfare schemes for ensuring a healthy and safe working environment for the workers in future.

## 1.7 Work Environment:-

### 1.7.1 Meaning and definition of work environment:

The committed employee is a valuable asset to the company as he contributes his maximum skill and knowledge, Further, the committed employee is loyal to the company in the process of maintaining human relations, the company provides congenial work environment to its employee. The organization has to create conducive environment at the work place to make him committed to the company. Work environment includes various internal and external factors which exist at the work place. These factors influence the employee's mind and body.

The work environment should match the requirements of plant and machinery in case of production requirement and job requirement, in case of other requirements in addition to the conveniences of the employee maximize the worker's efficiency and productivity.

Industrial psychologist, therefore suggest that the organizations should provide conducive work environment, in order to reduce employee's problem at work, annoyance, boredom, monotony, anxiety and fatigue

Work environment consists of **(i)** physical environment **(ii)** social environment **(iii)** Psychological environment. The term work environment can be understood by following definitions;

**Definitions:**

**1)** "The term work environment refers to working conditions. It refers to all of the conditions and factors that influence work. In general, these include physical, social, psychological and environmental conditions and factors. Work environment includes lighting, temperature, and noise factors, as well as the whole range of ergonomic influences. It also includes things like supervisory practices as well as reward and recognition programs. All of these things influence work."

2) "Work environment is a term used to describe the surrounding conditions under which an employee operates. The work environment can be composed of physical conditions such as office temperature or equipment such as personal computers. It may also be related to things such as work processes or procedure".

The work environment may also involve the social interactions at the workplace including interactions with peers, subordinates and managers. Generally, and within limits, employees are entitled to a work environment that is free from harassment.

**1.7.2 Importance of work environment in powerloom industry:**

The environment we work in can be quite important. In recent years, many studies have been done on things like lighting, sound, temperature and even the ergonomics of our desks and other work stations. While some employees just seem to be able to work anywhere and they have a high capacity for different work spaces, other is a bit more sensitive.

Employers may very well leave a pleasant, healthy work environment may not be enough to keep employees if they have other insensitive to leave but an unpleasant environment can certainly influence employee turnover rates. Solicit feedback from employees to determine if the work environment is indeed, drive them away. Management must achieve a positive work environment to motivate employees to a great degree so performance remains at an optical level, and aid in successful development. If the work environment is too cold to be conducive to productive work, or the furniture is rickety, equipment outmoded and inefficient or other details that make it difficult or unpleasant to get work done.

Making effort to ensure the work environment is as comfortable and conducive to productivity is time well spent on the part of an employer, however each environment might be different, but employees will respond well when the environment fits the work. An effective work environment is Vital to the success of small business and large corporations alike. When problems remain unsolved and rules never get implemented, the result can be an unproductive staff and a stable work environment. People working together with a common denominator will accomplish tasks with grater case and have higher expectations of themselves and their work. Work environment is essential no matter how many employees you have. It is management that foster the work at mashers of they are responsible to conducting things in a way that helps raise people's spirits. These are four basic

beliefs: a) Hope b) Trust c) Pleasure d) Opportunity. All this will to create a positive work environment.

Development of any economy is decided by industrial development. Especially various small scale industries contribute a lot of in increasing national income of the country. These industries also generate employment on large scale. Among small scale industries, powerloom industry is one of the important industries which are major among textile sector. Labour is the most important factor in this industry. However modern small scale industries and powerloom use modern technology and are urban oriented. Powerloom industry occupies a significant place in economy of Maharashtra state & other states i.e. UP, MP, Gujarat, and Tamilnadu etc. The products of powerloom add colors in our daily lives. The progress of powerloom industry depends upon the efficiency of labour which is affected by the work environment in this industry.

All the factors of work environment affect directly or indirectly on workers body and mind. Industrial psychologists therefore suggest that industries should provide conductive work environment in order to reduce employee's problem at work, annoyance and boredom, anxiety and fatigue. The importance of work environment lies in the factors of work environment for ex. physical work environment include noise, colour of walls & roofs, lighting, health & safety conditions etc. Social & psychological work environment includes group formation, communication etc. The importance of work environment in powerloom industry can be explained by following points;

**1) Reducing labour turnover:**

Labour is the most important factor in powerloom industry. However there is huge percentage of labour turnover in this industry due to bad working conditions in powerloom shed. Workers are reluctant to work in bad conditions. It also affect on their physical health. This fact leads them to move to such powerloom shed where physical conditions are satisfactory .Hence it is required for every powerloom owner to maintain physical conditions at proper level.

**2) Reducing labours absenteeism:**

There is also tendency of absenteeism among workers in powerloom industry. The basic reason is that they are not totally dependent on the work from this industry .It is their part time business. Another reason is that they do not get adequate wages as per minimum wages act. Hence they see this work as part time

work. This tendency of workers can be reduced by giving them adequate wages & satisfying their required wants and needs.

**3) Increasing job satisfaction:**

Majority of workers in these Industries are dissatisfied because of one or more reasons. These reasons are related to work environment .Every worker in this industry has to face problems related to their health, their social status & their psychological aspects. All these factors can be fulfilled at optimum level by providing them proper work environment.

**4) Increasing moral& production:**

Productivity of a worker in this industry can be improved by increasing their moral. Moral is the state of mind of worker. Moral affects their thinking power. It also leads them towards higher production & better quality of life. Morale is output of various factors of work environment for ex. Proper physical conditions, employer's friendly & Co-operative nature regarding workers, maintenance of health & safety measures, leadership style, owner's policy regarding group formation & trade unions etc. If the approach of owner towards these factors is positive then it will definitely leads towards high morale & high productivity of workers.

**5) Maintaining health of workers:**

Heath of workers is totally depended upon physical work environment in powerloom industry. Health is affected due to various factors such as; noise level, lighting, conditions, plant layout, and distance between two powerlooms, safety measures etc. If all these factors are considered by the owner, he can give the workers assurance regarding their health & safety measures in this industry.

**6) Sound industrial relations:**

It is necessary to have co-operative & friendly relation between powerloom workers & owners. Otherwise it leads towards conflict between them. This condition is responsible for bad industrial relation in powerloom industry. Often it is found that the owners exploit the workers, they pay less attention toward physical, mental & psychological health of workers. The workers are scolded by their owners in case of mistake. All these facts destroy healthy environment in powerloom industry. The worker's view and owners view are different. Workers want high wages, better conditions & word of praise. But owners are interested only in getting things done through their workers. They neglect worker's view. If

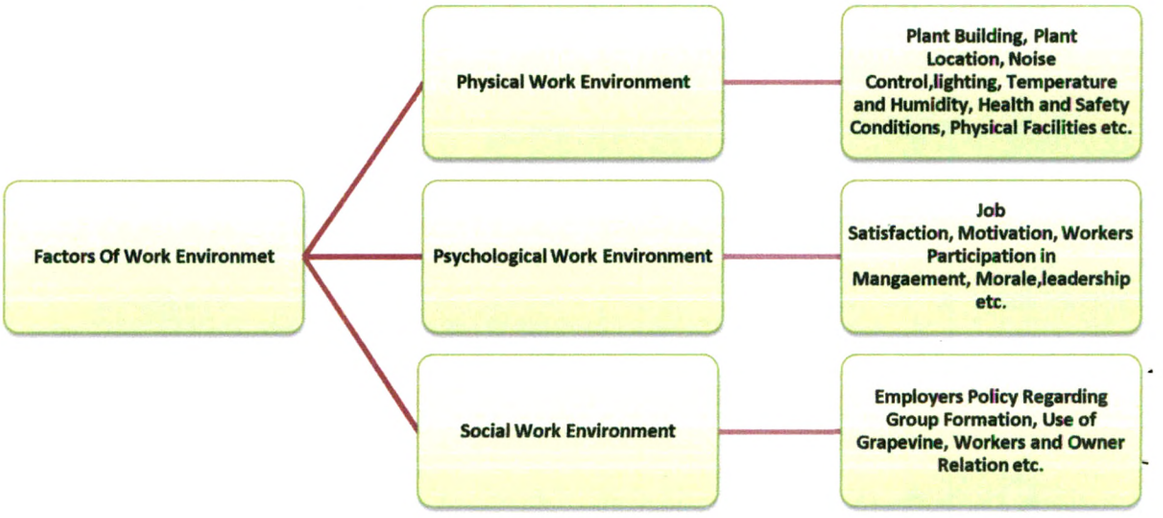
owner satisfy the workers need & want and pay attention toward the healthy work environment in this industry, there will less chances of strikes, morchas & hinders of sound industrial relation in this industry

In a nutshell, work environment is prime necessity of powerloom industry. Especially in Vita it is required to have healthy and conducive work environment for progress and development of this industry. If physical, social and psychological factors of work environment are properly attempted by the powerloom owner, then it can be definitely reduce the labour absenteeism and their turnover. It will also solve problem of labour shortage. As worker is base of this industry, it is required to satisfy the needs of workers at optimum level and providing them proper work environment.

### 1.7.3 Factors of Work Environments:

The factors of work environment may be classified in three categories i.e. 1) Physical environment 2) Social Environment & 3) Psychological environment. These main factors and sub-factors are described by following diagram;

**Chart No. 1.3 Factors of Work Environment**




- **Physical Work Environment:**

Physical Work environment consist of plant location, type of the building, ventilation, lighting, rest rooms, toilets, furniture, temperature, moisture, humidity, noise, colors of the walls, roof, passage, greenery etc. The physical

facilities of an industrial enterprise consist of the manufacturing and office buildings, surrounding premises, and the machines and equipment necessary to make, in the quantities desired, a product or a range of products.

**Factors of physical Work Equipment:**

**1. Plant locations:**

The decision on locating an industrial plant is frequently one that has a vital effect on the success or failure of the operation of that plant. Hence it should be based upon careful considerations of all factors pertinent to the business of the particular enterprise. The nature and emphasis of the factors in plant location vary among industries have changing technical and economic conditions. Some industries have tended to follow their markets in the location of their plants; other have located around the source of power; still others, have tended to seek the source of their raw materials. From time to time new or special factors have arisen to outweigh the usual consideration involved in plant location.

There are three steps in locating a plant. The first, the locations of the region or general area in which the plants is to be located. Once the general areas has been determined, the search for a plant site marrow to the second step, the selection of the particular community.

The third step is the selection of the exact plant site in the favored community. In the search for a site, the principal consideration is land. Is it ample in size, including room for expansion and for the parking of employee's vehicles? Is the topography right for the type of building desired, and are the soil content and drainage such as to provide the proper foundations?

The second factor in order of importance is very likely to be transportations. Is the potential site as readily accessible to rail, motor, water or air transportations as may be required? Can employees with and without automobiles conveniently reach the plant?

Then comes the miscellaneous factors pertaining to the sites surrounding. Will employees consider it a good place to work? Are there any building and zoning restrictions that would not permit the type of building planned?

A plant location today is generally a matter of costs tempered by circumstance. Actually, however, the decision as to plant location is not always based on reason. For, more times than management is willing to admit, corporate

or financial ties of the enterprise or personal, and whims of some top executive exercise the balance of power in this regard, and circumstance then takes precedence over cost.

**2. Plant Building:**

In selecting the plant building, decision must first be made between single-story building and the multistory building. Each has its advantages and disadvantages. These must be weighed with respect to the requirements of the particulars enterprise. The single-story structure, with its fewer columns and servicing equipment installed in overhead trusses, permits greater flexibility of plant layout. It provides for more uniform illumination, is easier to expand by simply moving a wall, gives greater floor-loading capacity with fewer vibrations, and requires lighter foundations. It permits easier handling and routing of materials and facilitates supervision. The multistory building makes more efficient use of land space and generally results in lower construction costs per squares foot of floor space and in lower heating costs. Vertically arranged productions areas are possible, which make for more compact layouts and permit the gravity flow of materials.

Once decision is made as to the type of building, its arrangement and position on the plant site must be considered. Drainage, parking, rail road siding, roadways, location of receiving and shipping docks, zoning restrictions, provision for future expansion, and appearance from adjoining highway and railroad lines are typical of the considerations involved in locating the building on its site. Industrial architects and construction engineers are usually called on to advice in this connection as well as in the design and construction of the building, so vital are these decisions to the future of the enterprise.

**3. Noise Control:**

During the past few years industry has displayed an increasing interest in the control of industrial noise. While a reduction or elimination of objectionable noise in a plant lessens the wear and tear on employees' nerves, reduces mental fatigue, and improves morale, such a problem is far from philanthropic. An increase in the amount of work performed, improvement in its quality, and a reduction of costly accidents and of compensation cases involving "Industrial deafness" definitely results from the control of noise.

- **Control of noise pollution:**

Noise generation is associated with most of our daily activities. A healthy human ear responds to a very wide range of sound pollution from – the threshold of hearing at zero db uncomfortable at 100-120 dB and painful at 130-140dB. Due to the various adverse impacts of noise on humans and environment, noise should be controlled. The technique or the combination of techniques to be employed for noise control depend upon the extent of the noise reduction required, nature of the equipment used and the economy aspects of the available techniques.

- **Impacts of noise:**

Often neglected, noise induces a severe impact on humans and on living organisms. Some of the adverse effects are summarized as annoyance, loss of hearing, sleepiness, impact on human performance etc. The methods of controlling industrials noise are; Designing the building incorporating the use of suitable noise absorbing material for wall/door/window/ceiling, installation of panels or enclosures, use of hearing protection like earmuffs, earplugs etc.

**4. Lighting:**

Research demonstrates that light has a profound impact on people- on their physical, physiological, and physiological health, and on their overall performance- particularly in the workplace. And yet, despite having an intuitive understanding of the importance of light, as well as research – based data that proves its significance, we often fail to give it adequate consideration when planning for the workplace. When we think about lighting in the workplace, the first thing that comes to mind is the obvious physical effects it has on us. Inappropriate lighting can lead to a host of problems, ranging from eyestrain to serious musculoskeletal injuries. While the physical impact of lighting is obvious, its physiological and psychological impact can be just as strong. Light sends a visual message which can affect mood and motivation levels.

To fully realize your investment in both your people and your facility, don't overlook the importance of quality lighting. A light has a significant impact on our performance in the workplace. Research shows conclusively that when you get it right, a quality lighting program can boost productivity and performance, reduce fatigue and eyestrain, and increase an organization's opportunity for success.

There are two steps to achieving a quality lighting plan in your own environment. First, make lighting an integral part of your initial architectural and interior design discussion. Don't allow lighting to become an afterthought. Second, engage a lighting professional to guide these initial conversations.

**5. Temperature, Humidity & ventilations etc.**

Practically all machine tools generate heat. Some are dust, fume, moisture, or smoke producers. Human occupancy of a plant results in lower oxygen content and higher carbon dioxide content. At the same time, human lungs and bodies give off heat and moisture. Odors and bacteria are introduces. Sunlight and artificial lights as well are responsible for an appreciable amount of heat. Winter weather in most sections of the country cools plant interiors. Yet some industrial processes require constant temperatures throughout the year. Thus industrial air conditioning in its broadest sense requires control over temperature, humidity, dust, motion, purity (freshness and bacteria), and odors.

The control of temperature generally involves heating the air in winter and cooling it in summer. However, some plants, in which continuous operation produce considerable heat, require year-around cooling. Heat may be generated from a central heating plant, with the heating medium- usually hot water or stream- piped to heat radiating devices in the plant areas.

Humidity and dust are controlled as part of the temperature conditioning. Moisture is added to the dry winter air and removed from the moist summer air. Dust is collected by filter and electrostatic air cleaners. Air motion and purity are encouraged by the proper positioning of incoming air dusts and exhaust outlets to move fresh air throughout the entire area. Bacteria and odors are removed by means of ozone and germicidal lamps or by passing the air over chemicals.

**6. Health and safety conditions:**

Since a large number of workers spend a great deal of their time in an industrial setting, their environment is not usually conducive to a healthy life. Moreover, malnutrition, insanitary and psychological conditions, and the strains and stresses under which they live impair their health. On the one hand, the efficiency in work is possible only when an employee is healthy, on the other, the industry exposes him to certain hazards which he would not meet elsewhere and which may affect his health. It is with the intention of reducing these hazards and improving the workers health that the discipline of industrial health came into

being as a branch of public health in its own right. Bad health results in a high rate of absenteeism and turnover, industrial discontent and indiscipline, poor performance and low productivity. That is why when industrial health programmes are introduced, both employers and worker benefit. A reduction in the rate of labour turnover, absenteeism, accidents and occupational diseases has been the natural consequence of industrial health programmes. The other benefits include reduced spoilage, improved morale, increased productivity per employee and longer working period of an individual.

**7. Physical facilities:**

Included in the category of employee facilities are locker rooms, rest rooms, showers, water coolers, eating facilities, time clocks, plant hospital, and first-aid equipment. Criteria for the design of any of the above installation dictate that they should be; **(1)** adequate in capacity for the employee concentration required, **(2)** readily accessible to the bulk of employee with a minimum of lost production time, **(3)** easy to keep clean and sanitary, and **(4)** located and accessible for ease of maintenance.

**Social & Psychological Work Environment:**

- **Social Environment:**

Social work environment consist of management's policies and practices regarding formation of work group/teams, allowing and encouraging the employees to form work groups/ teams informally, making use of grapevine, utilizing open- space concept regarding the layout of offices and work places.The factors like encouraging/following the employees to interact socially with other employees open and extensive interaction between superiors and subordinates, easy access of the top management to employees and management style of managing by walking around and consulting the employees informally also include social work environment.

- **Psychological environment:**

Psychological work environment significantly influences certain factors of human resources like values, attitudes, aptitude etc. Psychological work environment includes perception, personality, motivation, morale, group formation, maintenance, utilization, leadership style, levels of job satisfaction,

individual difference, human relation, supervision, superior-subordinate interaction and relation, organizational climate, communication etc. The Psychological environment can be thought of, more specifically, as those features of the work environment which are relevant to worker behavior. By behavior, the three related types of psychological phenomena are considered; affect (e.g. emotions, mood, Psychological symptoms, affective disorder); cognitions virus (e.g. effectiveness, absence, motivation). The Psychological environment is therefore the set of those characteristics of environment that affects how the worker feels, thinks and behaves. Here, the focus will be particularly on affective responses.

**Factors of Social & Psychological Work Environment:**

**1. Job Satisfactions:**

Job satisfaction is a psychological and mental state of the individual. Hence various authors have given different factors of job satisfactions According to **Stanger and Flebbe,** the factors are general working conditions, union-management relation, general quality of supervision and grievance handling procedures.

A good management is always interested in having and maintaining a better work force which is loyal to the organization and its objective. A group- be it in industry or in some other sphere of human activity is organized with an eye on certain well-defined objectives. It is, therefore absolutely essential that the group as a whole in charged with enthusiasm about the work entrusted to it. Such zeal or enthusiasm is usually referred to as morale. It is the subjective feeling of the employee. A management which is really interested in motivating its employees must try to understand the impact of its policies and practices on the attitude of workers about the work to improve their morale by removing the causes of dissatisfaction away the workers.

**2. Motivations:**

Management is supposed to get the work done by the subordinates toward the attainment of the common goals. This is the most important function of the management to inspire and stimulate the personnel with zeal to do work for the accomplishment of organizational objectives. In other words, it is motivation of people. A successful manager knows that the issuance of direction, however well-conceived, does not mean that they will be followed in its true spirit. He should

enthuse the people to work harmoniously for the achievement of established goals. He should also know that motivation as an unending process and the management has to provide for incentives constantly.

Motivation is an effective instrument in the hands of management in inspiring the work force. Its benefits are -- 1. Best utilization of resources possible 2. Willingness to work is induced 3. Reduction in labour problems 4. Increase in productivity 5. Co-operation is ensured 6. Improvement upon skill and knowledge 7. Acceptance of organizational change 8. Better image as good employer.

Motivation and efficiency are positively correlated. The theme of motivation is to induce the men to present their worth to the best of their efforts in the interest of the organization to attain the overall objectives of the enterprise

**3. Workers Management Relations:**

In a modern time, it is a recognized fact that the worker's should be given humanly treatment at work to avoid troubles and to let the enterprise advance. Such treatment should be based on mutual cooperation in the solution of common problems. It should be realized that our employees are not only to be able to work but be willing to work as well. This willingness is largely based on management's ability to integrate the interests and needs of its employees, with the objective of organization.

In short, human relation is the art of getting along with people either as individuals or as a group and a process of achieving cooperation of men towards the objective of the organizations.

**4. Workers participation in management:**

Worker participation in management has been given different meaning to different people and it has varied facets in practice. For example, management interprets it as the joint consultation prior to decision-making; workers take it as equivalent to co-decisions and experts practically regard it as association of labour without the final authority or responsibility.

The principle of participation seeks to meet the psychological needs of the workers, bring them closer to the management, promctes their interest in self education, gives them an insight into the economic and technical conditions and the purpose of the undertaking where they work and serve to bridge the gulf between the management and the workers.

"Being a human being every worker wants that his opinion and voice should carry some weight in the working and management of the enterprise in which he is working."

"The participation results from parties which increase the scope for employees share of influence in decision making a different tier of organizational hierarchy with concomitant assumption of responsibility."

**5. Employers Policy of Group Formation:**

"An organization will function best when its personnel function not as individual but as members of highly effective work groups with high performance goals"

Group exists in every organization and they affect the behavior of their members. They not only affect the behaivours of their members, rather they have impact on other group and the organization as a whole. Such groups are created by the organization as well as by organization members for their own satisfactions. An organization divides its ultimate task into small task which are assigned to various subunits known as units/sections/departments. The organizations itself generate forces towards the formation of various functional task group within itself. Beside, many groups are created automatically because of operation of socio-psychological factors at workplace. Thus these groups are essential for organization's functioning if one wants to study the organization; he will have to understand group and their functioning.

**6. Making Use of Grape-vine:**

Grape – vine means an informal means of circulating information, or even a gossip, or baseless rum our. In the context of an enterprise, the grape-vine discharges the role of speeding official information and message among its members. So much so, in fact that about official policies and procedure grape-vine provides better and more detailed information than even the official channels themselves. Thus, a good system of communication should not disregard the potential of grape-vine. Rather it should treat it as supplementary to the formal channels of communications.

**7. Morale:**

Morale is generally referred to "willingness to work". Job satisfactions and dissatisfaction create the problem of morale. Being a psychological concept, it is not easy to define it precisely. It has been defined differently by different authors.

Different definitions of morale can be classified into three major approaches. Classical Approach, Psychological Approach and Social Approach.

**i)Classical Approach :**According to this approach, the satisfaction of basic needs is the symbol of morale.

**ii)Psychological Approach:** According to this approach morale is psychological concept i.e. a state of mind

iii) **Social Approach:** According to some experts, morale is social phenomenon which pulls the men to live in a society or groups in pursuit.

The place of morale is no less important for an industrial undertaking. The success of failure of the industry much depends upon the morale of its employees.

According to **Dalton E. McFarland,** "High morale exist when employee attitude are favorable towards their jobs, their company and their fellow workers, favorable to the total situation of the group and to the attainment of its objective." If morale is high in an organization, workers cooperate fully with the management towards the achievement of organizational goals.

**8. Leadership:**

"Leadership is that combination of qualities by the possession of which one is able to get something done by others, chiefly because through his influence they become willing to do so."

The main essence of management is to get the work done by the people by directing them in the right perspective. It means subordinates should be led so as to be directed towards the common goal. Leadership is the quality of the behavior of individuals whereby they guide people or their activities in organized manners. In reality, the companies compete more by means of their leaders than by the products. Leaders give the company the life which creates the product an innovation that he sells. Better leaders develop better employees and the two together develop a more effective organization. Managers at all levels in business undertaking are leaders because they have followers (Subordinate) whose efforts have to be channelized in a definite direction. As leaders they are not only to show the way but also to lead the group towards it. **Peter F. Ducker**, an original thinker on management science considers leadership as a human characteristic which lifts a man's vision to higher rights, raises man's performance to higher standard and builds a man's personality beyond its normal limitations.

From the above discussion, it is clear that work environment is mixture of physical, social and psychological factors. The organization which maintains such environment will definitely leads towards progress and development. It will also create and maintain such human resources that will act as asset to organization. Hence the study of work environment in powerloom industry in Vita is important from the point of view of social aspects. Therefore the researcher has undertaken the study entitled "The study of work environment in powerloom industry in Vita."