SANDIP UNIVERSITY

UGC Recognised

A Report On

"Internship Programme"

Submitted by

Name of the Student: Ashish P. Marathe

PRN: 200101092003

Name of the Industry: Pooja Industries

Duration of Internship in days: 15 days

Date of Commencement: 20th July 2020

Date of Completion: 4th August 2020

Department of Mechanical Engineering,

School of Engineering and Technology, Sandip University, Nashik Mahiravani,

Trimbak Road, Nashik-422213

Academic Year - 2020-2021

Dedicated to,

To my *family*,

teachers and *friends*

for their constant love, support & inspiration.

Mahiravani, Trimbak Road, Nashik – 422 213

Website : http://www.sandipuniversity.edu.in Email :diruiic@sandipuniversity.edu.in

Ph.: (02594) 222 541, 2/3/4 Fax: (02594) 222 555

Directorate of University -Industry Interaction Cell (UIIC)

DO'S & DONT'S

1) Students must duly complete all formalities with UIIC.
2) Collect Bonafide certificate (Letter head) from your UIIC Coordinator.
3) Students must submit Undertaking letter duly signed by Parents & student to their respective UIIC coordinator.
4) Students must wear complete uniform & proper foot wear (no chapels) while attending internship / industrial training.
5) The students should meet their Company guide every day and follow his/her instruction. The students must update their Company guide regularly on the progress of work.
6) Always carry University Identity card while undergoing internship.
7) Attendance at the company is mandatory for the entire Internship period.
8) If for some reason you are not able to attend, inform the company guide / official.
9) Always carry Note pad & pen.
10) Make notes of work performed on daily basis.
11) Be polite with everyone, do not argue.
12) Follow the instruction given by company official.
13) Do not linger around.
14) Do not enter any RESTRICTED Area/s.
15) Follow safety norms, if needed use safety goggles / safety gadgets as prescribed by the company.
16) Do not carry Gutka, cigarettes, lighter etc. or any kind of inflammable with you.
17) Do not carry Camera /Pen drive, data chord etc.
18) Keep your UIIC Coordinator informed/updated about your activities/whereabouts.


Certificate of Internship
POOJA INDUSTRIAL TRAINING CENTER
(Subsideary of Pooja Industries)
L-6,M.I.D.C.,Ambad Nashik-10
INTERNSHIP
2020
This is to certify that Ashish Pralhad Marathe
has completed a Certificate Course on "CNC (Miliing) Programing"
as Summer Internship Program from 20th July 2020 To 5th August
2020 organized by POOJA INDUSTRIAL TRAINING CENTER,
BEST AWARD
Mr. Nilesh Pawar
Co-ordinator and Training Head
Mr. Sanjay Mahajan
CEO - Pooja Industries

SANDIP UNIVERSITY
— UGC Recognised —

Certificate

This is to certify that,

Ashish Pralhad Marathe

Student of (Mechanical Dept. / B-tech/ Specialization comes here) was examined in internship-I presentation of industry which he visited is

"**Pooja Industrial Training Centre**"

On

20*/07/*2020

At

Pooja Industries,
Nashik

Mr. Nilesh Pawar
Guide

Prof. D. S. Dhondge
UIIC Coordinator

HOD
Dept. of Mech. Engg.

Date: -

Place: Nashik

Acknowledgement

I am pleased to acknowledge the support of the Sandip University and Pooja Industries. I would like to thanks all the teaching faculty who have helped and supported me directly or indirectly for the completion of this summer internship. I express my truly gratitude towards Mr. Nilesh Pawar, Prof. D. S. Dhondge and Prof. Arvind Ambesange for his constant incitement to complete this Internship on **“**CNC (Milling) Programing**”.**

With deep sense of gratitude, we thanks to School of Engineering and Technology for providing all necessary facilities and their constant encouragement and support.

Ashish Marathe

July 2020 Nashik,

India.

Abstract

As we have to complete at least 15 days of Internship I approach to the Pooja Industries for Internship in mechanical field. And I got a place there as an Intern.
This is an account of our experience and the knowledge gained while working at “Pooja Industries” during in plant training. It takes order of various component from its vendors. As per drawing they are manufactured on the CNC and VMC machines.
This exposure gave us an idea of the various function aspects linking an organization together. During this training we involved in study of drawing, manufacturing, coding etc.

Contents

Chapter 1

Overview of the Organization

1.1Introduction of the organization

1. Name of the company - Pooja Industries
2. Address- L-6 MIDC Ambad-422010
3. Mobile no – 8983123642
4. Person to be contact- Mr. Nilesh Pawar
5. Type of industry – small-scale industry
6. Man power – 10 to 12
7. Company owner- Mr. Sanjay Mahajan
8. Working hours - 9am to 7am
9. Production capacity - 30 ton per month
10. weekly off – Saturday
11. Suppliers and vendors – Sharda Motor Works, Shamla Industries, Trupti Engineering.

1.2Policy of the organization

Great engineering machines for manufacturing; on particular CNC and VMC machineries.

Chapter 2

2.1 Number of employees: 10 to 12

2.2 Main offices: Pooja Industries, L-6 MIDC ambad-10

2.3 Introduction of all the Departments

2.3.1 Raw material

Raw material supplies from Trupti Engineering of stainless steel, aluminum, copper etc. material. Then there is initial inspection done by the person from quality control department
Parameter to be checked

1. Name of the job
2. Drawing
3. Number of jobbing
4. Dimension

A) **In**: incoming raw material is confirmed and stored in this section with care
B) **out:** finished good in company, which are ready to dispatch is also stored in this section with care

In **Pooja Industries** raw material are stored in proper sequence.

2.3.2 Drawing department

In this department suppliers provide drawing sheet with the component. Various operations are performed on the raw material like cutting, blanking, punching etc. because of the drawing department die selection becomes very easy

2.3.3. Manufacturing department:

- Production department work is turning input into finished output through series of production process
- Production head is responsible for complete production
- Production department involves complete team from production head to helpers
- All team members are interconnected with each other to manufacture the production is given time and in given amount
- The quantity and quality of production coming off a production line will be closely monitored

2.3.4 Quality department:

POOJA INDUSTRIES ensure the customer satisfaction with-

- Quality
- On time delivery
- Development
- We all achieved the above goal through
- Involvement and training of employees and suppliers
- Technology up gradation
- Customer interaction
- Continues improvement
- Creating safe and healthy work environment

Quality objective:

- To reduce process rejection and rework.
- To reduce customer complaints.
- To achieve in time deliveries.
- To increase sales turnover.

Chapter 3

Daily Activities Report

Day 1 Date: 20th July 2020

Introduction to the guide and brief intro of company's work and various machine
Sir. Nilesh Pawar introduce us all 14 internals to the staff in the office as well as gave us the information of the company to which it is working
Pooja Industries is the small-scale industry mainly works under the big company such as Trupti Engineering, Shamla Industries to build up the part of some other big companies.
In the Pooja Industries almost all the works have been done on CNC as well as VMC machines.
On first day guide introduce as to all the machine used in the company and also gives us some safety

Following are the machines-


CIRCUIT POWER
EMERGENCY


PUMA 8UHS


AMS


AMS

Day 2 Date: 21 July 2020

Material inspection and technical drawing

On the second day of the internship sir told us about G – Codes and M – Codes which will be useful for CNC as well as VMC programming, also they said to write all the codes in our notebook which they given to us.

G00 Linear Rapid Positioning
G01 Linear Feed Interpolation
G02 CW Circular/Helical Interpolation
G03 CCW Circular/Helical Interpolation
G04 Dwell
G05 High Speed Cycle Machining
G06 NURBS Machining
G07 Imaginary Axis Designation
G08 Fast Cornering Mode
G09 Exact Stop
G10 Offset Value Setting
G11 Offset Value Setting Cancel
G15 Polar coordinates command cancel
G16 Polar coordinates command
G17 XY Plane Selection
G18 ZX Plane Selection
G19 YZ Plane Selection
G20 Input in inch
G21 Input in mm
G22 Stored Stoke Limit On
G23 Stored Stoke Limit Off
G24 Circular Pocket Clear
G25 Circular Finish Inside
G26 Circular Finish Outside
G27 Reference Point Return Check
G28 Return to Reference Point
G29 Return from Reference Point
G30 Return to 2nd, 3rd & 4th Reference Point
G31 Skip Function
G32 Z to Tool Change
G33 Thread Cutting
G34 Rectangular Pocket Clear
G35 Rectangular Finish Inside
G36 Rectangular Finish Outside
G39 Corner Offset Circular Interpolation
G40 Cutter Compensation Cancel
G41 Cutter Compensation Left
G42 Cutter Compensation Right
G43 Tool Length Compensation + Direction
G44 Tool Length Compensation - Direction
G45 Tool Offset Increase
G46 Tool Offset Decrease
G47 Tool Offset Double Increase
G48 Tool Offset Double Decrease
G49 Tool Length Compensation Cancel
G50 Scaling Off
G51 Scaling On
G52 Local Coordinate System Setting
G53 Machine Coordinate System Selection
G54 Work Coordinate System 1 Selection
G55 Work Coordinate System 2 Selection
G56 Work Coordinate System 3 Selection
G57 Work Coordinate System 4 Selection
G58 Work Coordinate System 5 Selection
G59 Work Coordinate System 6 Selection
G60 Single Direction Positioning
G61 Exact Stop Mode
G62 Automatic Corner Override
G63 Tapping Mode
G64 Cutting Mode
G65 Simple Macro Call
G66 Custom Macro Modal Call
G67 Custom Macro Modal Call Cancel
G68 Coordinate System Rotation
G69 Coordinate System Rotation Cancel
G70 Input in inch
G71 Input in mm
G73 Peck Drilling Cycle
G74 Counter Tapping Cycle
G76 Fine Boring
G80 Canned Cycle Cancel
G81 Drilling Cycle, Spot Boring
G82 Drilling Cycle, Counter Boring
G83 Peck Drilling Cycle
G84 Tapping Cycle
G85 Boring Cycle - Feed Out
G86 Boring Cycle - Stop, Rapid Out
G87 Back Boring Cycle
G88 Boring Cycle
G89 Boring Cycle - Dwell, Feed Out
G90 Absolute Programming
G91 Incremental Programming
G92 Programming Of Absolute Zero Point
G94 Feed Per Minute
G95 Feed Per Revolution
G96 Constant Surface Speed Control
G97 Constant Surface Speed Control Cancel
G98 Return To Initial Point In Canned Cycle
G99 Return To Ref Point In Canned Cycle

CNC G - Codes

Day 3 Date: 22 July 2020

On the 3rd day they gave us some another codes which is used in VMC operation. To avoid coding confusion sir take VMC codes on the next day, so this also we write it down on our notebooks

CONTENTS.

Day4 Date: 23 July 2020

On the 4th day they form one google classroom and they started putting operation videos on daily basis so that we can understand it in better manner. We watched videos daily and if doubt comes in our mind we can solve it by discussing with sir on zoom sation.

Day 5 Date: 24 July 2020

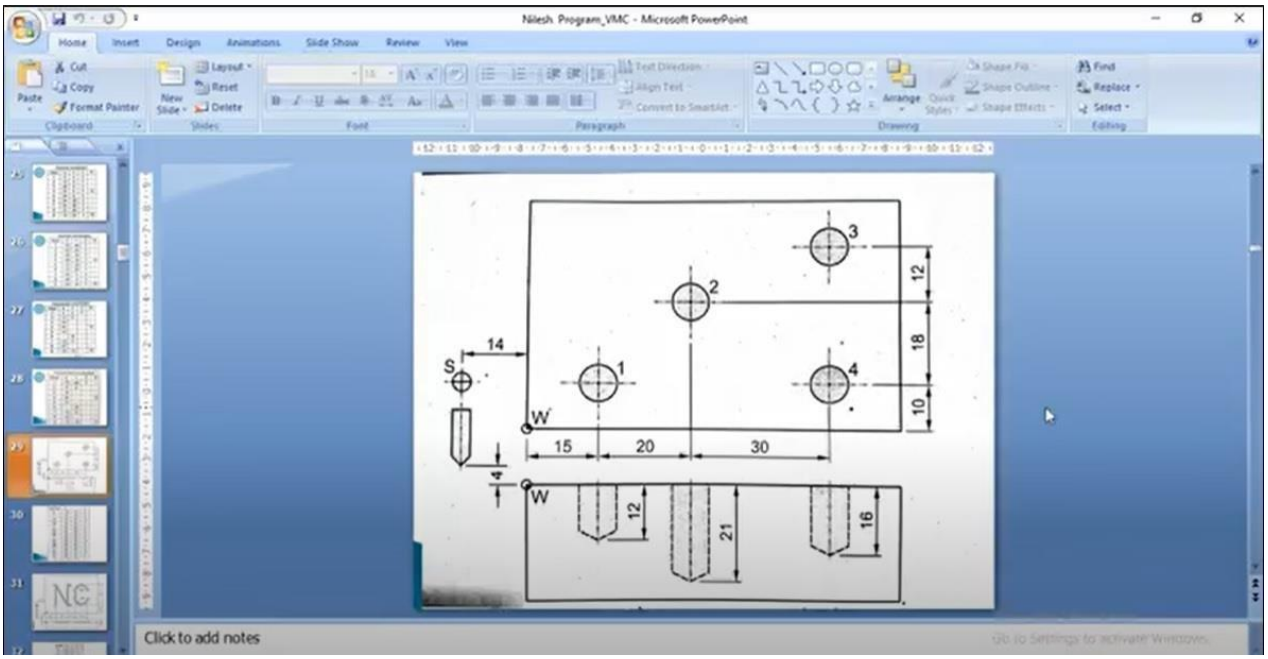
On the 5th day they share screen on zoom sation and showed us that same videos which was previously send by Nilesh sir on google class, this is only for resolving the doubts of every intern.

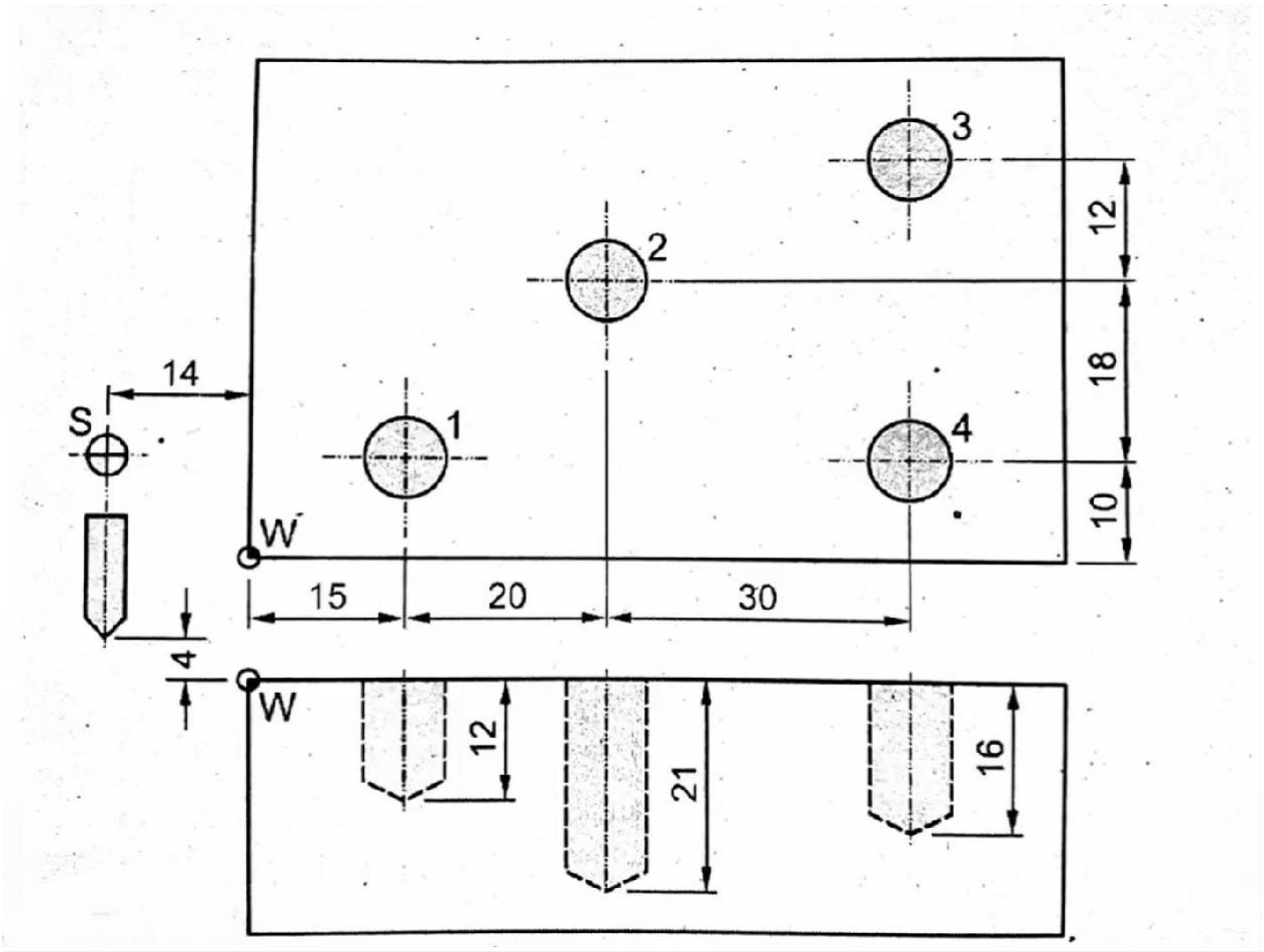
Day 6 Date: 25 July 2020

On the 6th day Nilesh sir tell us about CNC tools which will be used in different operations. They also showed us tools in zoom sation and gives us a brief introduction about tools.

Day 7 Date: 26 July 2020

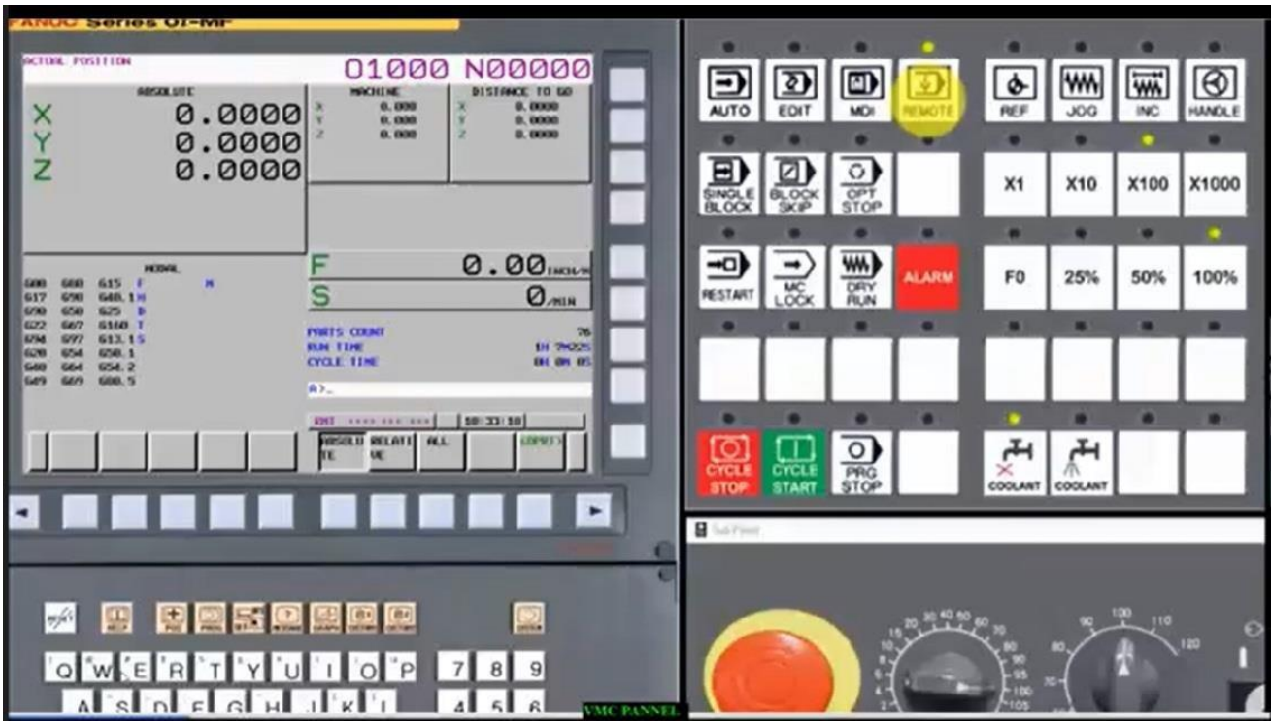
On the 7th day they show us some drawing and explain us how to draw it and how to check it after it done and also shows operational videos of that particular job.

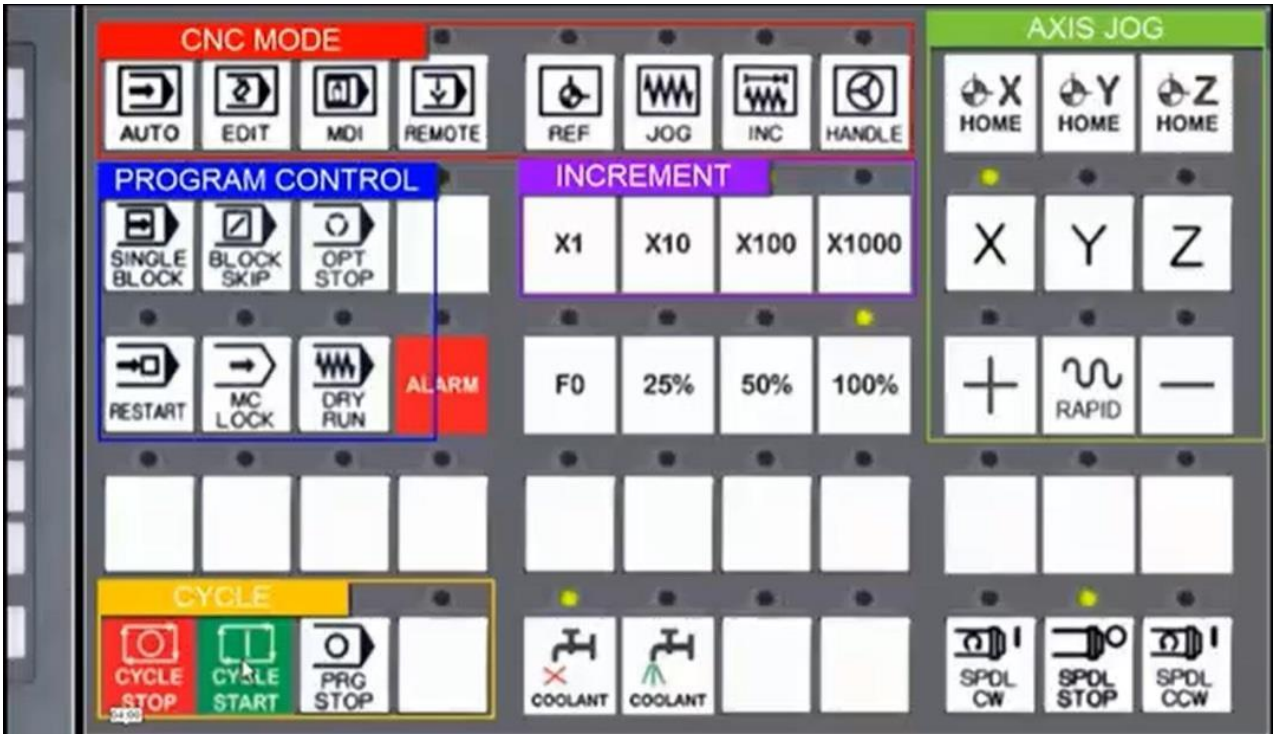




Day 8 to 10 Date: 27 to 29 July 2020

On next three days from 26 to 28 July sir gives us deep introduction of VMC tooling, how to change the tool, how oprtion is done on VMC, intro of control panel of VMC, working of codes all these things they teach us practically during these three days via zoom sation as well as videos which was posted on google classroom.





Day 11 to 14 Date: 30 to 3rd July 2020

Again on next four days sir resolve our doubts also ask some questions to us and tell us the future scope for these skills. Whatever they told us on last day of internship it really feels good to us and whatever they taught us in 15 days will really help us in future.

Day 15 Date: 4th July 2020

On the 15th day sir distribute certificates to us and give us some best wishes for our further studies.

Conclusion:

This industrial training built the potential to increase our practical knowledge. We got a chance to study about hydraulic machine, mechanical power press, TIG welding, etc...
And got knowledge about various department such as design and development, Quality Control, Production, Purchase, dispatch, etc...
This training helped us to become familiar with industrial environment. We got lot of information and knowledge from this training session i.e., CNC(Milling) Programing.

References:

1. **Wikipedia**

2. **www.google.com**

3. **Google classroom – code: xet5mjn**