



Promoting Excellence in  
Teaching, Learning & Research

(An Autonomous Institute)

(Accredited with NAAC A+)

AN INDUSTRIAL TRAINING

AT

**KANERI INDUSTRY, SHIROLI-MIDC**

BY

**STUDENTS NAME**

**PRN**

**OMKAR JIVAN POTE**

**21UME398**

**PRATHMESH DINKAR PACHGAONKAR**

**21UME383**

T.Y.B TECH. (MECHANICAL)

DURING THE PERIOD

***27 December 2022 TO 15 January 2023***



DEPARTMENT OF MECHANICAL ENGINEERING

(NBA Accredited & ISO 9001 Certified)

D.K.T.E. Society's

TEXTILE & ENGINEERING INSTITUTE

ICHALKARANJI

2022-23

**D.K.T.E. Society's TEXTILE & ENGINEERING INSTITUTE,  
ICHALKARANJI**

**CERTIFICATE**

THIS IS TO CERTIFY THAT

**STUDENTS NAME**

**PRN**

**OMKAR JIVAN POTE**

**21UME398**

**PRATHMESH DINKAR PACHGAONKAR**

**21UME383**

HAVE SUBMITTED THEIR REPORT OF INDUSTRIAL TRAINING UNDERGONE AT  
“KANERI INDUSTRY, SHIROLI-MIDC”. THIS REPORT IS SUBMITTED BY THEM FOR PARTIAL  
FULFILLMENT OF THE SYLLABUS OF "INDUSTRIAL TRAINING" AT B.TECH. (MECHANICAL)  
PART-II FOR THE ACADEMIC YEAR 2022-23. THIS REPORT REPRESENTS THE BONAFIDE  
WORK OF THE STUDENTS.

DATE -

PLACE – ICHALKARANJI

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**Prof.(Dr.)Mrs. L.S. Admuthe**

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<b>SR. NO.</b>	<b>CONTENT</b>	<b>PAGE NO.</b>
<b>1</b>	<b>INTRODUCTION</b>	<b>5 - 7</b>
	1. Objectives and scope of Industrial Training Program	5
	2. Duration and location.	5
	3 The importance of industrial training.	6
	4 Benefits derived from training.	6
	5 Objective of report	7
<b>2</b>	<b>THE TRAINING ORGANIZATION</b>	<b>8</b>
	1 Information of company.	8-10
<b>3</b>	<b>PLANT LAYOUT</b>	<b>10</b>
<b>4</b>	<b>PRODUCT MANUFACTURED</b>	<b>11-13</b>
<b>5</b>	<b>INDUSTRIAL TRAINING</b>	<b>14-21</b>
	5.1 Objectives	14
	5.2 Analysis	14
	5.3 Meterology department	15-18
	5.4 List of machine in machine shop	19-21
<b>6</b>	<b>CONCLUSION</b>	<b>22</b>
<b>7</b>	<b>REFERENCE</b>	<b>23</b>

## **1 . INTRODUCTION**

### **1. Objectives and scope of Industrial Training Program**

1. The main objective of Industrial training is that the trainee must get exposed to industrial environment and understand the working in the industry.
2. For future employments and develop personal attributes.
3. To know what quality should we possess and try to develop our personality.
4. To analysis theoretical knowledge with practical knowledge which we gain in the company.
5. To develop our questioning, practical knowledge and reasoning skills.
6. To learn industrial disciplines and manners.
7. Interact with professional and non professional groups.
8. Apply engineering method and problem solving.
9. Develop technical, interpersonal and communication skills.
10. To teach time management, human resource management etc. (this is not tough in training; the trainee must learn it with keenly observing people.

### **2.Duration and location**

1. The duration of my training was from 27 DEC TO 15 JAN
2. The time of my training was from 10:00AM TO 1:00PM
3. Every Monday there is holiday for the organization.

### **3.Importance**

During our four years of B.Tech degree, we are going to study various courses in our curriculum which engineer require in future, as we all known we have studied different subjects related with the design, manufacturing, quality control, management etc. But there is a gap between practical & theoretical knowledge that we gain because of less focus on practical knowledge. This training help us in narrowing this gap which will be beneficial in future. And industries are willing to hires those engineer which are good in there practical or technical knowledge.

### **4.Benefits derived from Training**

1. Acquire the work experience and transferable skills such as professional communication, interpersonal relationship management and team work. Be able to experience a prospective career path.
2. Acquire the practical experience by applying methods and theories learned in class.
3. Due to training, adopting to industrial environment become easier.
4. Network with professionals in our field, helps in getting knowledge from expert persons and reference for future job opportunities.
5. Develop new skills and refine others
6. Gain confidence about our working abilities.
7. To get aware from various function carried out in industries

## **5.Objectives of Report**

1. To identify objectives, importance and benefits of the industrial training.
2. To show organization structure of an industry and its business functions.
3. To illustrate working of different machines and equipment used in an Industry.
4. To understand the practical knowledge gain in those training period.
5. To identify problems involved in Assembly process and to suggest suitable remedy for it.
6. To understand what we have gain in those 15 days of industrial training.

## **2.The Training Organization**

### **2.1 COMPANY PROFILE**

Kaneri group started as a small scale machine shop with machining facilities as a Kaneri Enterprises in 2002 . We are one of the leading fully finished Disc Rotor & Flywheel Assembly manufacturers for automotive industry.

We have 2 Grey cast iron & Ductile cast iron (S.G. iron) foundry units one of 990Sq.mt. and other of 6000Sq.mt. named as KANERI INDUSTRIES UNIT-I and UNIT –II and a machine shop of 4000 Sq . meters known as KANERI ENTERPRISES. The entire process of the Flywheel & disc rotor is In house captive foundry, having installed capacity of 1386 MT good casting per month. Our components range from 0.5 kg to 75 kg. We have separate core shop along with core baking facilities, fully automated CNC machine having facility of dynamic balancing & testing equipments from spectrometer onwards.

Kaneri Group of industries is situated in Kolhapur district which is at the distance of 221 Km from Pune and 365 km from Mumbai. We are one of the leading manufacturer and supplier of a wide range of automobile components. Our range includes Automobile spare parts, brake disc (Ventilated and plain disc), Brake Drums and Flywheel Assembly. Fly over ten year as per customer samples at competitive and lowest rate as compared present market rate.

We take care of our customer and ensure to offer them with quality assured automotive components with the help of highly of efficient team of research & development. Our aim is customer satisfaction through customer care. We believe in quality and continue updation of skills and machinery to achieve high quality standards of components.

All components are manufactured to meet IATF 16949 quality system standards and are direct replacement of components supplied by Original Equipment Manufacturers with no modification in terms of quality and service.

### **2.2QUALITY POLICY**

“It is our policy to provide customers with products or services that meet or exceed their expectations emphasizing product & employee safety.”



“Everyone should look at their next process as 'The Customer'. Continual improvement shall be the way of our life by which we shall strive to achieve customer delight in our business of finished castings.”

## **2.3 VISION**

To be known for our technology, quality control, product performance & customer service. When it comes to automotive parts manufacturing "Kaneri Group" will be the one name that stands out not only in the local but global market.

## **2.4 MISSION**

To continue our development with state-of-the-art production facilities for serving the needs of our worldwide clients and create lasting contributions & consistent customer relationships.

## **2.4 OBJECTIVE**

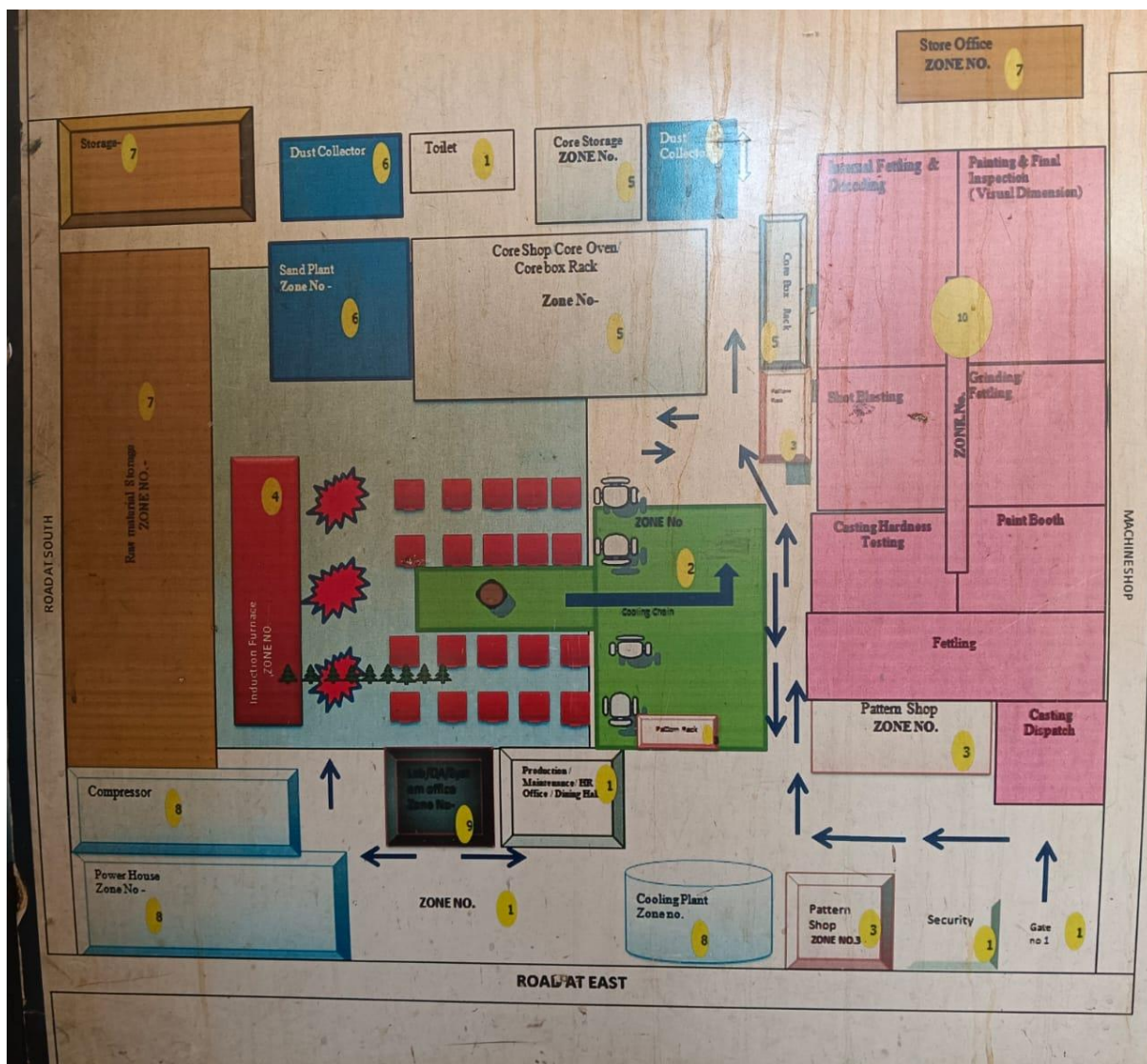
Meet the requirements of both internal as well as external customers on a sustained basis.

Develop processes to achieve high productivity and minimum handling.

Reduce waste, rework, and scrap. Do things right the first time, every time.

Training of employees to make them quality conscious and educate them about their role in the quality system.

### 3. Plant layout



## 4. PRODUCTS MANUFACTURE –

### 4.1 Flywheel

Flywheels are produced by the sand casting method and the material used for manufacturing is excellent quality iron. Once cast, the flywheel is finished by machining.

- Flywheel Assembly – It is designed for the high volume passenger car to heavy commercial market. This type of flywheel is highly suitable for high mileage vehicle applications.
- Ring Gear: Wide Range of Variety available



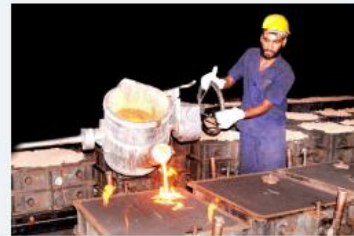
#### CASTING

Casting method used for flywheel is Sand Casting



#### CNC MACHINING

Flywheel gets finished by Machining & Boring



#### POURING

Preset Length Bar is welded into a circle configuration



#### RING FITTING



#### DYNAMIC BALANCING



#### QUALITY CONTROL



## 4.2 Brake Disc

Brake Discs are most important part in braking system. We maintain following specification while manufacture of brake disc casting to achieve better or best braking performance.

- Uniform thickness of braking surface: Top most performance of braking system, maximum comfort and higher durability of components
- Braking surface finish ground or fine: Improved herd discs fitment of and better running in.
- Close dimensional tolerance: Elimination of disc vibration
- Correct casting hardness: Persist wear and tear hence outstanding performance.







## CASTING

Casting is done using automatic casting equipment



## THERMAL TREATMENT

Thermal & Pressure treatment makes it stronger



## MACHINING

Here it gets final shape with all its holes & slots



## CORRECTION



## INSPECTION



## QUALITY CONTROL

## **5. INDUSTRIAL TRAINING**

### **5.1.Objectives –**

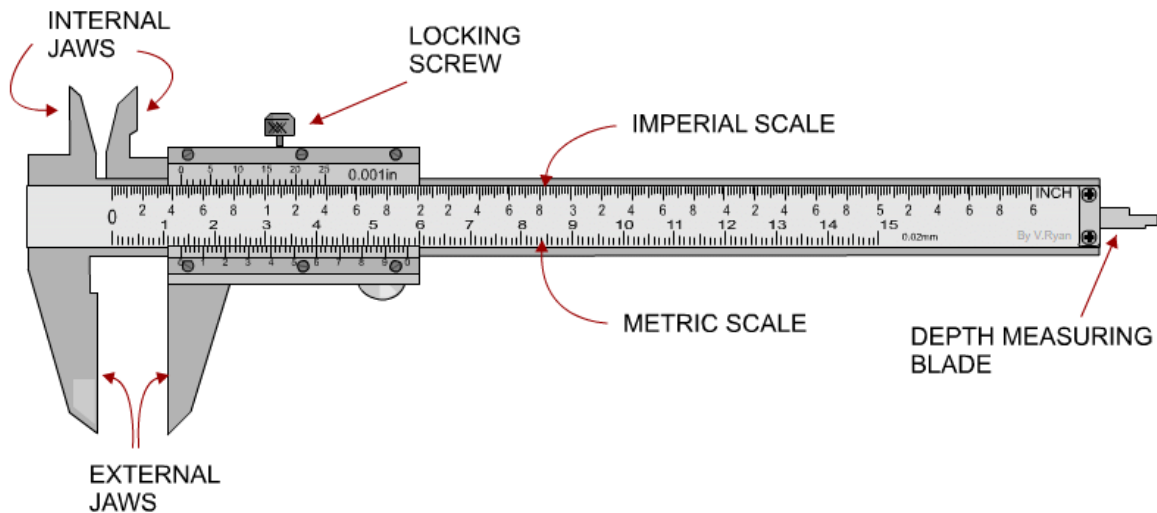
- a. To get exposed to industrial environment and understand industrial disciplines. The first thing a trainee should always remember while stepping into an industry is that, now he/she is also a part of that particular organization and should behave as such.
- b. To understand industrial rules and regulations and their intensions behind these rules. Trainee should know that his/her casual attitude will not be entertained in an industry.
- c. To know what are the requirements of an industry and shape his/her personality accordingly. Once a trainee enters an industry he faces different situations, thus he can get an idea what industry is excepting from upcoming engineers.
- d. To develop questioning and reasoning skills. It is observed that more questions arise when a student is getting a practical knowledge than when he is getting theoretical knowledge. Thus a curiosity is developed in trainee's mind.
- e. To learn time management and human resource management.

### **5.2. Analysis –**

Different operations carried out in machining shop are studied during training program. The different specifications of the machinery used are studied as well as the latest technology and software used in the industry

### **5.3. Metrology Department -**

#### **1.VERNIER CALIPER –**



1. Least count of Vernier caliper is 0.02 mm.
2. It is used for measuring internal, external and depth measurements of the job.
3. There are various ranges of Vernier calipers 0-250mm, 0-500mm, 0-1000mm etc.
4. Used to measure the inner and outer diameters of the shaft sleeves.

## 2.MICROMETER SCREW GAUGE -

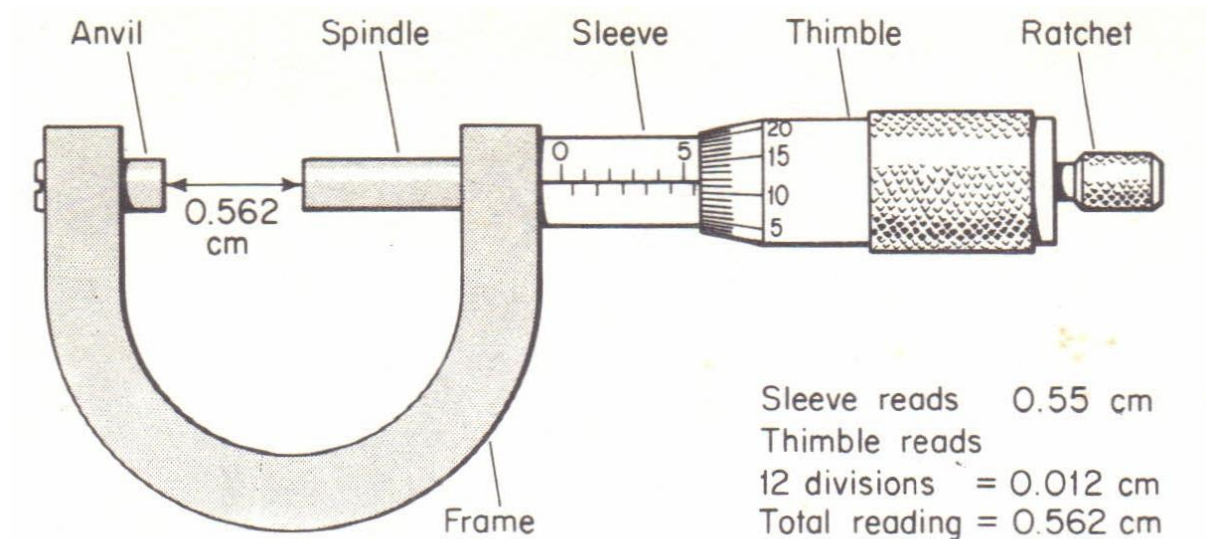


Fig. 1.6. Micrometer screw gauge

### Details

1. Least count of micrometer screw gauge is 0.01mm.
2. Used for measuring external dimensions.eg, -measuring diameter of shaft,etc.
3. They are available in different ranges ranging from 0-25mm, 25-50mm, 50- 100mm, 100-125mm etc.
4. Used to measure dimensions after finish cut, because they give more accurate reading as compared to Vernier Caliper.
5. Disadvantage of this is that it can be only used to measure only small size of component.

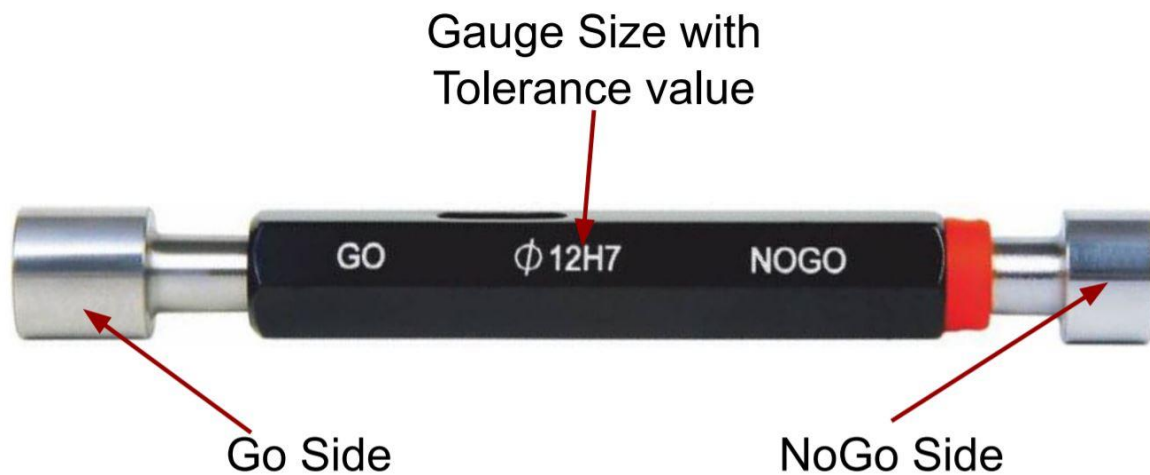


### 3.DIAL GAUGE –



1. Dial gauges are measuring instruments that can accurately measure minute lengths and displacements.
2. Dial Gauge Indicator, **0.01mm** Accuracy Measurement Instrument Dial Indicator Gauge, Measure Range 0-10mm.
3. Another method for determining roundness that is often used is to place the part in a vee-block and rotate it in contact with a dial gauge or similar indicator.

## 4.GO-NOGO -



1. Go - No Go gauges are manual mechanical measuring tools used in production lines to guarantee the machining has taken place and it has been performed correctly
2. A go/no-go gauge refers to an inspection tool used to check a workpiece against its allowed tolerances via a go/no-go test.
3. The dimension of the Go-end is equal to the minimum permissible dimension and that of the No -Go end is equal to the maximum permissible dimension..

## 5.4.List of machine in machine shope .

### 1.CMM – ( CORDINATE MEASURMENT MACHINE )

1. A coordinate measuring machine, also known as a CMM, is a piece of equipment that **measures the geometries of physical objects**. CMMs using a probing system to detect discreet points on the surfaces of objects.



## 2.CNC (ACE DESIGNER ) –

Computer Numerical Control machines are **automated machines, which are operated by computers executing pre-programmed sequences of controlled commands.**



Computer Numerical Control – Taking digitized data, a computer and CAM program is used to control, automate, and monitor the movements of a machine.

- Types of CNC Cutting Tools (With Illustrations)

- 1 Drill Bits
- 2 End Mill
- 3 Face Mill
- 4 Reamers
- 5 Gear Cutters
- 6 Hollow Mill
- 7 Thread Mill
- 8 Slab Mill
- 9 Fly Cutter

- Some Materials Used in CNC Machines' Cutting Tools

Carbon Steel  
High-Speed Steel  
Carbide  
Ceramic

## **6.CONCLUSION-**

Overall internship was a really good program. It helped to enhance and develop my skills, abilities and knowledge. It was a good experience. KANERI INDUSTRY SHIROLI-MIDC is a good place to do internship since it provides various benefits. The overall course period was with full depth knowledge of industrial environment with its history and up to its practical application. I am very thankful to the trainers for introducing us to the real world and the proper guidance to survive in it. The knowledge we perceived is fruitful in all ways. From observing all the things in industry we have to conclude that Time & Accuracy is very important matter to growth of industry and it was always helpful for all the students that will take internship. With experience, knowledge and skills acquired during industrial training we will be better prepared to face working world .

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