# SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

# SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU- 562 157.

### BENGALURU COL 10.1

### FINAL YEAR PROJECT WORK GUIDE ALLOTMENT

DEPARTMENT OF MECHANICAL ENGINEERING

Sl.	GROUP			
NO	NO	USN	NAME	GUIDE
1	ME01	1MV19ME001	AAKASH MISHRA	Mr. K Ejaz Ahmed
2	ME01	1MV19ME019	HANU YADAV	
3	ME01	1MV19ME039	NIKITA SINGH	
4	ME01	1MV19ME059	SIDDHARATH S H	
5	ME02	1MV19ME003	ADNAAN TAWHEED JAMEEL	Mr. B Chandrashekar
6	ME02	1MV19ME006	ARFAAN TAWHEED JAMEEL	K. Efery sollined
7	ME02	1MV19ME011	B S SRI SUMUKHA	0 3
8	ME02	1MV19ME058	SHUBHAM KUMAR JHA	
9	ME03	1MV19ME028	KARTHIK D PATIL	Dr Kiran Kumar M
10	ME03	1MV19ME067	TARUN R	
11	ME03	1MV19ME070	VINAYAK TEVARANNAVAR	
12	ME03	1MV18ME095	SANGAMESH	
13	ME04	1MV19ME002	ADITYA SOMVANSHI	Mr. Prashanth L
14	ME04	1MV19ME008	AYUSH KUMAR	
15	ME04	1MV19ME029	KARTHIK R	
16	ME04	1MV19ME032	MARUTHI P K	
17	ME05	1MV19ME023	HITHESH R	Mr. Natraja M.
18	ME05	1MV19ME036	NAVEEN D	
19	ME05	1MV19ME046	PUNEETH S	
		1MV19ME064	SUHAS S	
20	ME05	1MV19ME033	MOHAMMED YAHYA ADIL	Mr. Shiva Kumar S

SI.	GROUP		NAME	CHIDE
NO	NO	USN 1MV19ME068	NAME V VIGNESH	GUIDE
48	ME12	TIVI V 19IVIEUU6	VVIGNESH	
49	ME13	1MV19ME035	NANDAN T N	Dr. K S Shanmukharadhya
50	ME13	1MV19ME038	NIKHIL A J	
51	ME13	1MV19ME060	SIDHARTH V	
52	ME13	1MV19ME051	RIDU VARSHINI N	
53	ME14	1MV19ME062	SUDEEP V R	Mr. Sampth Kumar L
54	ME14	1MV20ME400	BALARAJU K	
55	ME14	1MV20ME401	BHARATH T S	
56	ME14	1MV20ME403	DRAKSHAYINI	
57	ME15	1MV19ME010	BASAMMA H	Dr. 16 Shanmukharadhya
58	ME15	1MV20ME402	CHANDRU KUMAR H V	reclandaghella, B
59	ME15	1MV20ME405	KANTEPPA	
60	ME15	1MV20ME407	MAHESH AINAPURE	
61	ME16	1MV19ME020	HARSHIT RAI	Mr Ramesh C G
62	ME16	1MV19ME034	MOHAN M G	
63	ME16	1MV19ME037	NAVEEN RAJ PANDEY	
64	ME16	1MV19ME040	NISHANTH KUMAR M	
65	ME17	1MV19ME005	AMAN SINGH	Dr V Shantha
66	ME17	1MV19ME007	ASHISH KUMAR MISHRA	
67	. ME17	1MV19ME016	DHANUSH N REDDY	
68	ME17	1MV19ME047	R HRITHIK REDDY	
69	ME18	1MV19ME018	GOKUL RAJ SM	Mr. Kumaraswamy R
70	ME18	1MV19ME026	K SANKETH SHINDE	
71	ME18	1MV19ME052	SAKET GARG	
72	ME18	1MV19ME021	HASEEB UR RAHMAN	
73	ME19	1MV19ME024	HRITHIK B N	Dr Hanamantraygouda M B

Sl. NO	GROUP NO	USN	NAME	GUIDE
22	ME06	1MV19ME053	SATYANARAYANA	
23	ME06	1MV19ME055	SHUBHAM ANAND	
24	ME06	1MV19ME057	SHUBHAM KUMAR	
25	ME07	1MV20ME404	EKANTH P MOHITHE	Dr Prashanth S H
26	ME07	1MV20ME408	PREMSAGAR G	
27	ME07	1MV20ME409	PUNEETH N	10 000
28	ME07	1MV20ME411	VAMSHI V	
29	ME08	1MV19ME012	CHANDAN B S	Mrs Asha Rani A
30	ME08	1MV19ME014	CHOLARAJU S MOHAN RAJU	
31	ME08	1MV19ME015	DHANUSH M P	
32	ME08	1MV19ME017	DINAKAR M K	
33	ME09	1MV19ME041	NITESH NADAGERI	Mr. S B Halesh
34	ME09	1MV19ME069	VARUN V	
35	ME09	1MV20ME406	KEERTHI D	
36	ME09	1MV20ME410	RAJATH H V	
37	ME10	1MV19ME043	PRAJWAL K	Mr.Janardhana K
38	ME10	1MV19ME048	R VINAY KUMAR	
39	ME10	1MV19ME054	SHANTA	
40	ME10	1MV19ME066	SWAROOP B	
41	ME11	1MV19ME004	ALOK JHA	Dr G Balakumar
42	ME11	1MV19ME022	HEMANTH B M	1
43	ME11	1MV19ME030	KUMAR SHIVAM	
44	ME11	1MV19ME061	SOURABH C PANCHAL	
45	ME12	1MV18ME066	RAVI B K	Mrs Veena B G
46	ME12	1MV19ME013	CHANDRASHEKHARA A E	
47	ME12	1MV19ME065	SURAJ A	

Sl.	GROUP			
NO	NO	USN	NAME	GUIDE
74	ME19	1MV19ME025	JAYASURYA K S	
75	ME19	1MV19ME045	PRUTHVI GOWDA V	
76	ME19	1MV19ME063	SUDHAMSHU A C	
77	ME20	1MV19ME027	K SHAHSIDHARA	Mr. H S Yeshvantha
78	ME20	1MV19ME042	PRADEEP SADANAND BIDARI	
79	ME20	1MV19ME044	PRASHANTH	
80	ME20	1MV19ME050	RAKESH R	-
81	ME21	1MV19ME009	AYUSH VISHAVKARMA	Mr. K Madhukumar
82_	ME21	1MV19ME049	RAJAT KUMAR POKALE	
83	ME21	1MV19ME031	M TINKU RAJ KUMAR	

Project Coordinator:

Project Co-Coordinator:

W29.10.22 HOD

PROFESSOR & HEAD

Department of Mechanical Engineering
Sir M. Visvesvaraya Institute of Techonolgy
Bengaluru-562, 157

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



#### Project Report on

## "DESIGN AND STRUCTURAL ANALYSIS OF MOTORCYCLE FRAME"

Submitted in partial fulfilment of the requirements for the award of degree BACHELOR OF ENGINEERING

In

#### MECHANICAL ENGINEERING

#### Submitted by

**IMV19ME019** 

**IMV19ME030** 

1MV19ME039

1MV19ME059

Hanu Yadav Kumar Shivam Nikita Singh Siddharth S H

Under the Guidance of

#### Mr. K. EJAZ AHMED

Associate Professor
Department of Mechanical Engineering
Sir MVIT, Bengaluru



DEPARTMENT OF MECHANICAL ENGINEERING
SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2021-2022

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### **CERTIFICATE**

Certified that the project work entitled "DESIGN AND STRUCTURAL ANALYSIS OF MOTORCYCLE FRAME" is bonafide work carried out by Hanu Yadav bearing USN (1MV19ME019), Kumar Shivam bearing USN (1MV19ME030), Nikita Singh bearing USN (1MV19ME039) and Siddharth S H bearing USN (1MV19ME059) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021-2022. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Mr. K. Ejaz Ahmed.

Dr. K. S. Shanmukharadhya

Associate Professor

Professor & HOD

Dept. of Mechanical Engg.

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

Sir MVIT, Bengaluru .

Names of the Examiners

1) Dr. V. Sharel-

2) M alrebook Syna !

Dr. V. R. Manjunath

Principal

Sir MVIT, IRRINOIPAL

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Arishnadevarayanagar, Hunasamaranahalli, International Airport Road, Bangalore-562 157.

Signature with Date

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the project work entitled FABRICATION OF MULTISTAGE POTABLE WATER FILTER USING BIO-CHEMICAL ADSORBENTS is bonafide work carried out by SANGAMESH (1MV18ME095), KARTHIK D PATIL (1MV19ME028), TARUN R(1MV19ME067), VINAYAK TEVARANNAVAR (1MV19ME070) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work Phase-2 (18MEP83) prescribed for the Bachelor of Engineering degree.

Assistant Professor Sir MVIT, Bengaluru

23.05.20<sup>2</sup>. Dr. K S Shanmukharadhya R M VISVIS DE, Rakesh S

Professor and Head of Krishradevarav Principal of Itle 10 Krishrad

Names of the Examiners

Signature with Date

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI -590018



A Project Report on

## DESIGN AND DEVELOPMENT OF UNDERWATER BIONIC ROBOT

Submitted in partial fulfillment of the requirements for the award of

#### BACHELOR OF ENGINEERING

In

#### MECHANICAL ENGINEERING

Submitted by

ADITYA SOMAVANSHI

1MV19ME002

AYUSH KUMAR

1MV19ME008

KARTHIK R

1MV19ME029

MARUTHI P K

1MV19ME032

Under the Guidance of

Mr. PRASHANTH L

Assistant Professor

Dept. of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli, Bengaluru-562157

Academic Year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

Certified that the project work entitled DESIGN AND DEVELOPMENT OF UNDERWATER SURVEILANCE ROBOT is bonafide work carried out by, SOMAVANSHI (1MV19ME002), AYUSH KUMAR **ADITYA** KARTHIK R (1MV19ME029), MARUTHI P K (1MV19ME008), (1MV19ME032), in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project has been approved as it satisfies the academic requirements in respect of project workprescribed for the Bachelor of Engineering degree.

Mr. PRASHA

Assistant Professor

Sir MVIT, Bengaluru

Dr. K S Shanmukharadhya

Professor and HOD Mechanical,

Sir MVIT, Bengaluru

PRINCIPAL

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Bangalors-502 157

Sir MVIT, Batterial a

Name of Examiners

in Prachart 18.5,

Signature with date

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE - 562 157

### DEPARTMENT OF MECHANICAL ENGINEERING



CERTIFICATE

Certified that the Project Work entitled "STUDY AND EVALUATION OF MECHANICAL PROPERTIES OF AI-SI ALLOY REINFORCED WITH ZrO2 PROCESSED BY SPRAY AUTOMISATION" is a bonafide work carried out by HITHESH R -IMV19ME023, NAVEEN D - 1MV19ME036, PUNEETH S - 1MV19ME046 and SUHAS S - 1MV19ME064 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering Degree.

Mr. Nataraj M
Assistant Professor
Dept. of Mechanical Engg.,

Dr. K S Shanmukharadhya
Head of the Department,

Dept. of Mechanical Engg.,

Sir MVIT, Bangalore

PRINCIPAL
SIDM VISVESVARADA STITUTE OF TECHNOLOGY
Krishnadeva dunasamarananalii
International Autorities Bacqualore-562 157

Principal,

Sir MVIT, Bangalore

Name of the Examiners

Signature with date

2. Vigaga B.

1 2015 2013

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevernya Nagar, Hunasamranhalli, Yelahanka, Bengaluru, Karnataka 562157

### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "DESIGN & CONSTRUCTION OF AIR COMPRESSED VEHICLE WITH INTEGRATION OF RADIO CONTROL \* 1s a bonafide work carried out by MOHAMMED YAHYA ADIL (IMV19ME033), SATYANARAYANA (1MV19ME053). SHUBHAM ANAND (IMV19ME055), SHUBHAM KUMAR (1MV19ME057) of Sir M. Visvesvaraya Institute of Technology, Bangalore, in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for Bachelor of Engineering degree.

Assistant Professor Dept of Mech. Engg.

Sir MVIT, Bengaluru

Dr. K. S. Shanmukharadhyanana Dr. Rakesh S. Gm

Professor and Head Dept of Mech. Engg. Sir MVIT, Bengaluru AR M. VISVESVARAMA CHIPUTE DE TECHE Principal 1999 ore-532 57

Sir MVIT, Bengaluru

PRINCIPAL

Names of the Examiners

Forhand His

Signature with Date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



A project report on

## DESIGN AND FABRICATION OF SOLAR POWERED MULCH LAYING MACHINE

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

IN

#### MECHANICAL ENGINEERING

### Submitted By

CHANDAN B S	1MV19ME012
CHOLARAJU S MOHAN RAJU	1MV19ME014
DHANUSH M P	1MV19ME015
DINAKAR M K	1MV19ME017

Under the Guidance of Mrs. Asha Rani A Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022 - 23

### SIR M.VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the project work entitled "DESIGN AND FABRICATION OF SOLAR POWERED MULCH LAYING MACHINE" bonafide work carried out by CHANDAN B S 1MV19ME012, CHOLARAJU S MOHAN RAJU 1MV19ME014, DHANUSH M P 1MV19ME015, DINAKAR M K 1MV19ME017 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

usamaranahalli. angalore-562 157

Asha Rani A

Dr. K S Shanmukharadhya

Prof. Rakesh S G

Assistant professor

Professor and Head

PRINCIPAL

Mech Engg

Dept of Mech Engg

Sir M V I T,

Sir M V I T, Bengaluru

Sir M V I T, Bengaluru

Bengaluru

Names of the Examiner

Signature with date

Dr. Parashant His. 2 Virgays B:

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "Study On Friction Stir Welding Of Aluminium Alloys" carried out by Mr. NITESH NADAGERI, (USN: 1MV19ME041), Mr. VARUN V, (USN: 1MV19ME069), Mr. KEERTHI D, (USN: 1MV20ME406), Mr. RAJATH H V, (USN: 1MV20ME410) a bonafide students of SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru in partial fulfillment for the requirements for the award of the degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature of Guide
Mr. S.B. HALESH

Signature of HOD

Dr. KS SHANMUKHARADHYA

PRINCIPAL
SIR M. YISYESYARAYA INSTITUTE OF TECHNOLOGY
Krishmodevarayanagar, Hunasamaranahalii
International Argentinee to Plagatiopal 602 157

Prof. RAKESHS G

External Viva

Name of the Examiners:

E.H. AnoMana His

2. Vijoga:B

Signature with date

GEM5 Ky

1245 2013 245 2013

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI - 590018



Project Report on

## "DESIGN & CONSTRUCTION OF AIR COMPRESSED VEHICLE WITH INTEGRATION OF RADIO CONTROL"

Submitted in partial fulfillment of the requirements for the award

of Bachelor of

Engineering in

MECHANICAL ENGINEERING

Submitted By

MOHAMMED YAHYA ADIL SATYANARAYANA SHUBHAM ANAND SHUBHAM KUMAR

1MV19ME033

1MV19ME053 1MV19ME055

1MV19ME057

Under the Guidance of

Mr. SHIVAKUMAR S

Assistant Professor, Department of Mechanical Engineering



### DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadeveraya Nagar, Hunasamaranahalli, Yelahanka, Bengaluru, Kamataka 562157 ACADEMIC YEAR: 2022-23

## Krishnadeversya Nagar, Hunasantranhalli, Yelahanka, Bengalura, Karnataka 562157

### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "DESIGN & CONSTRUCTION OF AIR COMPRESSED VEHICLE WITH INTEGRATION OF RADIO CONTROL " Is a bonafide work carried out by MOHAMMED YAHYA ADIL (IMY 19ME033), SATYANARAYANA (IMVI9MB053), SHUBHAM ANAND (IMVI9ME055), SHUBHAM KUMAR (IMV 19MEOST) of Sir M. Visvesvaraya Institute of Technology, Bangalore, in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for, Internal Assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for Bachelor of Engineering degree.

Assistant Professor

Dept of Mech. Engg. Sir MVIT, Bengaluru

Dr. K. S. Shanmuklin radhyuon br. Dr. Rakesh

Professor and Head Dept of Mech Enggs

Sir MVIT, Bengaluru

Principal

Sir MYIT Bengalu

Signature with Date

Names of the Examiners

Dr. Prophorat 144

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Project Report on

## "MODELLING AND FABRICATION OF SMART-WASTE SEGREGATION SYSTEM USING IOT"

Submitted in partial fulfilment of the requirements for the award Of BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

PRAJWAL K

1MV19ME043

R VINAY KUMAR

1MV19ME048

**SHANTA** 

1MV19ME054

**SWAROOP B** 

1MV19ME066

Under the Guidance of

#### Mr. JANARDHANA K

Associate Professor
Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the Project Work [18MEP83] entitled "MODELLING AND FABRICATION OF SMART-WASTE SEGREGATION SYSTEM USING IOT" is a bonafide work carried out by Prajwal K(1MV19ME043), R Vinay Kumar (1MV19ME048), Shanta(1MV19ME054) and Swaroop B(1MV19ME066) in partial fulfillment for theaward of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering Degree.

24.05.2023

**PRINCIPAL** SIR M. VISVĖSVARAYA INSTITUTE OF TECHNOLOGY Krishnadevar, sonagar, Hunasamaranahalli

Mr. JANARDHANAKS . Dr. K S Shanmukharadhyaaticn of Astront Bood Stange long Sec 157

Professor and Head of Associate Professor Mech. Dept., Sir MVIT, Bengaluru Sir MVIT, Bengaluru

Principal Sir MVIT, Bengaluru

Names of the Examine

1. Dr. H.S. yeshwansha 2. Dr. B.S. PRAVEEN KUMAR

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### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



### Project Report on

### "DESIGN AND FABRICATION OF CONTACTLESS EDDY BRAKING SYSTEM"

Submitted in partial fulfilment of the requirements for the award of degree BACHELOR OF ENGINEERING

ln

MECHANICAL ENGINEERING

Submitted by

ALOK RAJESH JHA HEMANTH B M KUMAR SHIVAM SOURABH C PANCHAL 1MV19ME004 1MV19ME022 1MV19ME030 1MV19ME061

Under the Guidance of

DR. G. BALAKUMAR
Associate Professor
Department of Mechanical Engineering
Sir MVIT, Bengahiru



DEPARTMENT OF MECHANICAL ENGINEERING
SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022-2023

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the project work entitled "DESIGN AND FABRICATION OF CONTACTLESS EDDY BRAKING SYSTEM" is bonafide work carried out by Alok Rajesh Jha bearing USN (1MV19ME004), Hemanth B M bearing USN (1MV19ME022), Kumar Shivam bearing USN (1MV19ME030) and Sourabh C Panchal bearing USN (1MV19ME061) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Dr G. Balakumar

Associate Professor

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

23.05.2028 Dr. K. S. Shanmukharadhya

Professor & HOD

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

inas maranahalli Jangalore-562 157

Interistrativity, Bengaluru.

Names of the Examiners

1) Dr. H.S. Yesh vauther 2) Dr. B. S. PRAVORN KLUNDA

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



A project report on

## FABRICATION OF MACHINE TO CONVERT PLASTIC TO OIL THROUGH PYROLYSIS PROCESS

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

IN

MECHANICAL ENGINEERING

Submitted By
RAVI B K 1MV18ME066
CHANDRASHEKHARA A E 1MV19ME013
SURAJ A 1MV19ME065
V.VIGNESH 1MV19ME068

Under the Guidance of Mrs. Veena B G
Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022 - 23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

### BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled FABRICATION OF MACHINE TO CONVERT PLASTIC TO OIL THROUGH PYROLYSIS PROCESS bonafide work carried out by SURAJ A (1MV19ME065), V. VIGNESH (1MV19ME068), CHANDRASHEKHARA A E (1MV19ME013), RAVI B K (1MV18ME066) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Mrs. VEENA B G Assistant Professor Sir MVIT, Bengaluru MA 24.05.2023

PRINCIPAL
SIR M. VISVESVARAYA 1 - CITUTE OF TECHNOLOGY
Krishnadayarayan 1 - CITUTE OF TECHNOLOGY

Mr. Krishnedevarayana: "unasamaranahalli Dr. K S Shanmukharadhya Internetienal Dro Rakes bangsiere-562 157

Professor and Head of Mech. Dept., Sir MVIT, Bengaluru

Principal Sir MVIT, Bengaluru

Names of the Examiners

1. Dr. H.S. Yellwansha

2. D.R.S. PRAVEER LIMOR

Signature with Date

[C] 24(d)3

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



Project Report On

### "DRIVER DROWSINESS DETECTOR"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering in MECHANICAL ENGINEERING

Submitted By

NANDAN T N NIKHIL AJ RIDU VARSHINI N SIDHARTH VENUGOPAL 1MV19ME035 1MV19ME038 1MV19ME051 1MV19ME060

Under the Guidance of DR. K. S. Shanmukharadhya Department of Mechanical Engineering Sir MVIT Bengaluru-562157.



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

### SIR M VISVESVARAYA INSTITUTE OF **TECHNOLOGYBENGALURU - 562 157** DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Project Work [18ME P83] entitled "DRIVER DROWSINESS DETECTOR" is a bonafied work carried out by Nandan T N(1MV19ME035), Nikhil AJ (1MV19ME038), Ridu Varshini N(1MV19ME051), Sidharth Venugopal(1MV19ME060) in partial fullfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022-23. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report have been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.

Dr.K.S.Shanmukharadhya Professor and Head Dept of Mech Engg Sir MVIT, Bengaluru

Dr.K.S.Shanmukharadhya Professor and Head Dept of Mech Engg Sir MVIT, Bengaluru

Dr. Rakesh S G Principal Sir MVIT Bengaluru

Name of the Examiners

1. Dr. H.S. Yeshwensha 2. Dr. B. J. Penroed kvonon

Signature with Date

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI



### Project Report on

## "SYNTHESIS AND CHARECTERIZATION OF NANOMATERIALS FOR AUTOMOTIVE INDUSTRY"

Submitted in partial fulfillment of the requirements for the award of

#### **BACHELOR OF ENGINEERING**

## IN MECHANICAL ENGINEERING

Submitted by

SUDEEP V R

1MV19ME062

BALARAJU K

1MV20ME400

BHARATH T S

1MV20ME401

DRAKSHAYINI

1MV20ME403

Under the Guidance of

Mr. Sampath Kumar L

**Assistant Professor** 

Department of Mechanical Engineering



# DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



### **CERTIFICATE**

Certified that the project entitled "SYNTHESIS AND CHARACTERIZATION OF NANOMATERIAL FOR AUTOMOTIVE INDUSTRY" is a bonafied work carried out by, SUDEEP V R [1MV19ME062], BALARAJU K [1MV20ME400], BHARATH T S [1MV20ME4001], DRAKSHAYINI [1MV20ME403] are student of VIII Semester in partial fulfillment for the award of degree of Bachelor of Engineeringin Mechanical Engineering at Sir M Visvesvaraya Institute of Technology, Bengaluru during theyear 2022-2023 has successfully submitted the report. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Technical Seminar Report has been approved as it satisfies the academic requirements in respect of Project Phase-2 (18MEP83) prescribed for the Bachelor of Engineering degree.

Mr. Sampath Kumar L. **Assistant Professor** Dept. of Mech Engg.

Sir MVIT, Bengaluru.

S. Shanmukharadhya

Professor & HOD Dept. of Mech Engg. Sir MVIT, Bengaluru. Dr. Rakesh S G Principal

Sir MVIT, Bengaluru.

Names of the Examiners

1. Dr. HS. Yeshvansha 2. Dr. B.S. Provisos leuman

i

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



#### Project Report on

## STUDY AND ANALYSIS OF EFFECT TOOL PROFILE ON FRICTION STIR WELDING

Submitted in partial fulfilment of the requirements

For the award of

BACHELOR OF ENGINEERING

Ĭn

### **MECHANICAL ENGINEERING**

#### Submitted By

BASAMMA.H	1MV19ME010
CHANDRUKUMAR H V	1MV20ME402
KANTEPPA	1MV20ME405
MAHESH AINAPURE	1MV20ME407

Under the Guidance of Mr. CHANDRASEKHAR B

Assistant Professor
Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA

Academic Year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

STUDY AND ANALYSIS OF This is to certify that the project work entitled EFFECT OF TOOL PROFILE ON FRICTION STIR WELDING is bonafide work KUMAR CHANDRU BASAMMA.H (1MV18ME010), (1MV20ME402),KANTEPPA(1MV20ME405),MAHESHAINAPURE(1MV20ME407 in partial fulfilmentfor the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Phase-2 (18MEP83) prescribed for the Bachelor of Engineering degree.

Assistant Professor Sir MVIT, Bengaluru

24.5.2023 Dr. KS Shanmukharadhya Professor and Head of

Mech Dept, Sir MVIT, Bengaluru

Dr. Rakesh S G Principal Sir MVIT, Bengaluru

Names of the Examiners

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI



#### Project Report on

#### "IMPLEMENTATION OF ROCKER BOGIE MECHANISM IN AGRICULTURE"

Submitted in partial fulfilment of the requirements for the award of degree

#### **BACHELOR OF ENGINEERING**

In

#### DEPARTMENT OF MECHANICAL ENGINEERING

#### Submitted by

HARSHIT RAI 1MV19ME020
MOHAN M G 1MV19ME034
NAVEEN RAJ PANDEY 1MV19ME037
NISHANTH KUMAR M 1MV19ME040

Under the guidance of

Mr. RAMESH C G
Assistant Professor
Department of Mechanical Engineering
SIR MVIT



DEPARTMENT OF MECHANICAL ENGINEERING
SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022-2023

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



Certified that the project work entitled "ROUGH TERRAIN VEHICLE USING ROCKER BOGIE MECHANISH" is bonafide work carried out by HARSHIT RAI bearing USN (1MV19ME020), MOHAN M G bearing USN (1MV19ME034), NAVEEN RAJ PANDEY bearing USN (1MV19ME037) and Nishanth Kumar M bearing USN (1MV19ME040) in partial fulfilment for the award of degree of Bachelorof Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as itsatisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Mr. Ramesh C G Assistant Professor

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

Professor & HOD

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

PRINCIPAL SIR M. VISVESVARAYA INCHITUTE OF TECHNOLOGY

05.202 Krishindevarayenaga: Hunasamaranahalli Krishnadevarayenaga: Hunasamaranahan Dr. K. S. Shanmukharadiligiarnational Airport Rook: Bangalore-562 157 Dr. K. S. Shanmukharadiligiarnational Airport Rakesh S. G.

Principal

Sir MVIT, Bengaluru.

Names of the Examiner

1) Dr. H.s. yeshvauthe 2) Dr. B. D. PRANTEN lunge

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



# Report On "MULTI-SOURCE RENEWABLE ENERGY HARVESTING FROM HIGHWAY TRAFFIC"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering in MECHANICAL ENGINEERING

Submitted By

AMAN SINGH ASHISH KUMAR MISHRA DHANUSH N REDDY R HRITHIK REDDY 1MV19ME005 1MV19ME007 1MV19ME016 1MV19ME047

Under the Guidance of
Dr. V. Shantha
Professor
Department of Mechanical Engineering
Sir MVIT Bengaluru-562157.



Estd. 1986

DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU - 562 157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Project Work entitled "MULTI-SOURCE RENEWABLE ENERGY HARVESTING FROM HIGHWAY TRAFFIC" is a bonafide work carried out by Aman Singh (1MV19ME005), Ashish Kumar Mishra (1MV19ME007), Dhanush N Reddy (1MV19ME016) and R Hrithik Reddy (1MV19ME047) in partial fulfillment for theaward of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering Degree.

Dr. V. Shantha Professor Dept. of Mech. Engg. Sir MVIT, Bengaluru Dr. K. S. Shanmukharadhya Professor and Head Dept. of Mech. Engg. Sir MVIT, Bengaluru

Prof. Rakesh S. G. Principal Sir MVIT, Bengaluru

Name of the Examiners

1. Dr. H.S. Yellwantha

2. Dr. B. S. PRINZER LUMAN

Signature with Date

( 24/8/2)

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

590018



Major Project report on

### CRUDE OIL EXTRACTION FROM PLASTIC

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

IN

### MECHANICAL ENGINEERING

Submitted By

GOKUL RAJ SM	1MV19ME018
SANKETH SHINDE	1MV19ME026
HASEEB UR RAHMAAM	1MV19ME021
SAKET GARG	1MV19ME052

Under the Guidance of Mr. Kumar Swamy R
Assistant professor, Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING
SIr M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022 - 2023

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

Certified that the project work entitled CRUDE OIL EXTRACTION FROM PLASTIC bonafide work carried out by GOKUL RAJ SM(1MV19ME018), HASEEB UR RAHMAN(1MV19ME021), SANKETH SHINDE (1MV19ME026), SAKET GARG (1ME19ME052) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Mr. Kumar Swamy R Assistant professor Mech Engg

Sir M V I T, Bengaluru

W.S. V3 Dr. K S Shanmukharadhya

Professor and Head Dept of Mech Engg Sir M V I T, Bengaluru Prof. Rakesh S G **PRINCIPAL** Sir M V I T, Bengaluru

The state of the s

Names of the Examiner

1. Dr. H.S. Yelwautha

2. Dr. M. - S. - Planter lumber

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



#### Project Report on

# SOLAR POWERED SMART AIR PURIFIER WITH AIR QUALITY MONITOR

Submitted in partial fulfilment of the requirements

for the award of

**BACHELOR OF ENGINEERING** 

In

#### MECHANICAL ENGINEERING

#### Submitted By

K SHASHIDHAR 1MV19ME027
PRADEEP SADANAND BIDARI 1MV19ME042
PRASHANTH 1MV19ME044
RAKESH R 1MV19ME050

## Under the Guidance of Mr. H S YESHVANTHA

Assistant Professor
Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA Academic Year 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the project work entitled "SOLAR POWERED SMART AIR PURIFIER WITH AIR QUALITY MONITOR" is bonafide work carried out by K SHASHIDHAR(1MV19ME027), PRADEEP SADANANBIDARI(1MV19ME042), PRASHANTH(1MV19ME044), RAKESH R(1MV19ME050) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work Phase-2 (18MEP83) prescribed for the Bachelor of Engineering degree.

Mr. ITS Yeshvantha Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya Professor and Head of Mech Dept, Sir MVIT, Bengaluru

.5.2025

Dr. Rakesh S G Principal Sir MVIT, Bengaluru

Names of the Examiners

1. Dr. H.S. Yelhvaule

2. Vigay B

Signature with Date

### VISVESVARAYA TRCHNOLOGICAL UNIVERSITY, BELAGAVI-590018



### DESIGN AND ANALYSIS OF THE ANTEPOLE BAR OF

Submitted in partial fulfilment of the requirements for the award of degree BACHBLOR OF ENGINEERING

FORMULA VEHICLE

Ĭn

MECHANICAL BNGINEERING Submitted by

AYUSH VISHAVKARMA TINKU RAJ KUMAR RAJAT POKALE

1MV19ME009

1MV19ME031

1MV19ME049

Under the Guidance

of

MR. K MADHUKUMAR

Assistant Professor Department of Mechanical Engineering Sir MVIT, Bengaluru



DEPARTMENT OF MECHANICAL ENGINEERING
SÍR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year; 2022-2023

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "DESIGN AND ANALYSIS OF ANTI-ROLL BAR OF FORMULA VEHICLE" is bonafide work carried out by AYUSH VISHAVKARMA bearing USN (1MV19ME009), TINKU RAJ KUMAR bearing USN (1MV19ME031), RAJAT POKALE bearing USN (1MV19ME049) in partial fulfilment for the award of degree of Bachelorof Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as itsatisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Madhukumar Assistant Professor

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

74.05.2023 24.05

Dr. K. S. Shanmukharadhya

Professor & HOD

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

Prof. Rakesh S. G.

Principal

Sir MVIT, Bengaluru.

Names of the Examiners

1) Dr. H.S. YeShvausha

2) Dr. B. S. Pravier kungar

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI



A Project Report On

## MEMs: DESIGNING & SIMULATING HIGH SENSITIVITY PIEZOELECTRIC BASED ACCELEROMETER

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING IN

MECHANICAL ENGINEERING Submitted By

AMAN SINGH 1MV19ME005
ASHISH KUMAR MISHRA 1MV19ME007
AYUSH VISHAVKARMA 1MV19ME009
RAJAT POKALE 1MV19ME049

Under the Guidance Of
Dr. Chethan D
Assistant Professor
Department Of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY,

Krishnadevarayanagar, Hunasamaranahalli, Bengaluru-562157 Academic Year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled MEMs: **DESIGNING** SIMULATING HIGH SENSITIVITY **PIEZOELECTRIC** BASED ACCELEROMETERis a bonafide work carried out by AMAN SINGH (1MV19ME005), ASHISH KUMAR MISHRA (1MV19ME007), AYUSH VISHAVKARMA(1MV19ME009), RAJAT POKALE(1MV19ME049) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020-2021. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Professor

Sir MVIT, Bengaluru

Dr K S Shanmukharadhya Professor and Head of

Mech Dept, Sir MVIT, Bengaluru

Dr V R Manjunath

Sir M. VRDEU

A PAYALNSTITUTE OF THE HNOLOGY Krishnadevarayanagar, Hunasama mahalli, International Airport Road, Bangalore 562 157.

Name Of the Examiners

Signature with Date



### Sir M. Visvesvaraya Institute of Technology, Bengalore-562157

### Department of Mechanical Engineering Internship Batch List

SL	USN	NAME	Company
1	1MV18ME066	RAVI B K	GTTC BANGALORE
2	1MV18ME095	SANGAMESH	TAKE IT SMART
3	1MV19ME001	AAKASH MISHRA	NISAAN AUTOMOBILE
4	1MV19ME002	ADITYA SOMVANSHI	HAL,BANGALORE
5	1MV19ME003	ADNAAN TAWHEED JAMEEL	HAL,ARDC,BANGALORE
6	1MV19ME004	ALOK RAJESH JHA	PIXAFLIP, TECHNOLOGY,PUNE
7	1MV19ME005	AMAN SINGH	BHARAT ALUMINIUM COMPANY LTD.
8	1MV19ME006	ARFAAN TAWHEED JAMEEL	HINDUSTAN AERONAUTICS LIMITED
9	1MV19ME007	ASHISH KUMAR MISHRA	SOLID STATE PHYSICS LABORATORY,DELHI
10	1MV19ME008	AYUSH KUMAR	HINDUSTAN AERONAUTICS LIMITED
11	1MV19ME009	AYUSH VISHAVKARMA	SHAHUL AUTOMOTIVES ,PVT LMTD,JAMMU
12	1MV19ME010	BASAMMA H	L & T, BANGALORE
13	1MV19ME011	BS SRI SUMUKHA	HINDUSTAN AERONAUTICS LIMITED
14	1MV19ME012	CHANDAN B S	DIESEL LOCO SHED, KRISHNARAJAPURAM, SOUTH WESTERN RAILWAY
15	1MW10ME012	CHANDD A CHEVILADA A E	SIDDI VINAYAKA FAB ENGINEERING WORKS PVT. LIM
15	1MV19ME013	CHANDRASHEKHARA A E CHOLARAJU S MOHAN	SIDDHI VINYAKA FAB
16	1MV19ME014	RAJU	ENGG PRIVATED LMTD
			DIESEL LOCO SHED KRISHNARAJAPURAM97- 560036
17	1MV19ME015	DHANUSH M P	
18	1MV19ME016	DHANUSH N REDDY	BHARAT ELECTONICS LIMITED
19	1MV19ME017	DINAKAR M K	HIGH TEMP FURNACES PVT LTD

			HINDUSTAN AERONAUTICS
20	1MV19ME018	GOKUL RAJ SM	LIMITED
			HINDUSTAN AERONAUTICS LIMITED
21	1MV19ME019	HANU YADAV	
22	1MV19ME020	HARSHIT RAI	DRDO
23	1MV19ME021	HASEEB UR RAHMAN	TAKE IT SMART
24	1MV19ME022	HEMANTH B M	COMPSOFT TECHNOLOGIES
25	1MV19ME023	HITHESH R	HAL-HELICOPTER DIVISION
			DIESEL LOCO SHED,K R
26	1MV19ME024	HRITHIK B N	PURAM,BANGALORE
27	13 67 (10) 67 (00 6	1111101101111111	DIESEL LOCO SHED,K R
27	1MV19ME025	JAYASURYA K S	PURAM,BANGALORE
28	1MV19ME026	K SANKETH SHINDE	HAL, BANGALORE TAKE IT SMART PVT. LTD
29	1MV19ME027	K SHAHSIDHARA	
			VARCONS TECHNOLOGIES, PVT
30	1MV19ME028	KARTHIK D PATIL	LMTD
31	1MV19ME029	KARTHIK R	HAL-ARDC
			FRENCHEASE
32	1MV19ME030	KUMAR SHIVAM	INTEGRAL COACH FACTORY
33	1MV19ME031	M TINKU RAJ KUMAR	TAKE IT SMADT (ODC)
			TAKE IT SMART (OPC) PVT.LTD
34	1MV19ME032	MARUTHI P K	
35	1MV19ME033	MOHAMMED YAHYA ADIL	AIRCRAFT RESEARCH AND DESIGN CENTRE
26	1MX/10ME024	MOHAN M G	HINDUSTAN AERONAUTICS LIMITED
36	1MV19ME034	MOHAN M G	LAMBHORGINI
37	1MV19ME035	NANDAN T N	BENGALURU
			SIDDHI VINAYAKA FAB
			ENGINEERING PRIVATE
38	1MV19ME036	NAVEEN D	LIMITED
			CHAMPARAN TEA &
39	1MV19ME037	NAVEEN RAJ PANDEY	INDUSTRIES PVT LTD
40	1MV19ME038	NIKHIL AJ	HAL, BANGALORE
41	1MV19ME039	NIKITA SINGH	OALCADEMY
	<u> </u>		SIR MECCANICA SERVICE
42	1MV19ME040	NISHANTH KUMAR M	INDIS PVT. LTD.
			HMT MACHINE TOOLS
43	1MV19ME041	NITESH NADAGERI	LIMITED
44	1MV19ME042	PRADEEP SADANAND BIDARI	TAKE IT SMART, PVT LMTD,BENGALURU

1 1		1	ULTRATECH CEMENT
			LIMITED ,UNIT :RAJASHREE
45	1MV19ME043	PRAJWAL K	CEMENT WORKS
73	11V1 V 171V1L:0+3	TRAJWALK	ULTRATECH CEMENT
			LIMITED ,UNIT
			:RAJASHREE CEMENT
46	1MV19ME044	PRASHANTH	WORKS
			HUNDUSTAN AERONATICS
47	1MV19ME045	PRUTHVI GOWDA V	LIMITED, HELICOPTER DIVISION
77	11 <b>v1 v</b> 171 <b>v1</b> E0+3	TROTTIVI GOWDALV	SIDDHI VINAYAK FAB
48	1MV19ME046	PUNEETH S	ENGINEERING
			SOLID STATE PHYSICS
49	1MV19ME047	R HRITHIK REDDY	LABORATORY
			DIESEL LOCO SHED, K R
50	1MV19ME048	R VINAY KUMAR	PURAM
	43 6744 03 6770 40		BHARAT ALUMINUM
51	1MV19ME049	RAJAT KUMAR POKALE	COMPANY, KORBA
52	1MV19ME050	RAKESH R	HAL,BANGALORE
53	1MV19ME051	RIDU VARSHINI N	L&T CONSTRUCTION EQUIPMENT LTD
54	1MV19ME052	SAKET GARG	EQUI WENT ETB
37	11VI V 171VILO32	SARLT GARG	TAKE IT SMART PVT (OPC)
	11.47.4101.4750.52	CATEVANIADANANIA	LTD
55	1MV19ME053	SATYANARAYANA	HINDUSTAN MACHINE TOOLS
			LIMITED
56	1MV19ME054	SHANTA	
57	1MV19ME055	SHUBHAM ANAND	TATA STEEL LMTD
			HARMONOZIER,PVT
58	1MV19ME057	SHUBHAM KUMAR	LMTD
59	1MV19ME058	SHUBHAM KUMAR JHA	HAL BANGALORE
		SIDDHARTH	HAL BANGALORE
	43 EL 14 03 EL 0.50	SHIVAKUMAR	
60	1MV19ME059	HASAVIMATH	I O THE HOUSE
61	1MV19ME060	SIDHARTH VENUGOPAL	L & T LIMITED
62	1MV19ME061	SOURABH C PANCHAL	COMPSOFT TECHNOLOGIES
		all DEED 1/2	HAL BANGALORE
63	1MV19ME062	SUDEEP V R	LINDUCTAN ACDOMALITICS
			HINDUSTAN AERONAUTICS LIMITED, HELICOPTER
64	1MV19ME063	SUDHAMSHU A C	DIVISION
65	1MV19ME064	SUHAS S	HAL BANGALORE
			DIESEL LOCO SHED, K R
66	1MV19ME065	SURAJ A	PURAM
			GOVERNMENT TOOLS &
67	1MV19ME066	SWAROOP B	TRAINING CENTRE
68	1MV19ME067	TARUN R	DIESEL LOCO SHED
		//	1

			DIESEL LOCO SHED KRISHNARAJAPURAM,SOUTH
69	1MV19ME068	V VIGNESH	WESTERN RAILWAYS
70	1MV19ME069	VARUN V	HAL -HELICOPTER DIVISION
71	1MV19ME070	VINAYAK TEVARANNAVAR	DIESEL LOCO SHED
72	1MV20ME400	BALARAJU K	SPACENEX AERO PVT LMTD
73	1MV20ME401	BHARATH T S	TAKE IT SMART
74	1MV20ME402	CHANDRU KUMAR H V	SIDDHIVINAYAKA FAB ENGG LMTD
75	1MV20ME403	DRAKSHAYINI	GOVERNMENT TOOL ROOM AND TRAINING CENTRE
76	1MV20ME404	EKANTH P MOHITHE	HMT MACHINE TOOLS LIMITED
77	1MV20ME405	KANTEPPA	TAKE IT SMART
78	1MV20ME406	KEERTHI D	TAKE IT SMART
79	1MV20ME407	MAHESH AINAPURE	TAKE IT SMART
80	1MV20ME408	PREMSAGAR G	BEML
81	1MV20ME409	PUNEETH N	KOLAR-CHIKKABALLAPURA COOPERATIVE MILK PRODUCERS SOCIETIES UNION LIMITED (KMF)
82	1MV20ME410	RAJATH H V	HMT MACHINE TOOLS LIMITED
83	1MV20ME411	VAMSHI V	KOLAR-CHIKKABALLAPURA COOPERATIVE MILK PRODUCERS SOCIETIES UNION LIMITED

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belgavi-590 018, Karnataka, India



An Internship Report On

### **Manual Transmission Design**

Submitted in Partial Fulfillment of the requirement for the award of the degree of

## BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By

AAKASH MISHRA

USN: IMV19ME001

Carried out at Nissan Shuhul Ltd, Jammu

Under the Guidance of

Internal Guide Mr. K Ejaz Ahmed Associate Professor Dept. Of ME, SMVIT External Guide Mr. Navneet Singh Sr Service Manager Nissan Automobile



Department of Mechanical Engineering
Sir M Visvesvaraya Institute of Technology
[Affiliated to Visvesvaraya Technological University, Belgaum]

Bengaluru-562157 2022-2023

### Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bengaluru-562157
2022-2023



### **CERTIFICATE**

Certified that the Internship Report entitled "MANUAL TRANSMISSION DESIGN" carried out by Mr. AAKASH MISHRA bearing USN: 1MV19ME001 a Bonafide student of Sir M Visvesvaraya Instituteof Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections/suggestions indicated for INTERNSHIP havebeen executed under the directions of Mr. K Ejaz Ahmed. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP prescribed for the said degree.

sax	
Signature of Guid	e

Mr. K Ejaz Ahmed Associate Professor Dept of ME SIR MVIT Signature of HOD

Dr. K S Shanmukharadhya HOD and Professor Dept of ME

SIR MVIT

PRINCIPAL

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnedevarayanagar, Hunasamaranahalli Internationalevarayanagar, Burgunate-562 157

Prof. Rakesh S G
Principal
SIR MVIT

Names of the Examiners

1) Alaivetus

2) .....

Signature with Date

.....

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



## VIII Semester B.E.Internship Report on DIFFERENT PARTS DESIGN AND MAUFACTURING OF LCA TEJAS FIGHTER JET IN ARDC DIVISION (HAL)

Submitted in partial fulfillment of the requirements for the award of degree of Bachelor of Engineering

In
MECHANICAL ENGINEERING by
ADITYA SOMVANSHI (1MV19ME002)

Under the Guidance Of

External Guide: Mr.Ashok Thayagarajan Manager-ARDC Hindustan Aeronautics Limited(HAL) Bangalore

Internal Guide: Mr.Prashanth L Assistant Professor Mechanical Department Sir MVIT Bangalore

Carried out at

Hindustan Aeronautics Limited(HAL) - Aircraft Research and Design Center(ARDC) Bangalore -560037



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY Bengaluru

AcademicYear:2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TCHENOLOGY,

### BENGALURU

### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship Report entitled " DIFFERENT PARTS DESIGN AND OF LCA TEJAS FIGHTER JET IN ARDC." submitted by MANUFACTURING ADITYA SOMVAMSHI bearing (USN-1MV19ME002) is a bonafide work carried out in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of Sir M Visvesvaraya Institute Of Technology during academic year 2022-23. It is certified that contents of the report have been incorporated as per the guidelines of the university. The internship report has been approved as it satisfies the academic requirements in respect of Internship Report prescribed for the Bachelor of Engineering Degree.

Mr. PRASHANT

Prof. RAKKSHA

Assistant Professor

Professor and HOD Mechanical,

SirMVIT, Bengaluru SirMVIT, Bengaluru SIR M. WSVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Airport Road, Bangalore-562 157

SirMVIT, Bengaluru

Name of the Examiners:

1. Avænasha. PS 2. Shivakumes

Signature with date

A for B 25/5/23

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY "Jnana Sangama", Belagavi - 590 018, Karnataka, India



# INTERNSHIP REPORT ON "LCA DESIGN AND DEVELOPMENT"

Submitted in partial fulfillment of the requirements for the award of the Degree

BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by

ADNAAN TAWHEED JAMEEL USN: 1MV19ME003

Internship carried out at

HINDUSTAN AERONAUTICS LIMITED

BENGALURU, 560037

#### INTERNAL GUIDE

M. K. EJAZ AHMED ASSOCIATE PROFESSOR DEPARTMENT OF MECHANICAL ENGINEERING.

### EXTERNAL GUIDE

Mr. ALEX GEORGE DGM HAL, ARDC, BENGALURU-560037





DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya nagar, Hunasamaranahalli, Bengaluru -562157

ACADEMIC YEAR: 2022 - 2023

### SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 Department of Mechanical Engineering



### CERTIFICATE

This is to certify that ADNAAN TAWHEED JAMEEL, a bonafide student of SIR M. Visvesvaraya Institute of Technology, Bengaluru has satisfactorily completed Industrial training from HINDUSTAN AERONAUTICS LIMITED. In partial fulfillment of the requirements as prescribed by the VTU for the award of Bachelor of Engineering in Mechanical Engineering has submitted this report during the academic year 2022 - 2023.

Mr. K. EJAZ AHMED Associate Professor Dept. of Mechanical

Engineering. Sir MVIT Bengaluru

25.5 20B Dr. K S SHANMUKHARADHYA

Professor and HOD Dept. of Mechanical Engineering. Sir MVIT Bengaluru

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOG Krishnadevarayarlagar. A.K. Salharanahalli International Airport RoadaBangalore-562 15

SIR MVIT Bengaluru

Name of the Examiners

Shivakum S

1.

Signature with Date

25/5/29

2.

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY Juana Sangma, Belagavi-590018



#### INTERNSHIP REPORT

ON

### "Granted Ashram School"

Submitted in partial fulfillment of the requirements for the award of degree of

### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

For the Academic Year 2022-23

Submitted by:

ALOK JHA (1MV19ME004)

Internship carried out at

PIXAFLIP TECHNOLOGIES
PUNE – 411019

Under the guidance of:

Dr G. Balakumar

Associate Professor, Dept. of ME Sir MVIT, Bengaluru MR. SAUDAGAR BARDE

CEO,

Pixaflip Technologies, Pune



DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY HUNASAMARANAHALLI, BENGALURU - 562157

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU -562157

### DEPARTMENT OF MECHANICAL ENGINEERING



It is certified that the Internship work entitled "WEB DEVELOPMENT" is a bonafide work carried out by Mr. Alok Jha (1MV19ME004) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of Internship work prescribed for the course of Bachelor of Engineering.

plebrae Dr G. Balakumar. Associate Professor

Dept. of ME, Sir MVIT

74.5.20 B Dr. K. S. Shanmukharadhya Head of Dept SIR MVIT

SIR M. VISVÈSVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Airport Road, Bangalore-562 157

Principal

Name of the Examiners

Signature with date

DY, SACHUDHANANDAN, 5

2) Es Halin

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



Internship Report On

### "Hands-On Experience in Industrial Operations at BALCO"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering in MECHANICAL ENGINEERING

Submitted By Aman Singh 1MV19ME005

Under the Guidance of

Internal Guide Dr. V. Shantha Professor

Department of Mechanical Engineering Sir MVIT Bengaluru-562157.

External Guide Mr. Komal Chandra Soni SRS Maintenance Bharat Aluminium Company Limited Korba Chhatisgarh 495684



Estd. 1986

DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU - 562 157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Operations at BALCO" is a bonafide work carried out AMAN SINGH (1MV19ME005), in partial fulfillment for the of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of Internship prescribed for the Bachelor of Engineering Degree.

Professor
Dept of Mech Engg

Sir MVIT, Bengaluru

Dr. K. S. Shanmukharadhya Professor and Head Dept of Mech Engg Sir MVIT, Bengaluru

25.5.93

PRINCIPAL

SIR M. VISVESVARATA ASTITUTE OF TECHNOLOGY

Krishnadava Karkesh S Chasamaranahalli
International American, Bangalore-562 157

Sir MVIT, Bengaluru

Name of the Examiners

1. Dr. SACHUDHANANDAN.S

2. Se Halum

Signature with Date

lash

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY "Jnana Sangama", Belagavi - 590 018, Karnataka, India



## INTERNSHIP REPORT ON "LCA DESIGN AND DEVELOPMENT"

Submitted in partial fulfillment of the requirements for the award of the Degree

BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by

ARFAAN TAWHEED JAMEEL USN: 1MV19ME006

Internship carried out at

HINDUSTAN AERONAUTICS LIMITED

BENGALURU, 560037

### INTERNAL GUIDE

M. K. EJAZ AHMED
ASSOCIATE PROFESSOR
DEPARTMENT OF
MECHANICAL
ENGINEERING.

#### EXTERNAL GUIDE

Mr. ALEX GEORGE DGM HAL, ARDC, BENGALURU-560037





DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya nagar, Hunasamaranahalli, Bengaluru -562157

**ACADEMIC YEAR: 2022 - 2023** 

### SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 **Department of Mechanical Engineering**



### CERTIFICATE

This is to certify that ARFAAN TAWHEED JAMEEL, a bonafide student of SIR M. Visvesvaraya Institute of Technology, Bengaluru has satisfactorily completed Industrial training from HINDUSTAN AERONAUTICS LIMITED. In partial fulfillment of the requirements as prescribed by the VTU for the award of Bachelor of Engineering in Mechanical Engineering has submitted this report during the academic year 2022 - 2023.

Associate Professor Dept. of Mechanical

Engineering.

Sir MVIT Bengaluru

2.

75.5.2023 Dr. K S SHANMUKHARADHYA

Professor and HOD Dept. of Mechanical Engineering.

Sir MVIT Bengaluru

PRINCIPAL

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOG Krishnadeventka Tsgar, Albrasamaranahali

International Airpop Rosignasangalore-562 15 SIR MVIT

Bengaluru

Name of the Examiners

1. Shivetunas

Signature with Date 25/5/23

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### CERTIFICATE FROM THE INDUSTRY

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D/ARDC/HR/Proj/Cert/6838/22

20.09.2022

#### CERTIFICATE

This is to certify that Mr. Arfaan Tawheed Jameel (USN No.1MV19ME006) who is a student of B.E (Mechanical). Sir M Visvesvaraya Institute of Technology, Bengaluru, has undergone Internship Training at HAL ARDC, Design Complex, Bengaluru from 24-08-2022 to 20-09-2022 an "No-Pay-No-Fee-Basis". He has been punctual, sincere and committed trainee. His conduct has been found Very Good.

 The student brings in a lot of energy and enthusiasm in the work, he is structured in his approach and methodical in resolving a problem. He is resourceful and adaptive to working environment.



(Prochi Dalvi)

Manager (HR)

ARDC, Design Chmplex.

ಕೋಂದಾಯತ ಕಲೀಂ : 15,4, ಕಬ್ಬರ್ ಚಕ್ಕೆ ಬೆಂಗಳೂರು - 560 001, ಭಾರತ ಭರನಿಜ್ಞನ ಹಾಡನೇಷ : 15,71, ಕಾರ್ಡ್ ನೆಕ್ಕ ಕೆಸನ್ಸನ - 560 001, ಇನನ Registered Office : 15,71, Cubbon Road, Bengaluru - 560 001, India ಹಿ ಐಎನ್/ सी बाई एवं/CIM: L35301KA1963GOI001622

**CS** CamScanner

www.hal-india.co.in

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Inana Sangama", Belgavi-590 018, Karnataka, India



An Internship Report

On

### "J-T CRYOCOOLER FOR SPACE & MILITARY APPLICATION"

Submitted in Partial Fulfillment of the requirement for the award of the degree of

#### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By

ASHISH KUMAR MISHRA

USN: 1MV19ME007

Carried out at SSPL DRDO, NEW DELHI

Under the Guidance of

Internal Guide Or. V. Shantha Associate Professor Dept. Of ME, SMVIT External Guide
Sh. Shital Kumar Garg
Sc. "E" Cryogenics Department
SSPL, DRDO





Department of Mechanical Engineering
Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bengaluru-562157
2022-2023

### Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bengaluru-562157
2022-2023



### **CERTIFICATE**

Certified that the Internship Report entitled "J-TCRYOCOOLER FOR SPACE AND MILITARY APPLICATION" carried out by Ashish Kumar Mishra bearing USN: 1MV19ME007 a Bonafide student of Sir M Visvesvaraya Instituteof Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections/suggestions indicated for INTERNSHIP have been executed under the directions of Dr. V. Shantha The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP prescribed for the said degree.

Signature of Guide

Dr. K S Shanmukharadhya

Signature of HOD

25.5.2023

Dr. V. Shantha
Professor
Dept of ME
SIR MVIT

Dr. K S Shannia Ria a HOD and Professor
Dept of ME
SIR MVIT

Signature of Principal

Prof. Rakesh S G

Principal

SIR MVIT

25/05/23

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadeyarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Names of the Examiners

1) Dr. SACHUD HANANDAN. 5

2) Sp Hours

Signature with Date

### CERTIFICATE

SO SOUL 2015 Certified

(Min. of Defence, DRDO)

Lucknow Road, Timarpur, Delhi-110054

VISTRIUI VILIULA / TRAINING CERTIFICATE

This is to certify that Mr/Ms/ ASHISH KUMAR MISHRA

Student of Str. M. VANESVASAA THITIME OF TECHNOLOgy Roll No. IMVIAMEDO?

Branch Methanical Entitherity (B.E.) has completed successfully Summer/Winter Internship for the period from 21 AVI 2022 to 19 SEP 2022 Duration Ob (Six) weeks/months.

Topic of Internship was T-T (RYOLOGIER FOR CPACE

AND MILITARY APPLICATION)

During the training period his/bar conduct at SSPL was good.

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



## VIII Semester B.E. Internship Report on "EXPLORING THE ROLES OF ARDC IN THE DESIGN AND MANUFACTURING OF LCA"

Submitted in partial fulfillment of the requirements for the award of degree of Bachelor of Engineering

MECHANICAL ENGINEERING
By

AYUSH KUMAR 1MV19ME008

Under the Guidance Of

External Guide: Mr.Ashok Thayagarajan Manager-ARDC Hindustan Aeronautics Limited (HAL) Bangalore Internal Guide:

Mr.Prashanth L

Assistant Professor, ME Sir MVIT Bangalore

Carried out at

Hindustan Aeronautics Limited (HAL) - Aircraft Research and Design Center (ARDC) Bangalore -560037



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY Bengaluru

AcademicYear:2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TCHENOLOGY, BENGALURU

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

This is to certify that the Internship Report entitled "EXPLORING THE ROLES OF ARDC IN THE DESIGN AND MANUFACTURING OF LCA" submitted by AYUSH KUMAR bearing USN-1MV19ME008 is a bonafide work carried out in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of Sir M. Visvesvaraya Institute of Technology during academic year 2022-23. It is certified that all contents of the report have been incorporated as per the guidelines of the university. The internship report has been approved as it satisfies the academic requirements in respect of Internship Report prescribed for the Bachelor of Engineering Degree.

Dr. K S Shanmukharadhya Professor and HOD Mechanical,

18 .5.D

Prof. RAKESH S G

**Assistant Professor** 

Sir MVIT, Bengalupu Sir MVIT, Bengaluru

Principal

Sir MVIT, Bengaluru

Name of Examiners

1. Armagh . p. S 2. Shivatinas

Signature with date

ii

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विभाग अनुसंधान एवं अभिकल्प केण्य (ए आर द्वी भी)
AIRCRAFT RESEARCH & DESIGN CENTRE (ARDC)
कार्य वर्ण्यान (क्ष्मेन्स्य क्ष्मेन्स्य/DESIGN COMPLEX
LIOSSANIAT क्ष्मेन्स्य क्ष्मेन्स्य/DESIGN COMPLEX
विभाग वर्ण्यान क्ष्मेन्स्य क्ष्मेन्स्य/DESIGN COMPLEX
LIOSSANIAT क्ष्मेन्स्य क्ष्मेन्स्य क्ष्मेन्स्य
विभाग क्ष्मेन्स्य
साम्बद्धान एर्थनाविक्स विभिटेड
HINDUSTAN AERONAUTICS LIMITED



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D/ARDC/HR/Proj/Cert/6913/22

28 09 2022

### CERTIFICATE

This is to certify that Mr. Ayush Kumar (USN No. 1MV19ME008) who is a student of B.E (Mechanical), Sir M Visvesvaraya Institute of Technology, Bangalore, has undergone Internship Training at HAL ARDC. Design Complex, Bengaluru from 01-09-2022 to 28-09-2022 are "No-Pay-No-Fee-Basis". He has been punctual, sincere and committed trainee. His conduct has been found Good.

2. The student brings in a lot of energy and enthusiasm in the work. he is structured in his approach and methodical in resolving a problem. He is resourceful and adaptive to working environment.



(Ramesh K)
Chief Manager (HR)
ARDC, Design Complex.

देशरकाराज १८१० : 15/1, १८३४ वर्ड, वेट्सप्रका - 560 001, कार्ड एंजीकृत कार्यालय : 15/1, कस्पन शेड, वेप्सून - 560 001, कार्ट्स Registered Office : 15/1, Cubbon Road, Bengaluru - 560 001, स्पर्धाः

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Inana Sangama", Belgavi-590 018, Karnataka, India



An Internship Report On

### **Manual Transmission Design**

Submitted in Partial Fulfillment of the requirement for the award of the degree of

## BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By

AYUSH VISHAVKARMA

USN: 1MV19ME009

Carried out at Nissan Shuhul Ltd, Jammu

Under the Guidance of

Internal Guide Mr. Madhu Kumar K. Assistant Professor Dept. Of ME, SMVIT External Guide Mr. Navneet Singh Sr Service Manager Nissan Automobile



Department of Mechanical Engineering
Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bengaluru-562157
2022-2023

### Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bengaluru-562157
2022-2023



### CERTIFICATE

Certified that the Internship Report entitled "MANUAL TRANSMISSION DESIGN" carried out by Mr. AYUSH VISHAVKARMA bearing USN: IMV19ME009 a Bonafide student of Sir M Visvesvaraya Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections/suggestions indicated for INTERNSHIP havebeen executed under the directions of Mr. Madhu Kumar K. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP prescribed for the said degree.

Signature of Guide

Mr.Madhu Kumar Assistant Professor Dept of ME SIR MVIT Signature of HOD

Dr. K S Shanmukharadhya HOD and Professor Dept of ME SIR MVIT PRINCIPAL

SIR M. VISVESVAS AND INSTITUTE OF TECHNOLOG Kristingtrature of Britishadamaranahali International Airport Road, Bangalore-562 151

> Prof. Rakesh S G Principal SIR MVIT

Names of the Examiners

1) - Chratimas!

2) PRAILASHA AM

Signature with Date

AP 26/1/23

### INTERNSHIP CERTIFICATE



Shuhul Automotives Pvt. Ltd.
(Nuthorised Dealer of Nissan Range of Cars)
National Highway 1, Narwal Bye Pass Road, Opposite Wave Mall Bathindi, Jamma-181152



#### TO WHOMSOEVER IT MAY CONCERN

This is no certify that Mr. Ayush Vishavkarma, a student of SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU has undergone an internship in Nissan & Shuhul Ltd. MRV Jammu of this organization as an intern from 22.08.2022 to 17.09.2022.

Mr. Ayush Vishawkarma has successfully completed the project of "Manual Transmission Design".

During the training period, his attendance & conduct was Good.

We wish him Best Wishes for his future Studies & Carrer.

For Nissan & Shuhul Ltd.

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



Internship Report On

### "L & T CONSTRUCTION EQUIPMENT"

Submitted in Partial Fulfillment of the requirement for the award of the degree of

BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By:

**BASAMMA H** 

1MV19ME010

Under the Guidance of Mr. CHANDRASEKHAR B Dept of Mechanical Engineering SMVIT Bengaluru-562157



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562157 Academic Year: 2022-2023

### Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bangaluru-562157
2022-2023

#### CERTIFICATE

Certified that the Internship [18MEI85] entitled "L & T CONSTRUCTION EQUIPMENT" carried out by Ms. BASAMMA H bearing USN: 1MV19ME010 a Bonafied student of Sir M Visvesvaraya Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internship have been executed under the directions of Mr. CHANDRASEKHAR B. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP [18MEI85] prescribed for the course of Bachelor of Engineering.

Signature of Guide

Mr. CHANDRASEKHAR B Assistant Professor Dept of Mech Engg SIR MVIT JA 75.5.03

Signature of HOD

Dr.K.S.Shanmukharadhya HOD & Professor Dept of Mech Engg SIR MVIT PRINCIPAL

SIR M. VISVESVAXAYA INSTITUTE OF TECHNOLOGY

Krishnadevarayanagar, Hunasamaranahalii
International Aliport Road, Bangalora-562, 157

Signature of Principal

Dr. Rakesh S G Principal SIR MVIT

Names of the Examiners

1. Do SACHUDHAN ANDAN S

2. SB Halmh

Signature with Date

### Internship certificate



LTCEL/HR/INTERNSHIP/2022

17-September-2022

#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Basamma (1MV19ME010) of Sir M Visvesvaraya Institute of Technology Bengaluru, has undergone Internship at our Organization from 22-08-2022 to 19-09-2022. During the above period she has completed Internship at L&T Construction Equipment Limited, Doddaballapura.

The Conduct of the Student was found Satisfactory during the Internship.

We wish her all the best for her future endeavors.

for L&T Construction Equipment Limited.

(S D Satish Chandra)

DGM-HR & IR

Registered Office : LBT House, N. M. Marg. Ballard Estate, Mumbal - 400 001, INDIA. www.Lar CRL U29248MH2018PCC318481



### VISVESVARAYA TECHNOLOGICAL UNIVERSITY "Jnana Sangama", Belagavi - 590 018, Karnataka, India



# INTERNSHIP REPORT ON "LCA DESIGN AND DEVELOPMENT"

Submitted in partial fulfillment of the requirements for the award of the Degree

#### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by

**B S SRI SUMUKHA** 

**USN: 1MV19ME011** 

Internship carried out at

HINDUSTAN AERONAUTICS LIMITED

BENGALURU, 560037

#### INTERNAL GUIDE

MR. K. EJAZ AHMED ASSOCIATE PROFESSOR DEPARTMENT OF MECHANICAL ENGINEERING.

### EXTERNAL GUIDE

Mr. ALEX GEORGE DGM HAL, ARDC, BENGALURU-560037





DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya nagar, Hunasamaranahalli, Bengaluru -562157

**ACADEMIC YEAR: 2022 - 2023** 

### SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 Department of Mechanical Engineering



### CERTIFICATE

This is to certify that B S SRI SUMUKHA, a bonafide student of SIR M. Visvesvaraya Institute of Technology, Bengaluru has **AERONAUTICS** completed Industrial training from HINDUSTAN LIMITED. In partial fulfillment of the requirements as prescribed by the VTU for the award of Bachelor of Engineering in Mechanical Engineering has submitted this report during the academic year 2022 - 2023.

Mr. K. EJAZ AHMED Associate Professor Dept. of Mech Engg.

Sir MVIT Bengaluru

75.5.90 PS Dr. K S SHANMUKHARADHYA

Professor and HOD Dept. of Mech Engg. Sir MVIT Bengaluru PRINCIPAL

SIR M. VISVESYARAYA INSTITUTE OF TECHNOLOGY Krishnadayarayanagar, Hunasamaranahalli International Airpon Troat, Sairt Stress 62 157

Principal SIR MVIT Bengaluru

Name of the Examiners

Signature with Date

Shivatimus S

### CERTIFICATE FROM THE INDUSTRY

्राञ्चन शंद्रकेश्यानं राज्यु अस्तुन्तं वेरवयु (३ वरणं व ३) विचान अनुसंघान एवं अभिकल्प केन्द्र (ए आर डी सी) AMCRAFT RESEARCH & DESIGN CENTRE (ARDC) अनुन वंद्रकार / मान्यान व्यक्तिक/ DESIGN Locial कृता अर्थकरस्थानं OEDISM क्रिनुस्तान एरोनॉटिक्स लिमिटेड NURDUSTAN AERONAUTICS LIMITED



Emote' seq diarri, tionelaris 500937, tinosi nrungsell dire, fings 500937, mon Marsthahati Post, Bengaluru-560937, india CLA (grant/Ph.: 91-80-22324912,22316774 there/faxt/Faxt91-80-22314320

D/ARDC/HR/Proj/Cert/6838/22

20.09.2022

#### CERTIFICATE

This is to certify that Mr. B \$ Sumukha (USN No.1MV19ME011) who is a student of B.E (Mechanical), Sir M Visvesvaraya Institute of Technology, Bengaluru, has undergone Internship Training at HAL ARDC, Design Complex, Bengaluru from 24-08-2022 to 20-09-2022 on "No-Pay-No-Fee-Basis". He has been punctual, sincere and committed trainee. His conduct has been found Very Good.

 The student brings in a lot of energy and enthusiasm in the work, he is structured in his approach and methodical in resolving a problem. He is resourceful and adaptive to working environment.



(Prachi Dalvi) Manager (HR) ARDC, Design Complex.

र्द्भारक्काळाड ४८१० : 15/1, ४६२८ ರಸ್ತೆ, ಬೆಂಗಳೂರು - 560 001, ಭಾರತ पंजीकृत कार्यालय : 15/1, कम्बन रोड, बेंगलूठ - 560 001, पारत Registered Office : 15/1, Cubbon Road, Bengaluru - 560 001, India ತಿ. ಬಎನ್/ सी आई एन/CIN:L35301KA1963GO1001622

**CS** CamScanner

#### XISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGANT - 590018



Internship Report on

#### "BOGIES MAINTENACE OF HHP LOCOS"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

In

**MECHANICAL ENGINEERING** 

Submitted By

CHANDAN B S

1MV19ME012

Internship carried out at

DIESEL LOCO SHED KRISHNARAJAPURA-560036



SWR

Under the Guidance of

#### MRS. ASHA RANI A

Asst. Professor Department of Mechanical Engineering

#### SRI. SRINIVAS RAO D

Asst. Divisional Mechanical Engineer Diesel Loco Shed, Krishnarajapura

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

It is certified that the Internship work entitled "BOGIES MAINTENACE OF HHP LOCOS" is a bonafide work carried out by CHANDAN B S (1MV19ME012) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18ME185) prescribed for the course of Bachelor of Engineering.

Mrs. Ashia Rani A Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya
Professor and Head of
Mech. Dept., Sir MVIT, Bengaluru

PRINCIPAL
SIR M. VISVESVA
Krishnadeva
International Autoritional Jang

al Aircoit i angaiore-562 157

Dr. Rakesh S G

TUTE OF TECHNOLOG

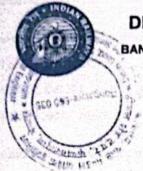
Principal Sir MVIT, Bengaluru

Names of the Examiners

1. Awash PI

2. Chivaland

#### INTERNSHIP CERTIFICATE



DIESEL LOCO SHED, KRISHNARAJAPURAM

BANGALORE DIVISION, BANGALORE-36, SOUTH WESTERN RAILWAY

#### CERTIFICATE

This is to certify that the below mentioned student, perusing B.E (Mechanical Engineering) in SIR.M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU – 562157 has successfully undergone internship in our organization from August 29, 2022 to September 24, 2022. During this period he has completed a project entitled "Study of Diesel HHP Loco Bogie Maintenance"

CHANDAN. B.S (1MV19ME012)

During this period, his conduct and behavior was found good and he has shown keen interest to learn.

This certificate is solely issued for education purpose to provide industrial exposure to students.

We wish success in his future endeavors.

Date: 24.09.2022

Place: Krishnarajapuram

(YOGESH BHALEKAR)
Sr. Divisional Mechanical Engineer

वृति तावस योजिस वृजीनियर Sr Divisional Mechanical Engineer वृद्धने कुपराज्ञात्व इन्द्र रहि Kahasasasasa

מעט ניפערים ומומות ביי איווי א

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI - 590018



#### An Internship Report on

#### "ORGANIZATION STUDY"

Submitted in partial fulfilment of the requirement for the award of degree BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

Submitted by:

## CHANDRASHEKHARA A E - 1MV19ME013

Internship carried out at

## SIDDHI VINAYAKA FAB ENGINEERING PRIVATE LIMITED

No.206, 11th main 3rd Phase, Peenya Industrial Area, Bangalore - 560058

Internal Guide

Mrs. Veena B G

Assistant Professor

Sir M V I T, Bengaluru

**External Guide** 

Mohammed Basheer Ahmed

**Technical Director** 

Siddhi Vinayaka Fab Engineering



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022 - 23

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

#### BENGALURU-562157

## DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Internship work entitled "ORGANIZATION STUDY" successfully completed by CHANDRASHEKHARA A E (1MV19ME013) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of Internship Work prescribed for the Bachelor of Engineering degree.

Mrs. Veena B G

Assistant professor

Mechanical Engineering

Sir M V I T, Bengaluru

25.5.2022 Dr. K S Shanmukharadhya

Professor and Head

Dept of Mechanical

Engineering

Sir M V I T, Bengaluru

Krishnedevareyanadar, Hunasamaranahalii International Airport Road, Bengatore 562 157

Sir M VIT.

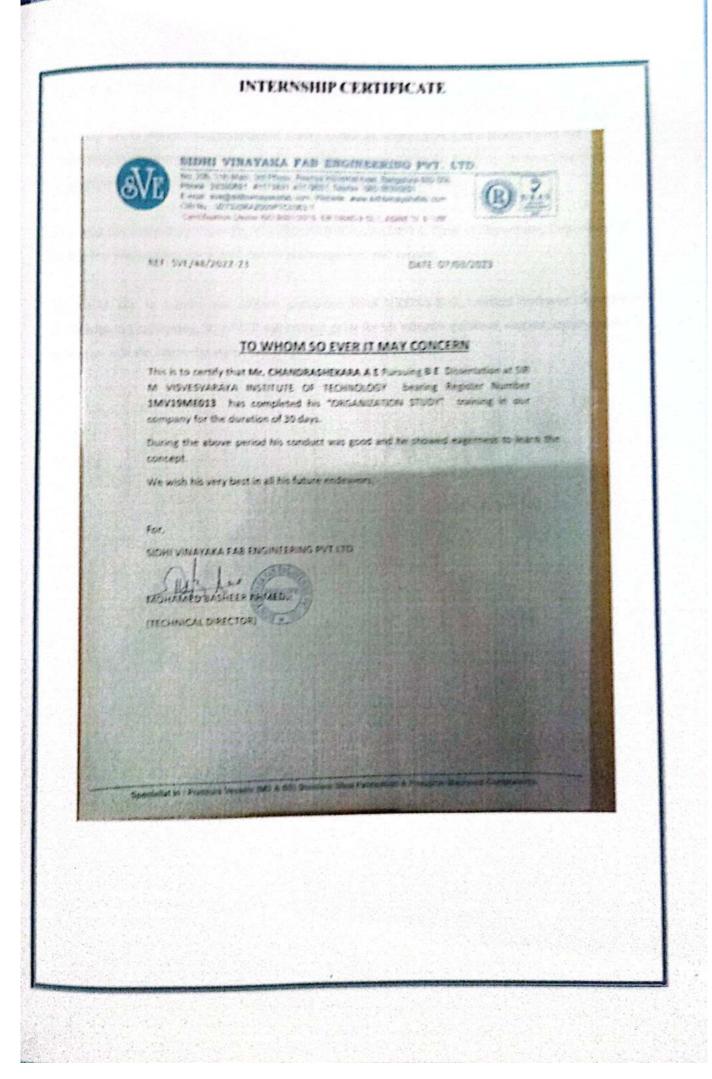
Bengaluru

Names of the Examiner

with date

1. D. 5. SACHU DHANANDAN. 5 de 25/05/23 2. 8B. HaleM

Signature



## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018



#### INTERNSHIP REPORT ON

## "STUDY ON BEML FUNCTIONALITIES"

Submitted in partial fulfillment of the requirements for the award of

BACHELOR OF ENGINEERING

In

#### MECHANICAL ENGINEERING

Submitted By CHOLARAJU S MOHANRAJU 1MV19ME014

Internal Guide
Mr. ASHA RANI A

Assistant Professor Sir M vivesvaraya Institute of Technology ExternaGuide ARUN KUMAR MANAGER



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA Academic Year: 2022-23

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGYBENGALURU-562157, KARNATAKA, INDIA

## DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship report entitled "STUDY ON BEML FUNCTIONALITIES" is bonafidework carried out by CHOLARAJU S MOHANRAJU (1MV19ME014) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Intership report has been approved as it satisfies the academic requirements in respect of Internship (18MEI85) prescribed for the Bachelor of Engineering degree.

**Assistant Professor** Sir MVIT, Bengaluru hanmukharadhya

Professor and Head of MechDept, Sir MVIT,

Bengaluru

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOG Krishnadevarayanagur, Hunasamaranahalli dhya Dr. Rakesh S G

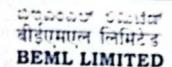
PRINCIPAL

Principal

Sir MVIT, Bengaluru

Names of the Examiners







Schedule W.Company under Ministry of Defence, Govt. of India

Defence & Aerospace | Mining & Construction | Rail & Metro

Ref: TKT/137(C)/2022

Date: 11-05-2023

## To Whomsoever It May Concern Internship Certificate

This is to certify that Mr. Cholaraju S Mohanraju(USN: IMV19ME(114) a student of BE (Mechanical Engineering) from SIR M Visvesvaraya Institute Of Technology, Bangalore has successfully undergone internship programme at our organization w.e.f. 26.08.2022 to 15.09.2022. During his stay at BEML Limited, his Character and Conduct was found Good.

We wish, Mr. Cholaraju S Mohanraju, ALL THE BEST in his future Endeavours.

for BEML LIMITED

ARUNKUMARTS

Asst. General .Manager [Training]

ARUN KUMAR TS

Asst. Gen. Manager, Training Control of Street, Street

Petavadi Post; MYSURU-570 014

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# VISVESVARAVA TECHNOLOGICAL UNIVERSITY. BELAGAVI - 590018



Internship Report on

### "BOGIES MAINTENACE OF HHP LOCOS"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

DHANUSH M P

1MV19ME015

Internship carried out at

DIESEL LOCO SHED KRISHNARAJAPURA-560036



SWR)

Under the Guidance of

#### MRS. ASHA RANI A

Asst. Professor Department of Mechanical Engineering

#### SRI. SRINIVAS RAO D

Asst. Divisional Mechanical Engineer Diesel Loco Shed, Krishnarajapura

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

## DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "BOGIES MAINTENACE OF HHP LOCOS" is a bonafide work carried out by DHANUSH M P (1MV19ME015) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18ME185) prescribed for the course of Bachelor of Engineering

Mrs. Asha Rani A Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya
Professor and Head of

Mech. Dept., Sir MVIT, Bengaluru

SIRM, VISVESVAR

Krishnadevara

resementation

International Dr. Rakesh 5 @ ore-562 157

Principal Sir MVIT, Bengaluru

Names of the Examiners

1. Avenash P.

2. Shi Kaleum S

# INTERNSHIP CERTIFICATE



DIESEL LOCO SHED, KRISHNARAJAPURAM
BANGALORE DIVISION, BANGALORE-36, SOUTH WESTERN RAILWAY

#### CERTIFICATE

This is to certify that the below mentioned student, perusing B.E (Mechanical Engineering) in SIR.M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU – 562157 has successfully undergone Internship in our organization from August 29, 2022 to September 24, 2022. During this period he has completed a project entitled "Study of Diesel HHP Loco Bogie Maintenance"

#### DHANUSH. M.P (1MV19ME015)

During this period, his conduct and behavior was found good and he has shown keen interest to learn.

This certificate is solely issued for education purpose to provide industrial exposure to students.

We wish success in his future endeavors.

Date: 24.09.2022

Place: Krishnarajapuram

(YOGESH BHALEKAR)
Sr. Divisional Mechanical Engineer

वर्षिः प्राप्त्रस्य साहितः इत्रोतियाः Sr Divisional Mechanical Employer दुप्तरे, प्राप्ति अपूर्ण SW Ny Nichologyanası देपलार-Bandalara 560 936

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

## "ELECTRONIC WARFARE AND AVIONICS"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

**DHANUSH N REDDY** 

1MV19ME016

Internal Guide
Dr. V Shantha
Professor
Department of Mechanical
Engineering
Sir MVIT Bengaluru-562157.

External Guide
Mrs. Tara Singh
Manager,
Bharath Electronics Limited



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship report entitled "ELECTRONIC WARFARE AND AVIONICS" is a bonafide work carried out by Dhanush N Reddy of USN: 1MV19ME016 of Sir M. Visvesvaraya Institute of Technology, Bengaluru, in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The Internship report has been approved as it satisfies the academic requirements in respect of Internship prescribed for Bachelor of Engineering degree.

Dr. V Shantha Professor

Sir MVIT, Bengaluru

Dr. K S Shanmukharadhya Professor and Head of Mech. Dept., Sir MVIT, Bengaluru

SIR M. VISVESVARAYA INSTITUTE OF TECHN Krishnadayarayanagar, Hunasamarana nrishnauevarayanaBar, nunasamarana Internation Prof. Rakesh S G Principal

Names of the Examiners

ACHUDHANANDAN .S

Signature with Date

25/05/2

OGY





## **CENTRE FOR LEARNING AND DEVELOPMENT**

BHARAT ELECTRONICS LIMITED (A Govt. of India Enterprise, Ministry of Defence) Jalahalli Post, Bengaluru - 560 013, India

# Certificate

This is to certify that
Sri./Smt/Kum Dhanush . N. Reddy
Ref No. 1410 / CLD / HA /2022 - 23/27 / 237
student of Sir. M. Visvesvaraya . Institute . Of
Technology Bengalore
carried out Project Work/Internship on Overview . Of.
Flectronics Wargars And Avionics
in Electronics Margare And Avionics
SBU/CSG of BEL, Bengaluru from 29 Aug 2022
to 28 . 5ep . 2022
He/She was regular and punctual in his/her attendance
and his/her conduct was satisfactory during the period.

Project / Internship Guide

Date: 38 | 09 | 2032

Place: Bengaluru





## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



Internship seminar report on

## "MANUFACTURING OF BATCH TYPE INTEGRAL SEALED QUENCH FURNACE"

Submitted in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

Submitted By DINAKAR M K 1MV19ME017



Under the Guidance of

Mr. Uday Naidu Production manager hightemp furnaces pvt.ltd



Mrs. Asha Rani A Assistant professor Sir MVIT, Bengalore

DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022 - 23

## SIR M.VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Internship entitled "MANUFACTURING OF BATCH TYPE INTEGRAL SEALED QUENCH FURNACE" bonafide work carried out by DINAKAR M K, USN: 1MV19ME017 a student of VIII Semester in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of Sir M Visvesvaraya Institute of Technology, Bengaluru during the year 2021-2023 has successfully completed the internship at "HIGHTEMP FURNANCES PVT LTD" and has successfully submitted the report. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Internship Report has been approved as it satisfies the academic requirements in respect of Internship (18MEI85/18IMI85) prescribed for the Bachelor of Engineering degree.

Mrs. Asha Rani A Assistant professor Dept of Mech Engg Sir M V I T, Bengaluru

S Shanmukharadhya

Professor and Head Dept of Mech Engg

Sir M V I T, Bengaluru

Krishnadevarayanagar, Hunesamaranahalli International Airport Road, Sangalore See 157
Prof. Rakesh S G

PRINCIPAL Sir M V I T,

SIR M. VISVÈSVARAYA INSTITUTE OF TECHNOLOGY

Bengaluru

Names of the Examiner





10, 2nd Phase, Peenya Indi Area. Bengalaru - 560-656 Kamataka, India Phone - 401-80-36365611 / 4076/1546 Par - 451-80-26330460 / 28395465 Website www.hightemp-fumacus.com

Ref No- HTF/TNG/2022-2023

Date: 16th September 2022

#### TO WHOM SO EVER IT MAY CONCERN

This is to certify that Mr. Dinakar M K (Reg No- 1MV15ME017) studying EE- Mechanical Engineering in Sir M Visvesvaraya institute of technology, Krishnadevarayanagar, Bangalore-562157. Carried out Internship training in our company from 22<sup>nd</sup> August 2002 to 16<sup>th</sup> September 2022.

In the span of his candidature was found to be sincere and good learner.

We wish him a bright Future.

Thanking You.

For Hightemp Furnaces Limited

Asst. Manager - HR & Admin

Heat Treatment Furnaces and Allied Heating Equipment
Member Down Thermotech Co. Ltd. Japan (THT Divn)
Regi Cff : \$ 8, Doly Apartners Countril Level Cross Pawan Baug Road Malad West, Munica - 400 054



## VISVESVARAYA TECHNOLOGICAL UNIVERSITY JNANASANGAMA, BELAGAVI - 590 018, KARNATAKA



An Internship Report on

## "GROUND TESTING CENTRE"

Submitted in partial fulfillment of the requirement for the award of degree

# BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by:

GOKUL RAJ SM (1MV19ME018)

VIII Semester
Internship carried out

At

"HAL-ROTARY RESEARCH AND DESIGN CENTRE"

HR DEPARTMENT, HELICOPTER DIVISION (HC) HINDUSTAN
AERONAUTICS LIMITED, Bangalore – 560 017, INDIA.

Internal Guide

Mr. KUMAR SWAMY R

Associate Professor

Sir M. Visvesvaraya Institute of Technology

External Guide

Mrs. PRABHA

HR department

**HAL-Helicopter Division** 



## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru-562157

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022 - 2023

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# Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157



## DEPARTMENT OF MECHANICAL ENGINEERING **CERTIFICATE**

This is to certify that the Internship Report on "GROUND TESTING CENTRE" submitted by GOKUL RAJ SM bearing 1MV19ME018 respectively is a bonafide student of Sir M. Visvesvaraya Institute of Technology, has successfully completed the Internship programme in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering prescribed by Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. The Internship report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering degree.

Signature of Internal Guide

Mr. Kumar Swamy Associate Professor

Dept. of Mech Engg., SMVIT

Signature of HOD

Dr. K S Shanmukharadhya Professor and HOD Dept. of Mech Engg., SMVIT

Prof. Rakesh S G PRINCIPAL

**External Viva** 

Name of the Examiners:

CHUDHANANDAN. 5

#### CERTIFICATE

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PENNY SKING RESEARCH & DESIGN CENTRE DESNY COMPLEX HINDUSTAN AERONAUTICS LIMITED Bengaluru - 560 017, India CIAULIST / THIS / Ph.1 91 - 80 - 2232 3149 91 - 80 - 2231 1284

HAL/DC/RWRDC/HR/INTRNSHP/ 1190 /2022

20th September 2022

www.hal-india.co.in

#### CERTIFICATE

This is to certify that Mr. Gokul Raj S M(USN: 1MV19ME018), student of B.Tech(Mechanical Engineering), Sir M. Visvesvaraya Institute of Technology, Bangalore has undergone Internship on No-pay-No-fee basis from 25.08.2022 to 20.09.2022 at Ground Test Centre, Rotary Wing Research & Design Centre, Hindustan Aeronautics Limited, Bengaluru.

2. His Punctuality, Behavior, Conduct, Progress in Training were 'Very Good' as rated by the Department Head during his training period with us.

(U SUDHAKAR) SENIOR MANAGER (HR)

Mr. Gokul Raj S M USN: 1MV19ME018 B.Tech (Mechanical Engineering) Sir M. Visvesvaraya Institute of Technology Bangalore



ದೋಂದಾಯತ ಕಚೇರಿ : ೧೫/೧. ಕಬ್ಬನ್ ರಸ್ತೆ, ಬೆಂಗಳೂರು-೫೬,೦೦೦೧, ಭಾರತ पंजीकृत कार्यालय : 15/1, कब्बन रोड, बेंगलूर - 560 001, भारत Registered Office : 15/1, Cubbon Road, Bengaluru - 560 001, India

A to apr/ 세 smi 무기/CIN:L35301KA1963G01001622 · 역/ 발/ E: herwide@hal-india.co.in

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI



### Internship Report

Submitted in partial fulfillment of the requirements for the award of

#### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By

Hanu Yadav

1MV19ME019

Under the Guidance of

Mr. K. Ejaz Ahmed

Associate Professor Department of Mechanical Engineering

Sir MVIT, Bengaluru



DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022-2023

## SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Internship entitled "Design and Development of Rotary Aircraft" is a bonafide work carried out by Hanu Yadav, USN: 1MV19ME019 a student of VIII Semester in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of Sir M Visvesvaraya Institute of Technology, Bengaluru during the year 2022-2023 has successfully completed the internship at "Hindustan Aeronautics limited" and has successfully submitted the report. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Internship Report has been approved as it satisfies the academic requirements in respect of Internship (18MEI85) prescribed for Bachelor of Engineering degree.

Mr. K. Ejaz Ahmed

Associate Professor

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

24.5.208 Dr. K. S. Shanmukharadhya

Professor & HOD

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

International Airport Road, Bangalore-562 157

Names of the Examiners

# INTERNSHIP CERTIFICATE

मानव संस्थान विभाग इतिकारित प्रभाग (वैका) विज्ञानिक एरोगाटिकत निविदेश \$4 x7407 1750, \$1097 - 560017, 1000



HR DEFARTMENT HELICOPTER DIVISION (HC) HINDUSTAR APPOHAUTICS LIMITED Fost Sag No. 1790, Bangatore-560 017, India Ph. (green; 1 91-85-2231 7891, 2232 1918 Fax (been) 1 91-85-22314717

Ref: 31/A/31R/CM (PR)/2022

September 20, 2022

www.hal-india.com

#### CERTIFICATE

This certify that Mr. Hanu Yadav (USN No : 1MV19ME019) student of BE - Mechanical Engineering, Sir M. Visvesvaraya Institute of Technology, Bangalore, has undergone "Internship" in Machine Shop, HAL-Helicopter Division from 22.08.2022 to 20.09.2022

- His Punctuality, Conduct, Behaviour and Progress during the period of "Internship" was Satisfactory.
- We wish Mr. Hanu Yadav all the very best in all his future endeavors.

For IAL-Helicopter Division

8x tu

(20/09/2022 (G. H. Raju) Chief Manager (Public Relations)

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visityse meteres : 15/1, marri the, dong - 56000), orde Registered Office: 15/1, Cubbon Road, Bangalore 560 001, India CIN: USS TOLKA 1961GORO01622 E(f): but hooperhal-indus com-

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



Internship Report On

#### "STIRLING CRYOCOOLER USED IN SPACE"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering in MECHANICAL ENGINEERING

Submitted By HARSHIT RAI 1MV19ME020

Under the Guidance of

Mr. Ramesh C G
Assistant Professor
Dept. of Mechanical Engg.
Sir MVIT Bengaluru-562157.

Mr. Shital Garg
Scientist 'D'
Department of Cryogenics
Solid State Physics Laboratory (SSPL), DRDO
Timarpur, New Delhi



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157 Academic Year: 2022-2023

## SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY **BENGALURU - 562 157** DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Internship Review on "STIRLING CRYOCOOLER USED IN SPACE" is a bonafide work carried out HARSHIT RAI (1MV19ME020), in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of Internship prescribed for the Bachelor of Engineering Degree.

25-052027 Mr. Ramesh C G **Assistant Professor** 

Dept of Mech Engg Sir MVIT, Bengaluru Dr. K. S. Shanmukharadhya Professor and Head

Dept of Mech Engg Sir MVIT, Bengaluru

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishpadefe Rahagah SuGasamaranahalli International pipport Road, Bangalore-562 157

Sir MVIT. Bengaluru

Name of the Examiners

DO. SACHUD HANANDAN.S

## COMPANY CERTIFICATE





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(Min. of Defence, DRDO) Lucknow Road, Timarpur, Delhi-110054 प्रशिक्षण प्रमाणपत्र /TRAINING CERTIFICATE

This is to certify that Mr./Ms./ HARSHIT	RA1
Student of SIV. M. VISUELVARAYA TRISTITUTE OF TE Branch MECHANICAL ENGINEERING (BE) has completed the period from 21 AUG 2022 to 19 SEP 2022 Du	successfully Summer/Winter Internship for
Topic of Internship wasSTIRLINIT	
During the training period his ther conduct at SSPL was good.	Markens.
	116,000 1111

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

#### "AUTODESK INVENTOR PROFESSIONAL"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

Submitted By

HASEEB UR RAHMAN 1MV19ME0321

Internship carried out at TAKE IT SMART PVT. LTD VIJAYNAGAR-560040





Under the Guidance of

Mr. KUMAR SWAMY R

Asst. Professor Dept. of Mech. Sir MVIT, Bengaluru Mr. RAGHUVENDRA

Asst. Designer Mechanical EngineerTake It Smart Vijayanagar

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "TAKE IT SMART PVT. LMT" is a bonafide work carried out by HASEEB UR RAHMAN (1MV19ME021) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Mr. KUMAR SWAMY R Assistant Professor

Sir MVIT, Bengaluru

Dr. KS Shanmukharadhya

Professor and Head of Mech. Dept., Sir MVIT, Bengaluru

SIR M. VISVĖSVARAYA INSTITUTE OF TECHLOLOGY Krishnadevarayansgar, Hunasamaran Halli

International Arran Cond Sengalore 5 157

Principal

Sir MVIT, Bengaluru

Names of the Examiners

DHANANDAN.S

## INTERNSHIP CERTIFICATE



# Take It Smart (OPC) PVT LTD

# 14, SGN Arcade, 1st Floor, 2nd stage, 1st Main Rd, RPC Layout, Vijayanagar, Bengaluru - 560 040 Mob. | 8050104212 / 8792697647 www.takeitsmart.in

TAKE IT SMART

Reg No.: 150027

ISO 9001 :2015

## Internship Certificate

This Certifies that

#### HASEEB UR RAHMAN

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

**Autodesk Inventor Professional** 

Has completed internship in Autodesk Inventor Profes: 20th August 2022 to 20th September 2022

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her And Wish him / her all the best for him / her future.









## VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018, Karnataka, India



An Internship Report On

"Template for Online YOGA Training Center"
Submitted in Partial Fulfillment of the requirement for the award of the degree of

BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By

HEMANTH B M

1MV19ME022

Carried out at
Compsoft Technologies



Under the Guidance of

Internal Guide
Dr. G. BALAKUMAR
Associate Professor
Dept. Of ME, SIR MVIT

External Guide Mr. NITHIN Trainer Compsoft Technologies



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bangaluru-562157
2022-2023

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

## DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "TEMPLATE FOR ONLINE YOGA TRAINING CENTER\* is a bonafide work carried out by HEMANTH B M (1MV19ME022) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Dr. GBALAKUMAR

Associate Professor

Mechanical Department

Sir MVIT, Bengaluru

Dr. K S Shanmukharadhya Professor and Head of

Mechanical Department

Sir MVIT, Bengaluru

PRINCIPAL

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOG Internation Africa Rakes & G

Principal

Sir MVIT, Bengaluru

Names of the Examiners

## Company Certificate



#### Compsoft Technologies

Providing a Complete Suite of IT Solutions

Certificate ID - 1CSTFSM264

Date - 30/09/2022

## Certificate of Internship

This is to certify that Mr Hemanth B M (1MV19ME022) has done his Full Stack Web Development Internship in Compsoft Technologies, RajajiNagar, Bangalore, from 25th August 2022 to 29th September 2022.

He has worked on a project titled Template For Online Yoga Training Center. This project was aimed at creating a cutting edge website for a client of ours, As part of the project, he designed functional webpages, Backend Databases to collect, store, and sort data, by understanding the design briefs and client Specifications that were provided in the Proposal.

During the internship, he demonstrated good design skills with a selfmotivated attitude to learning new things. His performance exceeded expectations and was able to complete the project successfully on time, We wish him all the best in his future endeavours.

Warm regards,





**(1)** 



\*Development

\*ML & Research

Search Engine Optimisation

\*Branding and Design

\*Content Writing \*Embedded Systems and IOT

## VISVESVARAYA INSTITUTE OF TECHNOLOGY, BELAGAVI – 590 018



An Internship Report on

#### "METHODS AND TOOLING DEPARTMENT"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering

in

MECHANICAL ENGINEERING

Submitted By

HITHESH R (1MV19ME023)

Internship carried out

At

"HAL - HELICOPTER DIVISION"

Hindustan Aeronautics Limited, Bangalore - 560 017, India

Internal Guide

Mr. Nataraj M

**Assistant Professor** 

Department of Mechanical Engineering

**External Guide** 

Mr. Hemanth D M

Manager

HAL - Helicopter Division



SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE – 562 157 DEPARTMENT OF MECHANICAL ENGINEERING

## SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE - 562 157

## DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship Report on "METHODS AND TOOLING DEPARTMENT" submitted by HITHESH R bearing 1MV19ME023 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. The Internship Report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering Degree.

Mr. Nataraj M Assistant Professor Dept. of Mechanical Engg.,

Dr. K S Shanmukharadhya Head of the Department, Dept. of Mechanical Engg.,

Sir MVIT, Bangalore

Dr. Rakesh S G

Principal,

Sir MVIT, Bangalore

Name of the Examiners

Signature with date

1. Avinash. PS 2. Chivakenne



HR DEPARTMENT
HELICOPTER DIVISION (HC)
HINDUSTAN AERONAUTICS LIMITED
Post Bag No.1790, Bangalore-560 017, India
Ph. (दुरमाय) : 91-80-2231 7891, 2232 2918
Fax (फेबर) : 91-80-22314717

Ref: H/A/HR/CM (PR)/2022

September 21, 2022

## CERTIFICATE

This is to certify that Mr. Hithesh R (USN No: 1MV19ME023) student of BE – Mechanical Engineering, Sir. M. Visvesvaraya Institute of Technology, Bangalore, has undergone "Internship" in Methods & Tooling Department, HAL-Helicopter Division from 22.08.2022 to 21.09.2022.

- 2. His Punctuality, Conduct, Behaviour and Progress during the period of "Internship" was Satisfactory.
- 3. We wish Mr. Hithesh R all the very best in all his future endeavors.

For HAL-Helicopter Division

(G. H. Raju)

Chief Manager (Public Relations)

ध क्षा काराः/दी एव चल्/तः भूतः संभ्ये तृपन्त्रस्थः (स्तर्भः

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Construction (content)

Construction (content)

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यंजीकृत कार्यलय : 15/1, कब्बन रोड, बेंगलूर – 560001, भारत Registered Office: 15/1, Cubbon Road, Bangalore-560 001, India CIN:U35301KA1963GOI001622 E(t): hr.hcop@hal-India.com www.hal-India.com

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, RELAGAVI - 590018



Internship Report on

#### "BOGIES MAINTENACE OF HHP LOCOS"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

111

MECHANICAL ENGINEERING

Submitted By

HRITHIK BN

1MV19ME024

Internship carried out at

DIESEL LOCO SHED KRISHNARAJAPURA-560036



SWR

Under the Guidance of

#### DR. HANAMANTRAYGOUDA MB

Asst. Professor Department of Mechanical Engineering

#### SRI. SRINIVAS RAO D

Asst. Divisional Mechanical Engineer Diesel Loco Shed, Krishnarajapura

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "BOGIES MAINTENACE OF HHP LOCOS" is a bonafide work carried out by HRITHIK BN (1MV19ME024) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18ME185) prescribed for the course of Bachelor of Engineering.

Dr. Hanamantraygouda

Assistant Professor Sir MVIT, Bengaluru

Professor and Head of

Mech. Dept., Sir MVIT, Bengalunternatgrathment Fled

Names of the Examiners

Signature with Date

#### INTERNSHIP CERTIFICATE



#### DIESEL LOCO SHED, KRISHNARAJAPURAM

BANGALORE DIVISION, BANGALORE 36, SOUTH WESTERN KILL MIKE

#### CERTIFICATE

This is to certify that the below mentioned student, perusing B.E. (Mischanical Engineering) in SIR.M.VISVESVARAYA INSTITUTE OF TECHNOLOGY. BENGALURU – 562157 has successfully undergone intermship in our organization from August 29, 2022 to September 24, 2022. During this period he has completed a project entitled "Study of Diesel HHP Loco Bogie Maintenance"

#### HRITHIK. B.N (1MV19ME024)

During this period, his conduct and behavior was found good and he has shown keen interest to learn.

This certificate is solely issued for education purpose to provide inclustrial exposure to students.

We wish success in his future endeavors.

Date: 24.09.2022 Place: Krishnarajapuram (YOGESH BHALEKAR)
Sr. Divisional Mechanical Engineer

2



#### Internship Report on

#### "STUDY OF POWER PACK AND MAINTAINANCE IN DIESEL' HHP LOCO"

Submitted in partial fulfilment of the requirements for the award.

of

**BACHELOR OF ENGINEERING** 

In

MECHANICAL ENGINEERING

Submitted By

JAYASURYA K S

1MV19ME02S

Internship carried out at

#### DIESEL LOCO SHED KRISHNARAJAPURA-560036





Under the Guidance of

DR. HANAMANTRAYGOUDA MB Asst. Professor Department of Mechanical Engineering SRI. SRINIVAS RAO D

Asst. Divisional Mechanical Engineer Diesel Loco Shed, Krishnarajapura

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157 Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "STUDY OF POWER PACK AND ITS MAINTAINANCE IN DIESEL HHP LOCO" is a bonafide work carried out by JAYASURYA K S (1MV19ME025) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Dr. Hanamantravgouda MB Assistant Professor Sir MVIT, Bengaluru

Dr. K S Shanmukharadhya Professor and Head of Mech. Dept., Sir MVIT, Bengaluru SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOG Krishnadevaray kasiba Shonasamaranahalli International Minoinational, Bangalore-562 157 Sir MVIT, Bengaluru

P 26/5/23

Names of the Examiners

Signature with Date

ii

#### INTERNSHIP CERTIFICATE



#### DIESEL LOCO SHED, KRISHNARAJAPURAM

BANGALORE DIVISION, BANGALORE-36, SOUTH WESTERN RAILWAY

#### CERTIFICATE

This is to certify that the below mentioned student, perusing B.E (Mechanical Engineering) in SIR.M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU – 562157 has successfully undergone internship in our organization from August 29, 2022 to September 24, 2022. During this period he has completed a project entitled "Study of Diesel HHP Loco Power pack system"

JAYASURYA. K.S (1MV19ME025)

During this period, his conduct and behavior was found good and he has shown keen interest to learn.

This certificate is solely issued for education purpose to provide industrial exposure to students.

We wish success in his future endeavors.

Date: 24.09.2022

Place: Krishnarajapuram

(YOGESH BHALEKAR) Sr. Divisional Mechanical Engineer

बरि मण्डल यांत्रिक दुर्जीतियर Sr. Divisional Mechanical Engineer द.प.रे., कृष्णगजपुरम S.W.Ry Krshnerejspuram देगलपुर-Bangalore-560 036

POTENTIAL BUREAUNT

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANASANGAMA, BELAGAVI - 590 018, KARNATAKA



An Internship Report on

#### "GROUND TESTING CENTRE"

Submitted in partial fulfillment of the requirement for the award of degree

#### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by:

SANKETH SHINDE

(1MV19ME026)

VIII Semester

Internship carried out

AI

#### "HAL-ROTARY RESEARCH AND DESIGN CENTRE"

HR DEPARTMENT, HELICOPTER DIVISION (HC) HINDUSTAN AERONAUTICS LIMITED, Bangalore – 560 017, INDIA.

Internal Guide

Mr. KUMAR SWAMY R

Associate Professor

Sir M. Visvesvaraya Institute of Technology

External Guide

Mrs. PRABHA

HR department

**HAL-Helicopter Division** 



#### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru-562157
DEPARTMENT OF MECHANICAL ENGINEERING

**ACADEMIC YEAR: 2022 - 2023** 

#### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157



### DEPARTMENT OF MECHANICAL ENGINEERING CERTIFICATE

This is to certify that the Internship Report on "GROUND TESTING CENTRE" submitted by SANKETH SHINDE bearing 1MV19ME026 respectively is a bonafide student of Sir M. Visvesvaraya Institute of Technology, has successfully completed the Internship programme in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering prescribed by Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. The Internship report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering degree.

Signature of Internal Guide

Mr. Kumar Swamy

Associate Professor

Dept. of Mech Engg., SMVIT

Signature of HOD

Dr. K S Shanmukharadhya

Professor and HOD

Dept. of Mech Engg., SMVIT

Prof. Rakesh S G PRINCIPAL

**External Viva** 

Name of the Examiners:

1. Dr. SACHUDHANANDAN S

2. So Hulm

Signature with date

ii

#### CERTIFICATE

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ROTARY WING RESEARCH & DESIGN CENTRE DESIGN COMPLEX HINDUSTAN AERONAUTICS LIMITED Bengaluru - 560 017, India

दोलंदकारी / ब्रूप्पाप / Ph.: 91 - 80 - 2232 3149 91 - 80 - 2231 1284

storislacti-MLOOO2, specia / बैनाकून - 560 017, भारत कुक्रून / केम्पस / Fax : 91 - 80 - 2231 1747

HAL/DC/RWRDC/HR/INTRNSHP/ 1173 /2022

20th September 2022

#### CERTIFICATE

This is to certify that Mr. Sanketh Shinde(USN: 1MV19ME026), student of B.Tech(Mechanical Engineering), Sir M. Visvesvaraya Institute of Technology, Bangalore has undergone Internship on No-pay-No-fee basis from 25.08.2022 to 20.09.2022 at Ground Test Centre, Rotary Wing Research & Design Centre, Hindustan Aeronautics Limited, Bengaluru.

2. His Punctuality, Behavior, Conduct, Progress in Training were 'Very Good' as rated by the Department Head during his training period with us.

(U SUDHAKAR)

Mr. Sanketh Shinde USN: 1MV19ME026

B.Tech (Mechanical Engineering)

Sir M. Visvesvaraya Institute of Technology

Bangalore



Registered Office: 15 /1, Cubbon Road, Bengaluru - 560 001, India

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#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



#### Internship Report on

#### "AUTODESK INVENTOR PROFESSIONAL"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

Submitted By

K SHASHIDHAR

1MV19ME027

Internship carried out at

TAKE IT SMART PVT. LTD VIJAYNAGAR-560040





Under the Guidance of

Mr. H S YESHVANTHA

Asst. Professor Dept. of Mech. Sir MVIT, Bengaluru Mr. RAGHUVENDRA

Asst. Designer Mechanical Engineer Take It Smart Vijaynagar

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "AUTODESK INVENTOR PROFESSIONAL" is a bonafide work carried out by K SHASHIDHAR (1MV19ME027) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Mr. H S Yeshvantha Assistant Professor

Sir MVIT, Bengaluru

Dr. K S Shanmukharadhya Professor and Head of Mech. Dept., Sir MVIT, Bengaluru

15/26.05.2023 SIR M. VISVEN Rakesh Samaranah International Arron (That), Bangalore-562 i57

PRINCIPAL

Names of the Examiners

hara Cumas

2. 1212121285 WA. A.M

Signature with Date

#### INTERNSHIP CERTIFICATE



## Take It Smart (OPC) PVT LTD

# 14, SGN Arcade, 1st Floor, 2nd stage, 1st Main Rd, RPC Layout, Vijayanagar, Bengaluru - 560 040 Mob. : 8050104212 / 8792697647 www.takeitsmart.in

TAKE IT SMART

Reg No.: 150027

ISO 9001:2015

#### Internship Certificate

This Certifies that

#### K SHASHIDHAR

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU

**Autodesk Inventor Professional** Has completed Internship in

20th August 2022 to 20th September 2022

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her And Wish him / her all the best for him / her future.









#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

#### "TEMPLATE FOR ONLINE STRENGTH TRAINING CENTER"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

KARTHIK D PATIL

1MV19ME028

Internship carried out at

VARCONS TECHNOLOGIES PVT. LTD.



Under the Guidance of



#### Dr. KIRAN KUMAR M

Asst. Professor Department of Mechanical Engineering

#### Ms. SPOORTHI H C

Trainer Varcons technology

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157 Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "TEMPLATE FOR ONLINE STRENGTH TRAINING CENTER" is a bonafide work carried out by KARTHIK D PATIL (1MV19ME028) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Dr. Kiran Kumar M

Assistant Professor Sir MVIT, Bengaluru

Professor and Head of

Mech. Dept., Sir MVIT, Bengaluru

VISVESVARAYA INSTITUTE OF TECHNOL Krishnadevarayanagar, Hunasamaranaha

Dr. K S Shanmukharadhyalernetional Aliput Rate San Spre-562 1

Principal

Sir MVIT, Bengaluru

Names of the Examiners

Signature with Date

#### INTERNSHIP CERTIFICATE

Varcons Technologies Pvt Ltd
Communicate. Collaborate. Create

#### CERTIFICATE OF INTERNSHIP

This is to certify that Karthik D Patil whose USN is 1MV19ME028, has completed their Full Stack Web Development Internship organised and handled by Varcons Technologies Pvt. Ltd from 6<sup>th</sup> February, 2023 to 9<sup>th</sup> March, 2023.

The person to whom this certificate is addressed to has worked on a project titled **Template - Site to sell gym essentials**. This project was aimed at creating fully-fledged functional **web template(s)** for a client of ours. As part of the project, they designed functional web pages, used databases to collect, store, and sort data, by understanding the design briefs and client specifications that were provided in the project proposal.

During the course of the internship, they demonstrated good design skills with a self-motivated attitude to learning new things. Their performance exceeded expectations and was able to complete the project successfully on time.

To verify this certificate, CLICK HERE

OLOGIES PVT. LTD

18 M G Roud, Ulsoor, Bangalory -560001

www.vurconstech.com

contact@varconstech.com

This certificate was generated using CERTIEFY COM

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



## VIII Semester B.E.Internship Report on "EXPLORING THE ROLE OF ARDC IN THE DESIGN AND MANUFACTURING OF LCA"

Submitted in partial fulfillment of the requirements for the award of degree of Bachelor of Engineering

In

MECHANICAL ENGINEERING

By

KARTHIK R 1MV19ME029

Under the Guidance Of

External Guide: Mr.Ashok Thayagarajan Manager-ARDC Hindustan Aeronautics Limited(HAL)

Bangalore

Internal Guide: Mr.Prashanth L Assistant Professor Mechanical Department Sir MVIT Bangalore

Carried out at

Hindustan Aeronautics Limited(HAL) - Aircraft Research and Design Center(ARDC) Bangalore -560037



#### DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY Bengaluru

AcademicYear:2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TCHENOLOGY, BENGALURU

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship Report entitled "EXPLORING THE ROLE OF ARDC IN THE DESIGN AND MANUFACTURING OF LCA" submitted by KARTHIK R bearing USN-1MV19ME029 is a bonafide work carried out in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of Sir M. Visvesvaraya Institute Of Technology during academic year 2022-23. It is certified that all contents of the report have been incorporated as per the guidelines of the university. The internship report has been approved as it satisfies the academic requirements in respect of Internship Report prescribed for the Bachelor of Engineering Degree.

Mr. PRASHANTH L

Dr. K S Shanmukharadhya

AssistantProfessor

Professor and HOD Mechanical,

SirMVIT, Bengaluru

SirMVIT,Bengaluru

PRINCIPAL
SIR M. VISVESVARAYA I STITUTE DE JECHNOLOG
Krishnad Prof. Programma Samarana politi

International Airport Road, Bangalore-562 157
Principal

SirMVIT,Bengaluru

Name of the Examiners:

Signature with date

1. Avinashop. S

2. Alivatamer S

A La RS /2/23

विमान अनुसंधान एवं अभिकल्प केन्द्र (ए आर ही सी)
AIRCRAFT RESEARCH & DESIGN CENTRE (ARDC)
अग्नुमं म्रान्टिन अभिकल्प कॉम्प्लेक्स / DESIGN COMPLEX
किंव्यक्रम् म्रान्टिन अभिकल्प कॉम्प्लेक्स / DESIGN COMPLEX
किंव्यक्रम् म्रान्टिन अभिकल्प कॉम्प्लेक्स / DESIGN COMPLEX
किंव्यक्रम् म्रान्टिन क्रिक्ट क्रिक क्रिक्ट क्रिक्ट क्रिक्ट क्रिक्ट क्रिक क्रिक क्रिक्ट क्रिक क्रिक क्रिक क्रिक क्रिक्ट क्रिक क्र



स्कृत व्यक्त है कि स्मृत विद्यादा के कि उन्हें कि स्मृत के स्थान के स्था के स्थान के स्थान के स्थान के स्थान के स्थान के स्थान के स्थान

D/ARDC/HR/Proj/Cert/6913/22

28.09.2022

#### CERTIFICATE

This is to certify that Mr. Karthik R (USN No. 1MV19ME029) who is a student of B.E (Mechanical), Sir M Visvesvaraya Institute of Technology, Bangalore, has undergone Internship Training at HAL ARDC, Design Complex, Bengaluru from 01-09-2022 to 28-09-2022 on "No-Pay-No-Fee-Basis". He has been punctual, sincere and committed trainee. His conduct has been found Good.

 The student brings in a lot of energy and enthusiasm in the work, he is structured in his approach and methodical in resolving a problem. He is resourceful and adaptive to working environment.



(Ramesh K)

Chief Manager (HR)

ARDC, Design Complex.



ನೋಂದಾಯಿತ ಕಧೇರಿ : 15/1, ಕಬ್ಬನ್ ರಸ್ತೆ, ಬೆಂಗಳೂರು - 560 001, ಭಾರತ पंजीकृत कार्यालय : 15/1, कब्बन रोड़, बेंगलूरु - 560 001, भारत Registered Office : 15/1, Cubbon Road, Bengaluru - 560 001, India ಸಿ ಐ ಎನ್/ सी आई एन/CIN: L35301KA1963GO1001622

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY Jnana Sangma, Belagavi-590018



#### INTERNSHIP REPORT

#### ON "FULL STACK WEB DEVELOPMENT"

Submitted in partial fulfillment of the requirements for the award of degree of

#### BACHELOR OF ENGINEERING in MECHANICAL ENGINEERING

Submitted by:

Kumar Shivam (1M19ME030)

Internality carried out at

#### FRENCHEASE THE MOLOGIES PVT LTD

BENGALURU

Under the guidance of:

Dr. G. Balakumar

Associate Professor, Dept. of ME Sir MVIT, Bengaluru Mr. AYUSH VERMA

Director, FrenchEase Technologies Pvt. Ltd



### DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

HUNASAMARANAHALLI, BENGALURU – 562157

ACADEMIC YEAR: 2022-2023

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU -562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

It is certified that the Internship work entitled "FULL STACK WEB DEVELOPMENT" is a bonafide work carried out by KUMAR SHIVAM (1MV19ME030) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved at a case of Bachelor of Engineering.

Dr. G. Balakumar

oplehva

Associate Professor

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

Ath 24.5.2023

Dr. K. S. Shanmukharadhya

Professor & HOD

Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOG
Krishnadevarayanagar: Hunasamarznahalli

Prof. Rakesh S. G.

Principal

Sir MVIT, Bengaluru.

Names of the Examiners

1) Shivatymus

2) PRAKASHAANI

Signature with Date

A 26/5/2)

#### **Company Certificate**



#### Certificate

Date: 04.08.2022

This is to certify that Mr/hts Kumar Shivam has worked as Web-Designing Intern with FrenchEASE from 13/05/2022 to 13/06/2022

During his tenure, Shivam worked on the Frontend (ReactJS) and software testing end to end. He also contributed to NLP algorithm and helped Senior Developer to deploy on live servers along with integrations of Rest API's.

In this period, he has shown a great amount of responsibility, sincerity, genuine willingness to learn, and zeal to take on new assignments and challenges. In particular, his coordination and technical skills are at par and his attention to detail is impressive.

We wish him every success in life.

With regards,

**单ingh** 

Satyam Singh, Founder, Team FrenchEASE.

> Administrative Office: LIG 136, Kajpura Colony, Phase-2, Bhadohi, Uttar Pradesh -221401 Website: www.frenchease.com Email: info@frenchease.com

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



Internship Report on

Integral Coach Factory (ICF)

Submitted in partial fulfilment of the requirements for the award of

Bachelor of Engineering

in

MECHANICAL ENGINEERING

Submitted By

M TINKU RAJKUMAR

1MV19ME031





#### DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadeveraya Nagar, Hunasamaranahalli, Yelahanka, Bengaluru, Kamataka 562157 ACADEMIC YEAR: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadeveraya Nagar, Hunasamranhalli, Yelahanka, Bengaluru, Karnataka 562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the internship report entitled on "Integral Coach Factory" is a bonafide work carried out by M TINKU RAJKUMAR (1MV19ME031) of Sir M. Visvesvaraya Institute of Technology, Bangalore, in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The Internship report has been approved as it satisfies the academic requirements in report work prescribed for Bachelor of Engineering degree.

SIR M. VISVESVARA: A HISTITUTE OF TECHNOLOGY Kristmadevarayanagar, Hunasamaranahalli Internetional Richard Rengalore-562 157 Mr. R. Kennedy Sundhara Vadanam

Senior Section Engineer,

Professor and Head

Principal,

MWM, Integral Coach Factory, Chennai

Dept of Mech. Engg.

Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

MADHUKUMAR.K

Names of the Examiners

Signature with Date

1. Dir. SACHUDHANANDAN. S

25/05/23 le x/x

2. SB Herlinh



#### सवारी डिब्बा कारखाना, चेन्नै - 600 038 रेल मंत्रालय की एक उत्पादन इकाई

#### INTEGRAL COACH FACTORY, CHENNAI - 600 038

A Production Unit Under Ministry of Railways



[ISO/TS 22163:2017-IRIS, ISO 9001:2015-QMS, ISO 14001:2015-EMS, ISO 45001:2013-OHSMS, ISO 50001:2012-EMS Constant

sl.No.: M/105/2022

pate: 05.09.2022





This is to certify that Mr	M. IINKO ROBIO
Regn.No1MV19ME031	CourseBE
A MECHANICAL	THIRD Year, Student of
BranchWESCHARAVA INSTITUTE OF	TECHNOLOGY, BANGALORE - 562 157
SIR M.VISVESVARATA.	05 09 2022
has undergone Internship Training	From 22.08.2022 to 05.09.2022
at Integral Coach Factory.	

AA TINKU RAIKUMAR



Principal 5 | 91 --Technical Training Centre
ICF, Chennai-38

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

# "AUTODESK INVENTOR PROFESSIONAL"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

Submitted By

MARUTHI P K

1MV19ME032

Internship carried out at

TAKE IT SMART PVT. LTD VIJAYNAGAR-560040





Under the Guidance of

Mr. PRASHANTH L

Asst. Professor Dept. of Mech. Sir MVIT, Bengaluru Mr. RAGHUVENDRA

Asst. Designer Mechanical Engineer
Take It Smart Vijayanagar

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

# SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

# DEPARTMENT OF MECHANICAL ENGINEERING



# CERTIFICATE

It is certified that the Internship work entitled "TAKE IT SMART PVT. LMT" is a bonafide work carried out by MARUTHI P K (1MV19ME032) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Mr. PRASHANTH L Assistant Professor Sir MVIT, Bengaluru

Dr. KS Shanmukharadhya

Mech. Dept., Sir MVIT, Bengaluru Sir MVIT, Bengaluru

Names of the Examiners

Signature with Date



# Internship Certificate

This Certifies that

# MARUTHI P K

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU Student of.

**Autodesk Inventor Professional** Has completed Internship in\_

20th August 2022 to 20th September 2022

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her And Wish him / her all the best for him / her future.









# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590018



# VIII Semester B.E.Internship Report on "EXPLORING THE ROLE OF ARDC IN THE DESIGN AND MANUFACTURING OF LCA"

Submitted in partial fulfillment of the requirements for the award of degree of Bachelor of Engineering

> In MECHANICAL ENGINEERING

By

## MOHAMMED YAHYA ADIL 1MV19ME033

Under the Guidance Of

External Guide:
Mr. Ashok Thayagarajan
Manager-ARDC
Hindustan Aeronautics Limited(HAL)
Bangalore

Internal Guide:
Mr.Shivakumar S
Assistant Professor
Mechanical Department
Sir MVIT Bangalore

Carried out at

Hindustan Aeronautics Limited(HAL) - Aircraft Research and Design Center(ARDC) Bangalore -560037



# DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY Bengaluru

Academic Year:2022-23

# SIR M. VISVESVARAYA INSTITUTE OF TCHENOLOGY, BENGALURU

# DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This is to certify that the Internship Report entitled "EXPLORING THE ROLE OF ARDC IN THE DESIGN AND MANUFACTURING OF LCA" submitted by MOHAMMED YAHYA ADIL bearing USN-1MV19ME033 is a bonafide work carried out in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of Sir M.Visvesvaraya Institute Of Technology during academic year 2022-23. It is certified that all contents of the report have been incorporated as per the guidelines of the university. The internship report has been approved as it satisfies the academic requirements in respect of Internship Report prescribed for the Bachelor of Engineering Degree.

Mr. Shivakumar S

AssistantProfessor

SirMVIT, Bengaluru

Mb/2.25

Dr. K S Shanmukharadhya

Professor and HOD Mechanical.

SirMVIT, Bengaluru

PRINCIPAL

SIK M. VISVESVARAYA I STITUTE OF TECHNOLOGY Krishnaugtanahalli Hunasamaranahalli Internatiopal Pipati Rossi, Bangalore-562 157

SirMVIT, Bengaluru

Name of the Examiners:

1. Awrasha P.S

2. Shrakeman J

Signature with date

My 25/5/23



D/ARDC/HR/Proj/Cert/6913/22

28.09.2022

# CERTIFICATE

This is to certify that Mr. MD Yahya Adil (USN No. 1MV19MEQ33) who is a student of B.E (Mechanical), Sir M Visvesvaraya Institute of Technology, Bangalore, has undergone Internship Training at HAL ARDC, Design Complex, Bengaluru from 01-09-2022 to 28-09-2022 on "No-Pay-No-Fee-Basis". He has been punctual, sincere and committed trainee. His conduct has been found Good.

2. The student brings in a lot of energy and enthusiasm in the work, he is structured in his approach and methodical in resolving a problem. He is resourceful and adaptive to working environment.



(Ramesh K)
Chief Manager (HR)
ARDC, Design Complex.



ਲੈਨ(ਫਲਲੇਡ ਫਫ਼ੈਂਨ) : 15/1, ਫਪੂਲਾ ਰੜ੍ਹੋ, ਖ਼ੈਰਸਵਨ - 560 001, ਪ੍ਰਤਾਰਤ ਧੰਗੀकृत कार्यालय : 15/1, कब्बन रोड़, बेंगलूर - 560 001, भारत Registered Office : 15/1, Cubbon Road, Bengaluru - 560 001, India ਨ ਲਗਾ/ सी आई एन/CIN:L35301KA1963GO1001622

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI



Internship Report on

# "HINDUSTAN AERONAUTICS LIMITED"

Submitted in partial fulfilment of the requirements for the award of degree

BACHELOR OF ENGINEERING

In

DEPARTMENT OF MECHANICAL ENGINEERING

Submitted by

MOHAN M G

1MV19ME034

Internship carried out at

HINDUSTAN AERONAUTICS LIMITED

Ramesh Nagar, Vimanapura Bengaluru-560017

Under the guidance of

Mr. Ramesh C G

Mr. Hemant D M

Assistant Professor

Manager

Department of Mechanical Engineering

HAL HELICOPTER DIVISION

SIR MVIT



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY-562157 Academic year: 2022-23

# SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

# DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

Certified that the Internship review on "HINDUSTAN AERONAUTICS LIMITED" is bonafide work carried out by MOHAN M G bearing USN (1MV19ME034) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of technical seminar prescribed for the Bachelor of Engineering degree.

25.05-2273

Mr. Ramesh C G

Assistant Professor

Dept. of Mechanical Engg. Dept. of Mechanical Engg.

Sir MVIT, Bengaluru.

Dr. K. S. Shanmukharadhylaternationabairer Rakeshasgalore-562 157 Professor & HOD

Sir MVIT, Bengaluru.

PRINCIPAL

R M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli

Principal

Sir MVIT, Bengaluru.

Names of the Examiners

1) DY - SACH UDHANANDAN. S

Signature with Date

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वानव संसघन विभाग इतिकॉप्टर प्रभाग (हैका) हिन्दुस्तान एरोनाटिक्स लिमिटेड शेस्ट बेग संख्या 1790, बेंगलूर - 560017, भारत



HR DEPARTMENT HELICOPTER DIVISION (HC) HINDUSTAN AERONAUTICS LIMITED

Post Bag No.1790, Bangalore-560 017, India Ph. (ब्रामाप): 91-80-2231 7891, 2232 2918

Fax (फेक्स) : 91-80-22314717

Ref: H/A/HR/CM (PR)/2022

September 21, 2022

# CERTIFICATE

This is to certify that Mr. Mohan M G (USN No: 1MV19ME034) student of BE - Mechanical Engineering, Sir. M. Visvesvaraya Institute of Technology, Bangalore, has undergone "Internship" in Methods & Tooling Department, HAL-Helicopter Division from 22.08.2022 to 21.09.2022.

- His Punctuality, Conduct, Behaviour and Progress during the period of "Internship" was Satisfactory.
- We wish Mr. Mohan M G all the very best in all his future endeavors.

For HAL-Helicopter Division

(G. H. Raju)
Chief Manager (Public Relations)

ा उत्तर कश्यांची एव समुर्देश क्ष्मंद्री स्पूर्णमा निर्माण (कर्म अवस्त ) मुख्य प्रयोगक (कार संग्रेत)

Chief Manager (Public Relations) ಹಲಿಕಾಚ್ರಣೆವಿಧಾಗ, ನೀಕ.ಎ.ಎರ್. ಚಿಸಕುಬರು-17 हेलिकां उर प्रथाम, एव.ए.ए.स. थेमल्ड-17

Helicopter Division, Ithu, Bengalur 1-17

पंजीकृत कार्यलय: 15/1, कब्बन रोड, बेंगलूर - 560001, भारत Registered Office: 15/1, Cubbon Road, Bangalore-560 001, India CIN: U35301KA1963GOI001622 E(\*): hr.hcop@hal-india.com

www.hal-india.com

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI-590018



# Internship Report

At

"Automobili Lamborghini S.p.A"



# Lamborghini Bengaluru

Submitted in partial fulfilment of the requirements for the award of

# BACHELOR OF ENGINEERING

In

## MECHANICAL ENGINEERING

Submitted by NANDAN T N 1MV19ME035

Under the Guidance Of

# Dr. K S Shanmukharadhya

Professor, Department of Mechanical Engineering



# DEPARTMENT OF MECHANICAL ENGINEERING, SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY,

Krishnadevarayanagar, Hunasamaranahalli, Bengaluru-562157

Academic year: 2022-2023

## **CERTIFICATE**

# SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU - 562 157

# DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

Certified that the Internship [18MEI85] entitled "LAMBORGHINI BENGALURU" carried out by Mr. Nandan T N bearing USN: 1MV19ME035 a Bonafied student of Sir M Visvesvaraya Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internship have been executed under the directions of Dr.K.S.Shanmukharadhya The report has been approved as it satisfies the academic requirements in respect of Internship [18MEI85] prescribed for the course of Bachelor of Engineering.

Dr.K.S.Shanmukharadhya **Professor and Head** Dept of Mech Engg Sir MVIT, Bengaluru

**Professor and Head** 

Dept of Mech Engg Sir MVIT, Bengaluru

PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli Dr.K.S.Shanmukharadhyanternational Alprot Rakeshose Gre-562 157

Principal Sir MVIT Bengaluru

Name of the Examiners

Signature with Date

1. Dr. Sachudhanandan

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# Lamborghini Bengaluru (Hoysala Automotive Pvt Ltd)



Registered Office : # 104, Ground Floor, Inlantry Techno Park, Infantry Road, Bangalore - 560 001. Ph : +91 80 2532 0513, 2559 5822, 2555 9384, 2559 0826

Fax: +91 80 2559 9515

Dt: 23.05.2023

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.Nandan T.N (Aadhar No: 510743896353), S/O of Mr.Nagaraj T.K., successfully completed his internship for a duration of 6 weeks (from 25<sup>th</sup> August 2022 to 4<sup>th</sup> October 2022) in the field of After Sales of Lamborghini Bengaluru Unit.

During the period of his internship with us he had been exposed to different process of After Sales and was found punctual, hardworking and inquisitive.

We wish him every success in his life and career.

For Hoysala Automotives Private Limited

Head-Human Resources

Vijayalakshmi K

CIN: U50200KA2013PTC069677
Web: www.lamborghinibengaluru.com
Email Id: contact@lamborghinibengaluru.com

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



### INTERNSHIP REPORT ON

"STUDY ON FABRICATION AND TOTAL QUALITY MANAGEMENT OF STAINLESS STEEL"

Submitted in partial fulfillment of the

requirements for the award of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

NAVEEN D

1MV19ME036

INTERNSHIP CARRIED OUT
AT

## SIDDHI VINAYAKA FAB ENGINEERING PRIVATE LIMITED

No.206, 11th main 3rd Phase, Peenya Industrial Area, Bangalore - 560058

Internal Guide

Mr. Nataraj M

Assistant Professor

Sir M Vivesvaraya Institute of Technology

External Guide

Mohammed Basheer Ahmed

Technical Director

Siddhi Vinayaka Fab Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR MVISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA Academic Year: 2022-23

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## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGYBENGALURU-562157, KARNATAKA, INDIA

### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship report entitled "STUDY ON FABRICATION AND TOTAL QUALITY MANAGEMENT OF STAINLESS STEEL" is bonafide work carried out by NAVEEN D (1MV19ME036) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Intership report has been approved as it satisfies the academic requirements in respect of Internship (18ME185) prescribed for the Bachelor of Engineering degree.

Mr.Nataraj M Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya Professor and Head of Mech Dept, Sir MVIT, Dr. Rakesh S G
Principal
Sir MVIT, Bengaluru

Names of the Examiners

1.

2.

Signature with Date

#### CERTIFICATE



#### SIDHI VINAYAKA FAB ENGINEERING PVT. LTD.

No. 206, 11th Main, 3rd Phase, Peonya Industrial Area, Dangelore - 560 058. Phone: 28390891, 41171891, 41179031, Telefax: 080-20390891

E-mail: sve@skthivinayakafab.com, Website: www.skthivinayakafab.com

CIN No. U27320KA2005PTC036311

Certification Under ISO 9001;2015, EN 15085-2 CL1, ASME 'U' & 'UM'



REF: SVE/30/2022-23

DATE: 22/09/2022

## TO WHOM SO EVER IT MAY CONCERN

This is to certify that MR.NAVEEN D, Pursuing B.E (Mechanical Engineering) department at SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY affiliated to VTU Belagavi bearing USN Number 1MV19ME036 has completed Internship in our company for the duration of 30 days From 22/08/2022 TO 22/09/2022.

During the above period his conduct was good and he showed eagerness to learn the concept.

We wish him very best in all his future endeavors.

For,

SIDHI VINAYAKA FAB ENGINEERING PVT.LTD.

MOHAMED BASHEER AHMED. (TECHNICAL DIRECTOR) NO ENGLISHING

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# VISVESVARAYA TECHNOLOGICAL UNIVERSITY JNANA SANGAMA, BELAGAVI - 590018



An Internship Report
On

"Production Management"

Submitted in partial fulfilment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

Submitted by

NAVEEN RAJ PANDEY

1MV19ME037

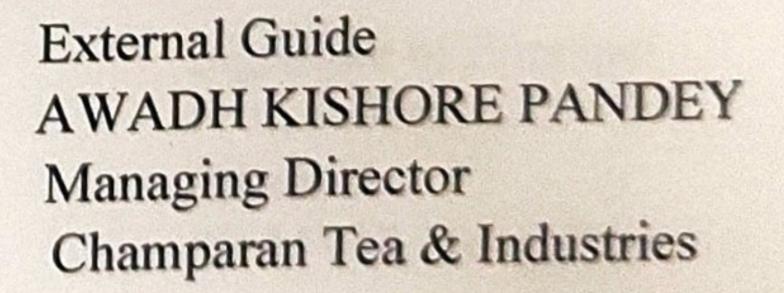
Carried Out at

Champaran Tea & Industries



Under the guidance of

Internal Guide
Mr. RAMESH C G
Assistant Professor,
Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Bengaluru -562157
2022-2023

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

Certified that the Internship Report on "PRODUCTION MANAGEMENT" prepared by NAVEEN RAJ PANDEY bearing USN-1MV19ME037, a bonafide student of SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY. The report is in partial fulfilment of the requirements for the award of the degree of "Bachelor of Engineering" in Mechanical Engineering. From the Visvesvaraya Technological University, Belagavi, Karnataka, India, during the academic year 2022- 2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report submitted to the Department. The Seminar report has been approved as it satisfies the academic requirement in respect to the work prescribed for the said Degree.

6505.2023

Signature of the Guide Mr. RAMESH C G Assistant Professor Dept of ME JAK-5.2013

Signature of HOD Dr. K. S. Shanmukharadhya Professor & Head Dept of ME PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunamamoranahalli
International Airport Road, Bangalore-502 157

Signature of Principal Prof. Rakesh S.G. Principal Sir MVIT, Bengaluru

Name of the Examiners

(1) DO SACHUDHANAND ANS

(2) 8B How ...

Signature with Date

le 165/22



## Champaran Tea & Industries Pvt. Ltd.

H.O. Sumitra Complex, WN-10, PO (autaha (Raminagar)).
District: West Champaran, Bihar - 845455 (IN)
Corporate Identification Number U154968976777776655976

Ret No CII/2022-23/HR/OPS/017

Date September 25, 2022

## TO WHOMSOEVER IT MAY CONCERN

We hereby certify that Mr. Naveen Raj Pandey (1MV19ME037), B.E. Mechanical Engineering student from Sir M. Visvesvaraya Institute of Technology, Bengaluru has undergone internship training in our organization from 25 August, 2022 to 23 September, 2022. During this period, he completed the project which was assigned to him and submitted the report to us.

We found him to be sincere during the above period and he has shown interest in gaining maximum knowledge with the guidance of our staff.

We wish him all the best in his future endeavors.

Sincerely,

Function Head (HR),

Champaran Tea & Industries (Pvt) Ltd.

My Ilway linked in Combron pany beam and the medical

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi - 590 018, Karnataka, India



# INTERNSHIP REPORT ON "LCA DESIGN AND DEVELOPMENT"

Submitted in partial fulfillment of the requirements for the award of the Degree

BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by

NIKHIL AJ

**USN: 1MV19ME038** 

Internship carried out at

HINDUSTAN AERONAUTICS LIMITED

BENGALURU, 560037

#### INTERNAL GUIDE

Dr. K S Shanmukharadya PROFESSOR AND HEAD OF DEPARTMENT MECHANICAL ENGINEERING

#### EXTERNAL GUIDE

Mr. Alex George DGM HAL, ARDC, BENGALURU-560037





DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya nagar, Hunasamaranahalli, Bengaluru -562157

**MAY 2023** 

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

## Department of Mechanical Engineering



## CERTIFICATE

This is to certify that NIKHIL AJ, a bonafide student of Sir M. Visvesvaraya Institute of Technology, Bengaluru has satisfactorily completed Industrial training from HINDUSTAN AERONAUTICS LIMITED. in partial fulfillment of the requirements as prescribed by the VTU for the award of Bachelor of Engineering in Mechanical Engineering and submitted this report during the academic year 2022 - 2023.

Professor and HOD

Dept. of Mech

Engg. Sir MVIT Bengaluru

Dr. K S Shanmukharadya Dr. K S Shanmukharadya

Professor and HOD Dept. of Mech

Engg. Sir MVIT

Bengaluru

WAS SIR M. VISVESVARAYA INSTITUTE OF TECHINA Krishnadevarayanagar, Hunasamara...

International Air act for ag Bangalore-56

Principal SIR MVIT Bengaluru

INTERNSHIP REVIEW

Name of the Examiners

1. D.C. SACHUD HANAMPAN, S

Signature with Date

23/05/23

District Xosert stag District stock (D et a. 1)
विमान अनुसंघान एवं अभिकल्प केन्द्र (ए आर ही सी)
AIRCRAFT RESEARCH & DESIGN CENTRE (ARDC)

District Xoleier / अधिकल कॉन्योक्त / DESIGN COMPLEX

Locianger District Carter

हिन्दुस्तान एरोनॉटिक्स लिमिटेड

HINDUSTAN AERONAUTICS LIMITED



संकटक स्थित सेवर्ग, होशाबिक्ट - 560037, हक्टेंड नारतहरूमी पोस्ट, बेंगलून - 560037, भारत Marathahalli Post, Bengaluru - 560037, India होत / ब्रूप्याप / Ph.: 91 - 80 - 22324312,22316774 हम्बर्ग / फेक्स / Fax: 91 - 80 - 22314320

D/ARDC/HR/Proj/Cert/6838/22

20.09.2022

#### CERTIFICATE

This is to certify that Mr. Nikhil A J (USN No.1MV19ME038) who is a student of B.E (Mechanical), Sir M Visvesvaraya Institute of Technology, Bengaluru, has undergone Internship Training at HAL ARDC, Design Complex, Bengaluru from 24-08-2022 to 20-09-2022 on "No-Pay-No-Fee-Basis". He has been punctual, sincere and committed trainee. His conduct has been found Very Good.

2. The student brings in a lot of energy and enthusiasm in the work, he is structured in his approach and methodical in resolving a problem. He is resourceful and adaptive to working environment.



(Prochi Dalvi)

Manager (HR)

ARDC, Design Complex.

ನೋಂದಾಯಿತ ಕಧೇರಿ: 15/1, ಕಬ್ಬರ್ ರಸ್ತೆ, ಬೆಂಗಳೂರು - 560 001, ಭಾರತ पंजीकृत कार्यालय: 15/1, कब्बन रोइ, बेंगलूर - 560 001, भारत Registered Office: 15/1, Cubbon Road, Bengaluru - 560 001, India ಸಿ ಐಎನ್/ सी आई एन/CIN: L35301KA1963GO1001622

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belgavi-590 018, Karnataka, India



An Internship Report

On

## PROJECT MANAGEMENT

Submitted in Partial Fulfillment of the requirement for the award of the degree of

# BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By

NIKITA SINGH

**USN: 1MV19ME039** 

Carried out at Olcademy, Bengaluru

Under the Guidance of

Internal Guide Mr. K Ejaz Ahmed Associate Professor Dept. Of ME, SMVIT External Guide
Akhil Kharbanda
Associate Vice President
Olcademy



Department of Mechanical Engineering
Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]

Bengaluru-562157

2022-2023

## Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgauni Bengaluru-562157 2022=2023



## CERTIFICATE

Certified that the Internship Report entitled "PROJECT MANAGEMENT" carried out by Ms. Nikita Singh bearing USN: 1MV19ME039 a Bonafide student of Sir M Visvesvaraya Instituteof Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections/suggestions indicated for INTERNSHIP have been executed under the directions of Mr. K F.jazz Ahmed. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP prescribed for the said degree.

Signature of Guide

Mr. K Ejaz Ahmed Associate Professor Dept of ME SIR MVIT

Signature of HOD

Dr. K S Shanmukharadhya HOD and Professor Dept of ME SIR MVIT

SIR M. VISVESVARAYA INSTITUTE OF TECHNIQUOSY Krishnadevarayanagar, Hunasamarahalli International Aktivetheory (Paper) 1949 562 157

> Prof. Rakesh S G Principal SIR MVIT

Names of the Examiners

Signature with Date

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*



# VISVESVARAYA TECHNOLOGICAL UNIVERSITY JNANA SANGAMA, BELAGAVI - 590018



An Internship Report

"MANUFACTURING ENGINEERING"

Submitted in partial fulfilment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

TN

MECHANICAL ENGINEERING

Submitted by

NISHANTH KUMAR M

1MV19ME040

Carried Out at

SIR MECCNICA SERVICE INDIA PVT. LTD.



Under the guidance of

Internal Guide
Mr. RAMESH C G
Assistant Professor,
Department of Mechanical Engineering

External Guide
SANJEEV SAXENA
Country Head
Sir Meccanica India



DEPARTMENT OF MECHANICAL ENGINEERING

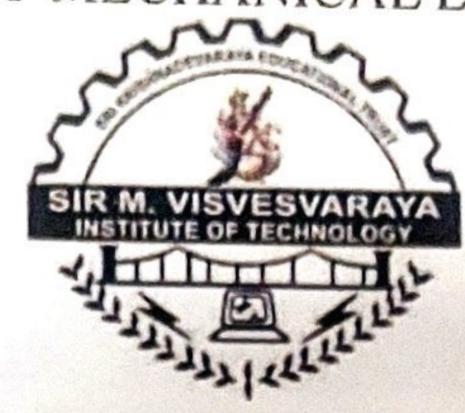
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Bengaluru -562157

2022-2023

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

NISHANTH KUMAR M bearing USN-1MV19ME040, a bonafide student of SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY. The report is in partial fulfilment of the requirements for the award of the degree of "Bachelor of Engineering" in Mechanical Engineering. From the Visvesvaraya Technological University, Belagavi, Karnataka, India, during the academic year 2022- 2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report submitted to the Department. The Seminar report has been approved as it satisfies the academic requirement in respect to the work prescribed for the said Degree.

95.05 mo 23

Signature of the Guide Mr. RAMESH C G Assistant Professor Dept of ME MBK-5.23

Signature of HOD Dr. K. S. Shanmukharadhya Professor & Head Dept of ME

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnedevarayanagar, Hunasamaranahalli
Krishnedevarayanagar, Hunasamaranahalli

International Airport Road, Bangalore-562 157
Signature of Principal
Prof. Rakesh S.G.
Principal
Sir MVIT, Bengaluru

Name of the Examiners

(1) Do. SACHUDHANANDAN.5

(2) As Hallm

Signature with Date



PH.: +91-124 - 4108866



SIR MECCANICA SERVICE INDIA PRIVATE LIMITED
22, Bougain Villa Marg. (2nd Floor) DLF City, Phase II, Gurgaon - 122002

www.sirmeccanica.com

CIN: U51909DL2011PTC219714

GST Number: 06AAPCS8131A1ZH Email : sales@sirmeccanicaindia.com

### TO WHOM SO EVER IT-MAY CONCERN

This is to certify that Mr Nishanth Kumar M, pursuing his Bachelor of Engineering In Mechanical Engineering from Sir M. Visvesvaraya Institute of Technology has completed Summer Internship at Manufacturing Engineering Project under the guidance of our organization from 20th Aug to 20th September 2022.

We found him sincere, hardworking, technically sound and result oriented. He worked well as part of a team during his tenure. We take this opportunity to wish him all the best for future endeavours.

For Sir Meccanica Service (India Pvt. Ltd.

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590 018



Internship Report On

## "STUDY OF DIFFERENT MANUFACTURING PROCESS AT HMT"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering

in

## MECHANICAL ENGINEERING

Submitted By

### NITESH NADAGERI 1MV19ME041

For the academic year 2022-2023

At

#### "HMT MACHINE TOOLS LIMITED"

Bangalore Complex
HMT colony, HMT Estate, Jalahalli, Bengaluru, Karnataka 560013
Duration:1Month (22-08-2022 to 19-09-2022)



Under the guidance of

Internal Guide
Mr. S B HALESH
Associate Professor
Dept. of Mechanical Engineering,
Sir MVIT Bengaluru

External Guide
Mr. ATMANAND N
Training Officer
HMT Machine Tools Limited
Jalahalli, Bengaluru



#### DEPARTMENT OF MECHANICAL ENGINEERING

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157

Academic year: 2022-23

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified) Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157

## DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the internship entitled "STUDY OF DIFFERENT MANUFACTURING PROCESS" carried out by Mr. NITESH NADAGERI (USN: 1MV19ME041), a bonafide student of Sir M. Visvesvaraya Institute of Technology, Bengaluru in partial fulfilment for the requirements for the award of the degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. The internship report has been approved as it satisfies the academic requirements in respect of internship work prescribed for the above-mentioned degree.

PRINCIPAL

SIR M. VISYESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Airport Road, Bangalore-562 157

Signature of Principal

Prof. RAKESH S G

Mr. S B HALESH

Dr. K S SHANMUKHARADHYA

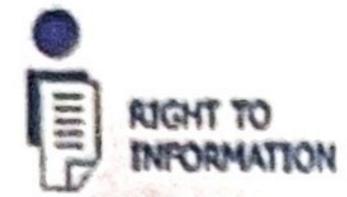
External Viva

Name of the Examiners:

Signature with date

#### CERTIFICATE

ISO 9001: 2008 Unit



एचएमटी मशीन टूल्स लिमिटेड (एचएमटी लिबरेड की सम्पूर्ण स्वामित्यपित अनुवंगी) (मात मालत कर अवक्रक)

यगित्स केंद्र वेगलूस कॉम्प्लेक्स

रहालहरूसी थी.ओ, बेंगलूस 560 013, भारत सुरक्षमा : +91-80-2838 8365

क्षेत्रमः । +91-80-2838 2797 ई-मेल : mbxtrg@tentmachinetoots.com चेत्र साईट : www.tentmachinetoots.com BELTINELE NA

HMT MACHINE TOOLS LIMITED
(A Wholly owned Subsidiary of HMT Ltd.)
(A Government of India Undertaking)

TRAINING CENTER

Jalahatti P.O., Bengaturu - 550 013, INDIA

Phone: +91-80-2838 8365

Fax: +91-60-2838 2797 E-mail: mbxtrg@hmtmachinetools.com

Ref: MBX/TC/2022-23

21-09-2022

#### CERTIFICATE

This is to certify that Mr. Nitesh Nadageri (USN 1MV19ME041), Student of BE-Mechanical Engineering from Sir M Visvesvaraya Institute of Technology, Bengaluru has successfully completed his "INTERNSHIP" at HMT MACHINE TOOLS LIMITED, BANGALORE COMPLEX from 22-08-2022 to 19-09-2022 as partial fulfilment for the award of degree.

During the period of Internship, the student was found to be regular and his conduct was good.

For HMT Machine Tools Ltd.



Chief of Chining
HMT Madebne Tools Limited
Bangotola (book) (MBX)
BANGOLAL-PEC PRO 013

## Visvesvaraya Technological University Belagavi, Karnataka-590 018



Internship Report on

## "EMBEDDED SYSTEM & IOT"

Internship Report submitted in partial fulfilment of the requirement for the award of

Bachelor of Engineering

In

Mechanical Engineering

Submitted by

PRADEEP SADANAND BIDARI
1MV19ME042

Internship carried out at TAKE IT SMART PVT LTD VIJAYANAGAR-560040





Under the guidance of

Mr. H S YESHAVANTHA

Assistant Professor Sir MVIT, Bengaluru Mr. Jagannath
Trainer
Take it Smart

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

2022-2023

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

## DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "EMBEDDED SYSTEM AND IOT" is a bonafide work carried out by PRADEEP SADANAND BIDARI(1MV19ME042) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK(18MEI85) prescribed for the course of Bachelor of Engineering.

Mr. HS Yeshavantha Assistant Professor Sir MVIT, Bengaluru

Dr. KS Shanmukharadhya Professor and Head of Mech.Dept., Sir MVIT, Bengaluru

Dr.Rakesh S G Principal Sir MVIT, Bengaluru

Names of the Examiners

Shivabrama)

2. PRAKASUA. A-M

Signature with Date



# Take It Smart (OPC) PVT LTD

# 14, SGN Arcade, 1st Floor, 2nd stage, 1st Main Rd, RPC Layout, Vijayanagar, Bengaluru - 560 040 Mob.: 8050104212 / 8792697647 www.takeitsmart.in

EITSMART

g No.: 150027

ISO 9001:2015

## Internship Certificate

This Certifies that PRADEEP SADANAND BIDARI

CID M	VISVESVARAYA	INICTITIITE OF	TECHNIOLOGY
DIV IVI	VIDVEDVARATA	IIVO I I I U I E UF	ICCHNULUGI

Student of.

**Embedded System and IOT** 

Has completed Internship in 28th January 2023 to 28th February 2023

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her And Wish him / her all the best for him / her future.







II) = #startupindia

Mallikarjun Kumbar Director

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590 018



Internship Report[18MEI85] On

### "STUDY OF DIFFERENT MANUFACTURING PROCESS"

Submitted in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING

DACHELOR OF ENGINEERING
IN
MECHANICAL ENGINEERING

HANCAL ENGINEERING
Submitted By

PRAJWAL K

1MV19ME043

For the academic year 2022-2023

Internship carried out at "HMT MACHINE TOOLS LIMITED"

Bangalore Complex
HMT colony, HMT Estate ,Jalahalli, Bengaluru, Karnataka 560013

Duration: 1 Month (22-08-2022 to 19-09-2022)

Internal Guide
Mr. JANARDHANA K
Associate Professor
Department of Mechanical Engineering
Sir MVIT, Bengaluru-562157.

External Guide
Mr. ATMANAND N
Training officer
HMT Machines Tools Ltd
Jalahalli, Bengaluru 560013



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

## SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY **BENGALURU - 562 157** DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship Report [18MEI85] entitled "STUDY OF DIFFERENT MANUFACTURING PROCESS" is a bonafide work carried out by PRAJWAL K(1MV19ME043) student of SIR M Visvesvaraya Institute of Technology has successfully completed the internship program in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of the prescribed for the Bachelor of Engineering Degree.

Mr. Janardhang H 23 Dr. K. S. Shanmukharadhya

Associate Professor Dept of Mech Engg Sir MVIT, Bengaluru

Professor and Head Dept of Mech Engg Sir MVIT, Bengaluru

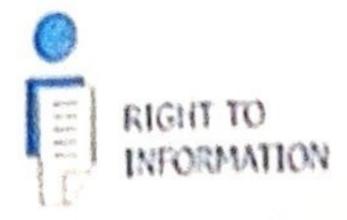
SIR M. VISVESVARASILINGTIVUTE, OF TECHNOLOGY Krishnadevaraya Ragagatunasamaranahalti International Airport Road, Bangalore-562 157

Name of the Examiners

SACHUD HANANDAN 5

Signature with Date

ISO 9001: 2008 Unit



एचएमटी मशीन ट्रन्स लिमिटेड एचएमटी विभिटेड की समूर्ण स्वामिनकीन अनुवनी) (धारत साकार का अपक्रम)

परीक्षण केंद्र

योगलूरु वर्गम्प्लेवस जालहल्ली पी.ओ, येगलूरु 560 013, भारत

दूरभाषा : +91-80-2838 8365 फेक्स : +91-80-2838 2797

ई-मेल : mbxtrg@hmtmachinetools.com वेब साईट : www.hmtmachinetools.com munule &

#### HMT MACHINE TOOLS LIMITED

(A Wholly owned Subsidiary of HMT Ltd.) (A Government of India Undertaking)

#### TRAINING CENTER

#### BANGALORE COMPLEX

Jalahalli P.O., Bengaluru - 560 013, INDIA

Phone: +91-80-2838 8365

Fax: +91-80-2838 2797 E-mail: mbxtrg@hmtmachinetools.com

Website: www.hmtmachinetools.com

Ref: MBX/TC/2022-23

21-09-2022

#### CERTIFICATE

This is to certify that Mr. Prajwal K (USN 1MV19ME043), Student of BE- Mechanical Engineering from Sir M Visvesvaraya Institute of Technology, Bengaluru has successfully completed his "INTERNSHIP" at HMT MACHINE TOOLS LIMITED, BANGALORE COMPLEX from 22-08-2022 to 19-09-2022 as partial fulfilment for the award of degree.

During the period of Internship, the student was found to be regular and his conduct was good.

For HMT Machine Tools Ltd.



Chicker Training
HMT Machine Voors Limited
Bang: AUCCOMMAN (MAX)
BANGALORE -560 013

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, **BELAGAVI - 590018**



#### Internship Report on "CEMENT MANUFACTURING AND PROCESSING"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

PRASHANTH

IMV19ME044

Internship carried out at

ULTRATECH CEMENT LIMITED

UNIT: RAJASHREE CEMENT WORKS ADITYA NAGAR, MALKHED ROAD, **GULBARGA-585292** 



ADITYA BIRLA **UltraTech** 

Under the Guidance of

#### Mr.H S YESHVANTHA

Asst. Professor Department of Mechanical Engineering

#### Mr. GOPAL CHAWAN

(AGM- mechanical) Rajashree cement works

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

PROCESSING" is a bonafide work carried out by PRASHANTH(1MV19ME044) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Mr.H S Yeshvantha Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya Professor and Head of Mech. Dept., Sir MVIT, Bengaluru

PRINCIPAL
SIR M. VISVĖSVARAYA INSTITUTE OF TECHNO (
Krishnadeva kayasias akustas maranah

Krishnaders jay Riakts juga tamaranah International Aippri Rhadi Bangalore-562

Sir MVIT, Bengaluru

Names of the Examiners

1. Shivabyma)

2. PRAKASHA.A.M

Signature with Date

A) 20/5/23 Auf 26/5/23

#### INTERNSHIP CERTIFICATE



06.10.2022

#### TO WHOMSOEVER IT MAY CONCERN

We hereby certify that Mr. Prashanth (1MV19ME044), B.E. Mechanical Engineering student from Sir M. Visvesvaraya Institute of Technology, Bengaluru has undergone internship training in our organization from 08.09.2022 to 06.10.2022. During this period, he was assigned the project & which he completed and submitted report to us.

We found him to be sincere during the above period and shown interest to gain maximum knowledge with the guidance of our staff.

We wish all success in his academic excellence.

For UltraTech Cement Ltd., (Unit: Rajashree Cement Works)

**KVVYŠ** Narayana Function Head-HR



Ultra left Cement Limited (Unit : Rajashree Cement Works) Adityanagar, Malakhed Road - 585 292, Dist. Kalaburagi, Karnataka, India Tel: (08441) 288888 | Fax: DS441-288624 | L. Mail: reoperator@adityabirla.com | Web: ultratechcement.com CIN: 126940MH2000PLC128420



#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI-590018



INTERNSHIP REPORT ON

#### LCH FINAL ASSEMBLY

Submitted in partial fulfilment of the requirements for the award of

Bachelor of Engineering in MECHANICAL ENGINEERING

Submitted By

PRUTHVI GOWDA V 1MV19ME045 Internship carried out

At

HUNDUSTAN AERONATICS LIMITED, Helicopter Division

Bangalore complex, Ramesh Nagar, Vimanapura, Bengaluru, Karnataka 560017 (Duration:22-08-2022 to 21-09-2022)

Internal Guide

Dr. Hanamantraygouda M B

Assistant professor

Dept. of Mech Engg, Sir MVIT

External Guide
Mr. Girish D J
Chief Manager, LCH Final Assy,
HAL Helicopter Division





DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



This is to certify that PRUTHVI GOWDA V (1MV19ME045), a bonafide student of SIR M. Visvesvaraya Institute of Technology, Bengaluru has satisfactorily completed Industrial training (18ME185) from Hindustan Aeronautics Limited, Helicopter Division in partial fulfilment of the requirements as prescribed by the VTU for the award of Bachelor of Engineering in Mechanical Engineering and submitted this report during the academic year 2022 - 2023.

Assistant professor

Dept of Mech Engg

Sir MVIT, Bengaluru

Dr K S Shanmukharadhya

Professor and Head

Dept of Mech Engg

Sir MVIT, Bengaluru

SIR AL VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli

International ARES FREE Bad, Bangalon 562 157

Principal

Sir MVIT,

Bengaluru

Names of the Examiners

Shrutimus PRIALASHA-A.M

Signature with Date

Amf 26/5/21

#### CERTIFICATE FROM THE INDUSTRY

मानव संसघन विभाग हेलिकॉस्टर प्रभाग (हैका) हिन्दुस्तान एरोनाटिक्स लिमिटेड वोस्ट बेग संख्या 1790, बेगला - 560017, भारत



HR DEPARTMENT HELICOPTER DIVISION (HC) HINDUSTAN AERONAUTICS LIMITED Post Bag No.1790, Bangalore-560 017, India Ph. (3747): 91-80-2231 7891, 2232 2918 Fax (केमा) : 91-80-22314717

Ref: IL/A/ILR/CM (PR)/2022

September 21, 2022

#### CERTIFICATE

This is to certify that Mr. Pruthvi Gowda V (USN No : 1MV19ME045) student of BE - Mechanical Engineering, Sir. M. Visvesvaraya Institute of Technology, Bangalore, has undergone "Internship" in LCH Final Assembly, HAL-Helicopter Division from 22.08.2022 to 21.09.2022.

- His Punctuality, Conduct, Behaviour and Progress during the 2. period of "Internship" was Satisfactory.
- We wish Mr. Pruthvi Gowda V all the very best in all his future endeavors.

For HAL-Helicopter Division

(G. H. Raju)

Chief Manager (Public Relations) ध क्या काक्य विशेषा प्रस्ति ।

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पंत्रीकृत कार्यलय : 15/1, कक्ष्मन रोड, चेंगलूर - 560001, घरत Registered Office: 15/1, Cubbon Road, Bangalore-560 001, India CIN:U35301KA1963G0I001622 E(f): hrhcop@hal-india.com

9 39 2

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



#### INTERNSHIP REPORT ON

"STUDY ON FABRICATION AND TOTAL QUALITY MANAGEMENT OF STAINLESS STEEL"

Submitted in partial fulfillment of the

requirements for the award of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

**PUNEETH S** 

1MV19ME046

INTERNSHIP CARRIED OUT AT

#### SIDDHI VINAYAKA FAB ENGINEERING PRIVATE LIMITED

No.206, 11th main 3rd Phase, Peenya Industrial Area, Bangalore – 560058

Internal Guide

Mr. Nataraj M

Assistant Professor

Sir M Vivesvaraya Institute of Technology

External Guide

Mohammed Basheer Ahmed

**Technical Director** 

Siddhi Vinayaka Fab Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR MVISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA Academic Year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGYBENGALURU-562157, KARNATAKA, INDIA

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is certify that the Internship report entitled "STUDY ON FABRICATION AND TOTAL QUALITY MANAGEMENT OF STAINLESS STEEL" is bonafide work carried out by PUNEETH S (1MV19ME046) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Intership report has been approved as it satisfies the academic requirements in respect of Internship (18MEI85) prescribed for the Bachelor of Engineering degree.

Mr.Nataraj M Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya Professor and Head of Mech Dept, Sir MVIT,

**Dr. Rakesh S G**Principal
Sir MVIT, Bengaluru

Names of the Examiners

1. Amach P. S

2. Shivating

Signature with Date

#### CERTIFICATE



#### SIDHI VINAYAKA FAB ENGINEERING PVT. LTD.

No. 205, 11th Main, 3rd Phase, Peenyo Industrial Area, Bangalora - 560 058 Phone 28390891, 41171891, 41179631, Telefar 080-28390891 E-mail . sve@sidhivinayakafab.com, Website ; www.sidhivinayakafab.com CIN No. UZ7320KA2005PTC035311 Certification Under ISO 9001:2015, EN 15085-2 CL1, ASME 'U' & 'UM'



REF: SVE 31/2022-23

DATE: 22/09/2022

#### TO WHOM SO EVER IT MAY CONCERN

This is to certify that MR. PUNEETH S Pursuing B.E (Mechanical Engineering) department at SIR M . VISVESVARAYA INSTITUTE OF TECHNOLOGY affiliated to VTU Belagavi bearing USN Number 1MV19ME046 has completed Internship in our company for the duration of 30 days From 22/08/2022 TO 22/09/2022.

During the above period his conduct was good and he showed eagerness to learn the concept .

We wish him very best in all his future endeavors.

SIDHI VINAYAKA FAB ENGINEERING PVT.LTD.

MOHAMED BASHEER AHMED (TECHNICAL DIRECTOR

Specialist in : Pressure Vessels (MS & SS) Stainless Steel Fabrication & Precision Machined Components.

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI - 590 018



Internship Report On

#### "JOULE-THOMSON CRYOCOOLER FOR SPACE AND MILITARY APPLICATIONS"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering in MECHANICAL ENGINEERING

#### Submitted By R HRITHIK REDDY 1MV19ME047

Internal Guide Dr. V Shantha

Professor

Department of Mechanical Engineering

Sir MVIT Bengaluru-562157.

External Guide

Mr. Sheetal Kumar Garg

Sc. 'D'

Department of Cryogenics

SSPL-DRDO Delhi



Estd.1986

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

#### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY **BENGALURU - 562 157** DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

on "JOULE-THOMSON CRYOCOOLER FOR Certified that the Internship report SPACE AND MILITARY APPLICATIONS" is a bonafide work carried out R Hrithik Reddy (1MV19ME047), in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of Internship prescribed for the Bachelor of Engineering Degree.

Dr. V Shantha Professor Dept of Mech Engg Sir MVIT, Bengaluru

75.5. B Dr. K. S. Shanmukharadhya Professor and Head Dept of Mech Engg Sir MVIT, Bengaluru

Krishnadevarayasa Rakesha Internation Paper Rakesha Sir MVIT, Bengaluru

Name of the Examiners

Signature with Date

SIR M. VISVĖSVAPAYA INSTIT

1. DE SACHUDHANANDANS

During the training period his/ber conduct at SSPL was good. the period from 21 9uy 2022 to 19 SEP 2022 Duration 06 (Six) Branch MECHANICAL ENGINEERING BE has completed successfully Summer/Winter Internship for Student of Sir M. VISNESYARAYA ISTITUTE OF TECHNOLOGIONO. IMVIAMEDAZ ISO 9001:2015 Certified Topic of Internship was This is to certify that Mr./Ms./ R. HRITHIK REDDY Solid State physics Laboraton, Politics Colin State Physics Ph AND प्रोशक्षण प्रमाणपत्र /TRAINING CERTIFICATE MILLTARY Lucknow Road, Timarpur, Delhi-110054 (Min. of Defence, DRDO) APPLICATION CRYOCOOLER Gp. Director (HR. SSPL, DRDO, Delbi-11 Dated 20 - Sep- 22 File No. 1805: 2.5.2/HR/SSPL/22 Scientist F \_weeks/<del>months.</del> Scanned with OKEN Scanner

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

### "STUDY OF POWER PACK AND MAINTENANCE IN DIESEL HHP LOCO"

Submitted in partial fulfilment of the requirements for the award

of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

R VINAY KUMAR

1MV19ME048

Internship carried out at

DIESEL LOCO SHED KRISHNARAJAPURA-560036





Under the Guidance of

Mr. JANARDHANA K Associate Professor Department of Mechanical Engineering

SRI. SRINIVAS RAO D Asst. Divisional Mechanical Engineer

Diesel Loco Shed, Krishnarajapura

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

It is certified that the Internship work entitled "STUDY OF POWER PACK AND MAITENANCE IN DIESEL HHP LOCO" is a bonafide work carried out by R VINAY KUMAR (1MV19ME048) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Mr. JANARDHANA K

Associate Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya

PRINBIPALL S G

Professor and Head of SIR M. VISVESVARAYA RYSTRUJEADF TECHNOLOGY Mech. Dept., Sir MVIT, Bengalmatshnadevsirya440pt; Hacasamaranahalli International Airport Road, Bangalore-562 157

Names of the Examiners

1. Dr. SACHUTHANANDAN.S

2. So July

Signature with Date

### INTERNSHIP CERTIFICATE

DIESEL LOCO SHED, KRISHNARAJAPURAM BANGALORE DIVISION, BANGALORE-36, SOUTH WESTERN RAILWAY 700 S.W. Fiel Sarior Date

### CERTIFICATE

This is to certify that the below mentioned student, perusing B.E (Mechanical Engineering) in SIR.M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU - 562157 has successfully undergone internship in our organization from August 29, 2022 to September 24, 2022. During this period he has completed a project entitled "Study of Diesel HHP Loco Power pack system"

> (1MV19ME048) VINAY KUMAR. R

During this period, his conduct and behavior was found good and he has shown keen interest to learn.

This certificate is solely issued for education purpose to provide industrial exposure to students.

We wish success in his future endeavors.

Date: 24.09.2022

Place: Krishnarajapuram

(YOGESH BHALEKAR) Sr. Divisional Mechanical Engineer

वरि, मण्डल यांत्रिक इजीतिवर Sr. Divisional Mechanical Engineer Land desired in S. M. S. Martin Mark चेतान्य-Bangalore-560 036

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



### Internship Report On

### ""Practical Exposure to Industrial Operations at BALCO""

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering

MECHANICAL ENGINEERING

Submitted By RAJAT POKALE 1MV19ME049

Under the Guidance of MR. K MADHUKUMAR Assistant Professor Department of Mechanical Engineering Sir MVIT Bengaluru-562157.



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY **BENGALURU - 562 157** DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

Certified that the Technical Seminar on "Practical Exposure to Industrial Operations at BALCO" is a bonafide work carried out RAJAT POKALE (1MV19ME049), in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of Internship prescribed for the Bachelor of Engineering Degree.

MR. K. Madhukumar Professor Dept of Mech Engg Sir MVIT, Bengaluru

25.5.23 Dr. K. S. Shanmukharadhya **Professor and Head** Dept of Mech Engg Sir MVIT, Bengaluru

Prof. Rakesh SG Principal Sir MVIT, Bengaluru

Name of the Examiners

Signature with Date

2. PRAICASHA-AM

### INTERNSHIP CERTIFICATE



BHARAT ALUMINIUM COMPANY LIMITED P.O. - BALCO Nagar, Korba, CG India - 495684

Ref. No: BALCO/HR/L&D/VT/2022/500592

### **CERTIFICATE**

This is to certify that Mr. Rajat Kumar Pokale student of BE in Mechanical Engineering from Sir M V Institute of Technology, Bangalore has completed his Summer Internship under the guidance of Mr. Komal Chandra Soni (SRS -Maintenance) from 2nd Sep'2022 to 30th September'2022 in Bharat Aluminium Company Limited. His performance during the project has been rated as Very Good by the guide.

We wish success in all his future endeavours.

Sanjay Kumbr Pradhan Lead L&D-BALCO

Date: 4th October'2022 Place: Korba (C.G.).

Registered Office: Aligninium Sadan, Core 6, Scope Complex, 7 Lodhi Road, New Delhi (India) - 110003 CIN: U74899DL1965PLC004518 | Tel: 011 49166200 | Fax: 011 24320177 | Web: www.vedantalimited.com | www.balcoindia.com

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANASANGAMA, BELAGAVI - 590 018, KARNATAKA



An Internship Report on

### "GROUND TESTING CENTRE"

Submitted in partial fulfillment of the requirement for the award of degree

### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by:

RAKESH R

1MV19ME050

VIII Semester

Internship carried out

Ai

### "HAL-ROTARY RESEARCH AND DESIGN CENTRE"

HR DEPARTMENT, HELICOPTER DIVISION (HC) HINDUSTAN AERONAUTICS LIMITED, Bangalore – 560 017, INDIA.

Internal Guide

Dr. H S YESHVANTHA

Assistant Professor

Sir M. Visvesvaraya Institute of Technology

External Guide

Mrs. PRABHA

HR department

**HAL-Helicopter Division** 



### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru-562157

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022 - 2023

i

### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157



### DEPARTMENT OF MECHANICAL ENGINEERING CERTIFICATE

This is to certify that the Internship[18MEI85] Report on "GROUND TESTING CENTRE" submitted byRAKESH R bearing 1MV19ME050 respectively is a bonafide student of Sir M. Visvesvaraya Institute of Technology, has successfully completed the Internship programme in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering prescribed by Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. The Internship report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering degree.

Signature of Internal Guide

Dr. H S Yeshvantha

Assistant Professor

Dept. of Mech Engg., SMVIT

Signature of HOD

Dr. K S Shanmukharadhya

16.5.03

Professor and HOD

Dept. of Mech Engg., SMVIT

Prof. Rakesh S G PRINCIPAL

External Viva

Name of the Examiners:

1. Shirolymus

2. PRAKASITA. A.M

Signature with date

Dor 20/0/23

### CERTIFICATE

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ROTARY WING RESEARCH & DESIGN CENTRE DESIGN COMPLEX HINDUSTAN AERONAUTICS LIMITED Bengaluru - 580 017, India

सकदस्तात । दूरभाव (Ph.: 91 - 80 - 2232 3149 91 - 80 - 2231 1294

#2019.000-011.0002. 10.00 - \$10.00 - 560.017, 1976 Tar / 600 / Fax: 91 - 80 - 2231 1747

HAL/DC/RWRDC/HR/INTRNSHP/ 1172 /2022

20th September 2022

www.hal-india.co.in

### CERTIFICATE

This is to certify that Mr. Rakesh R(USN: 1MV19ME050), student of B.Tech(Mechanical Engineering), Sir M. Visvesvaraya Institute of Technology, Bangalore has undergone Internship on No-pay-No-fee basis from 25.08.2022 to 20.09.2022 at Ground Test Centre, Rotary Wing Research & Design Centre, Hindustan Aeronautics Limited, Bengaluru.

His Punctuality, Behavior, Conduct, Progress in Training were 'Very Good' as rated by the Department Head during his training period with us. 2.

SENIOR MANAGER (HR)

Mr. Rakesh R USN: 1MV19ME050 B.Tech (Mechanical Engineering) Sir M. Visvesvaraya Institute of Technology Bangalore



ನೋಂದಾಯಕ ಕಚೇರಿ : ೧೫/೧೭ ಕಲ್ಲಡ್ ರಸ್ತೆ ಬೆಂಗಳೂರು-೫೭೦೦೦೧, ಭಾರತ पंजीकृत कार्यालय : 15/1, कब्बन रोड, बेंगलूरु - 560 001, भारत

Registered Office: 15 /1, Cubbon Road, Bengaluru - 560 001, India

초 ৯ ৯৯\*/ বী আई एन / CIN: L35301KA1963GOI001622 억 / ई / E: hr.rwrdc@hal-india.co.in

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



### Internship Report On

### "L & T CONSTRUCTION EQUIPMENT"

Submitted in Partial Fulfillment of the requirement for the award of the degree of

### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By:

Ridu Varshini N

1MV19ME051

Under the Guidance of Dr.K.S.Shanmukharadhya HOD & Professor

Dept of Mechanical Engineering SMVIT Bengaluru-562157



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562157 Academic Year: 2022-2023

### Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bangaluru-562157
2022-2023

### CERTIFICATE

Certified that the Internship [18MEI85] entitled "L & T CONSTRUCTION EQUIPMENT" carried out by Ms. Ridu Varshini N bearing USN: 1MV19ME051 a Bonafied student of Sir M Visvesvaraya Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internship have been executed under the directions of Dr.K.S.Shanmukharadhya The report has been approved as it satisfies the academic requirements in respect of Internship [18MEI85] prescribed for the course of Bachelor of Engineering.

Signature of Guide

Dr.K.S.Shanmukharadhya HOD & Professor Dept of Mech Engg SIR MVIT Jul 25.5.2023

Signature of HOD

Dr.K.S.Shanmukharadhya HOD & Professor Dept of Mech Engg SIR MVIT PRINCIPAL

SIR M. VISVESYAKAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya augur. Hunasamaranahalli
International Albort Ficasi, Bangalore-562, 157

Signature of Principal

Dr. Rakesh S G Principal SIR MVIT

25/05/23

Names of the Examiners

1. Dr. SACHUDHANANDAN.S

2. Sp. Halin

Signature with Date

### Internship certificate



L&T Construction Equipment Limited (formerly known as L&T Construction Mechanity Limited) Survey No. 27/28, Thermmashettihalli Kasaba Hobbi, Doddaballapur Taluk Bengahuru Rural District - 561 203, Karnataka, INDIA Tel. + 91 80 2217 5100

LTCEL/HR/INTERNSHIP/2022

17-September-2022

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Ridu Varshini N (1MV19ME051) of Sir M Visvesvaraya Institute of Technology Bengaluru, has undergone Internship at our Organization from 22-08-2022 to 19-09-2022. During the above period she has completed Internship at L&T Construction Equipment Limited, Doddaballapura.

The Conduct of the Student was found Satisfactory during the Internship.

We wish her all the best for her future endeavors.

for L&T Construction Equipment Limited.

(S D Satish Chandra)

DGM-HR & IR

Registered Office: L&T House, N. M. Marg, Ballard Estate, Mumbal - 400 001, INDIA. www.Larsentoubro.com CIN: U29248MH2018PLC318481

L&T Construction Equipment Limited is a wholly owned subsidiary of Larsen & Toubro Limited

ISO 9001 2015 ISO 14001 2015 ISO 45001 2018



### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018



### Internship Report

### "DESIGN AND ANAYLSIS OF BEVEL HELICAL GEARBOX"

submitted in partial fulfillment of the requirements for the award of the Degree of

### BACHELOR OF ENGINEERING

### MECHANICAL ENGINEERING

Submitted by

SAKET GARG

USN: 1MV19ME052

Under the Guidance of

Mr. Kumar Swamy R.

Assistant Professor Department of Mechanical Engineering Sir MVIT, Bengaluru.



## Department of Mechanical Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY (Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified) Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157

# Sir M VISVESVARAVA INSTITUTE OF TECHNOLOGY (Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified) Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Mehcanical Engineering



### CERTIFICATE

Certified that the internship work entitled "DESIGN AND ANAYLSIS OF REVEL HELICAL GEARBOX" carried out by Mr. SAKET GARG, USN 1MV19ME052, a bonafide student of Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru in partial fulfillment for the requirements for the award of the degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Internship work report has been approved as it satisfies the academic requirements in respect of internship work prescribed for the above-mentioned degree.

Signature Internal Guide Mr. Kumar Swamy R.

Signature of HOD Dr. K S Shanmukharadhya - SIR M. VISVESVA COMPUTE OF TECHNOLOGY Krishn Signature of Principal mahalis

International Prof. Rakesh S G ra-582 157

EXTERNAL VIVA

Name of Examiners

Signature with Date

TE SACHUDHANANDAN

2 8B Halvin

le net

2



### TO WHOM IT MAY CONCERN

Ref. No. JMB/HRM/105/ 000831

This is to certify that Mr. Saket Garg, a VII<sup>th</sup> semester B.E. Student in Mechanical Engineering of Sir M. Visvesvaraya Institute of Technology, Bangalore has undertaken unpaid internship training in our Jamadoba Coal Preparation Plant, Tata Steel limited, Jharia Division, Dhanbad for a period of 24 (twenty four) days from 16th October 2022 to 13th November 2022. He has also submitted his project reports on "Design and Analysis of Bevel Helical Gearbox."

This certificate is being issued to Mr. Saket Garg for completion of training as part of B.E. Course

We wish him success in his future endeavour.

Sr. Manager HRM 2011 2 2008 Govt. Liaison & Statutory Compliance-RM.

TATA STEEL LIMITED

Reseas Celliseres Jeruslehe 828 112 Dischool Index

Tel 91 326 232024V320205V2320267 Fax 91 326 2320268

Registered Office Beenbay Horses, 24, Horse Mondy Street, Feet, Marches – 409001 India

Tel 922 6463 8282 Fax 922 64657724

Composite Identity Number 1,2710034111007PLC000260 Wichests ways interest, post

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI - 590 018



### INTERNSHIP REPORT

ON

### "MACHINE LEARNING USING PYTHON"

Submitted in partial fulfillment of the requirements for the award of the degree

### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by:

SATYANARAYANA

1MV19ME053



Internship carried out at

Take It Smart (OPC) PVT. LTD BENGALURU-560040

Internal Guide:

### Mr. SHIVAKUMAR S

Assistant Professor / Depart. of Mechanical Engineering Bengaluru-562157



### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY DEPARTMENT OF MECHANICAL ENGINEERING

Hunasamaranahalli -562157

2022-2023

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

### DEPARTMENT OF MECHANICAL ENGINEERING

Hunasamaranahalli -562157

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka)



### CERTIFICATE

This is to certify that Satyanarayana (1MV19ME053), a bonafide student of Sir M. Visvesvaraya Institute of Technology, Bengaluru has satisfactorily completed Industrial training from Take It Smart (OPC) Pvt. Ltd. in partial fulfillment of the requirements as prescribed by the VTU for the award of Bachelor of Engineering in Mechanical Engineering and submitted this report during the academic year 2027-2023.

Signature of the Guide

Mr. Shivakumar S

Assistant Professor

Dept of Mechanical Engg.

Signature of HOD

Dr. K S Shanmukharadhya

Professor & HOD

Dept of Mechanical Engg.

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnedeverrivanagar, Hunasemacanahalli

International Assett Road, Bangalore-562 157 Signature of Principal

Prof. Rakesh S.G.

Principal

Sir MVIT, Bengaluru

External Viva:

Name of the Examiners

Signature with Date

1. Aylnisha, PJ

2 Shivakumais

### INTERNSHIP CERTIFICATE



# Take It Smart (OPC) PVT LTD

# 14, SGN Arcade, 1st Floor, 2nd stage, 1st Main Rd, RPC Layout, Vijayanagar, Bengaluru - 560 040 Mob. : 8050104212 / 8792697647. www.takeitsmart.in

TAKE IT SMART

Reg No.: 150027

ISO 9001:2015

## Internship Certificate

This Certifies that

### SATYANARAYANA

Student of SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY

Has completed Internship in Machine Learning Using Python

8th February 2023 to 9th March 2023

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her And Wish him / her all the best for him / her future.









Mallikarjun Kumbar Director

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



Internship Report[18MEI85] On

### "STUDY OF DIFFERENT MANUFACTURING PROCESS"

Submitted in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING

IN
MECHANICAL ENGINEERING
Submitted By
SHANTA 1MV19ME054
For the academic year 2022-2023

Internship carried out at
"HMT MACHINE TOOLS LIMITED"

Bangalore Complex

HMT colony, HMT Estate, Jalahalli, Bengaluru, Karnataka 560013

Duration: 1 Month (22-08-2022 to 19-09-2022)

Internal Guide
Mr. JANARDHANA K
Associate Professor
Department of Mechanical Engineering
Sir MVIT, Bengaluru-562157.

External Guide Mr. ATMANAND N Training officer HMT Machines Tools Ltd Jalahalli, Bengaluru 560013



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU - 562 157 DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

This is to certify that the Internship Report [18ME185] entitled "STUDY OF DIFFERENT MANUFACTURING PROCESS" is a bonafide work carried out by SHANTA(1MV19ME054) student of SIR M Visvesvaraya Institute of Technology has successfully completed the internship program in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements in respect of the prescribed for the Bachelor of Engineering Degree.

Mr. Janardhana 人為.? Associate Professor

Dept of Mech Engg Sir MVIT, Bengaluru Dr. K. S. Shanmukharadhya

Professor and Head Dept of Mech Engg Sir MVIT, Bengaluru Dr. Rakesh S G

SIR M. VISVESVARASALI MIVITE OF TECHNOLOGY Krishnadevarayaparas Hupasamaranahalli International Airport Road, Bangalore-562 157

Name of the Examiners

Signature with Date

1. Dr. SACHUDHANANDAN 5

2. EB Houlin

25/05/23 by ISO 9001: 2008 Unit



एचएमटी मशीन टूल्स लिमिटेड एक्क्प्यती लिमिटेड की समूर्ज स्वादिनकीन अनुस्ती) (भाग सम्बद्ध का अपक्रम) पहिल्ला केट्र

वेंगलूरु कॉम्प्लेक्स जालहरूमी पी ओ, वेंगलूरु 560 013, घरत दूरमाचा : +91-80-2838 8365

र्फक्स : +91-80-2838 2797 ई-मेल : mbxtrg@hmtmachinetools.com वेद गाईट : www.hmtmachinetools.com hand! A

HMT MACHINE TOOLS LIMITED

(A Wholly owned Subsidiary of HMT Ltd.) (A Government of India Undertaking)

TRAINING CENTER

BANGALORE COMPLEX Jalahalli PO., Bengaluru - 560 013, INDIA

Phone: +91-80-2838 8365

Fax: +91-80-2838 2797

E-mail: mbxtrg@hmtmachinetools.com Website: www.hmtmachinetools.com

Ref: MBX/TC/2022-23

21-09-2022

### CERTIFICATE

This is to certify that Ms. Shanta (USN 1MV19ME054), Student of BE- Mechanical Engineering from Sir M Visvesvaraya Institute of Technology. Bengaluru has successfully completed her "INTERNSHIP" at HMT MACHINE TOOLS LIMITED, BANGALORE COMPLEX from 22-08-2022 to 19-09-2022 as partial fulfilment for the award of degree.

During the period of Internship, the student was found to be regular and her conduct was good.

For HMT Machine Tools Ltd.



Chick Training
HMT Machine Tools Limited
Ban Almanandany: (MBX)
POINTER 17/C(TC) 013

पंजीकृत कार्यंतर - एचएमरी पदर, 59, बेल्लारी रोड, बेंगलूर-560 032. घात Registered Office: HMT Bhavan, 59, Bellary Road, Bengaluru - 560 032. India

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

### "AUTODESK INVENTOR SOFTWARE"

Submitted in partial fulfilment of the requirements for the award

of

**BACHELOR OF ENGINEERING** 

In

MECHANICAL ENGINEERING

Submitted By

SANGAMESH

1MV18ME095

Internship carried out at

TAKE IT SMART PVT. LTD VIJAYNAGAR-560040



1 1 11 11



Under the Guidance of

### DR. KIRAN KUMAR M

Asst. Professor Department of Mechanical Engineering

### Mr. RAGHUVENDRA

Asst. Designer Mechanical Engineer Take It Smart Vijaynagar

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

It is certified that the Internship work entitled "AUTODESK INVENTOR SOFTWARE" is a bonafide work carried out by SANGAMESH (1MV18ME095) in partial fulfillment for the awardof the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18ME185) prescribed for the course of Bachelor of Engineering.

Dr. Kiran Kumar M Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya
Professor and Head of
Mech. Dept., Sir MVIT, Bengaluru

Dr. Rakesh S G Principal

Sir MVIT, Bengaluru

Names of the Examiners

1. Ahrakmas

2.

Signature with Date

### INTERNSHIP CERTIFICATE



### Take It Smart (OPC) PVT LTD

# 14, SGN Arcade, 1st Floor, 2nd stage, 1st Main Rd, RPC Layout, Vijayanagar, Bengaluru - 560 040 Mob.: 8050104212 / 8792697647 www.takeitsmart.in

TAKE IT SMART

Reg No.: 150027

ISO 9001:2015

### Internship Certificate

This Certifies that

### SANGAMESH

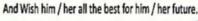
SIR. M. VISVESVARAYA INSTITUE AND TECHNOLOGY

Has completed Internship in

**Autodesk Inventor Professional** 

20th August 2022 to 20th September 2022

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her











### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018



Internship Report On

### "INDUSTRIAL ROBOTICS & NX CAD"

Submitted in partial fulfillment of the requirement for the award of BACHELOR OF ENGINEERING
In
MECHANICAL ENGINEERING

SUBMITTED BY:
RAVI B K 1MV18ME066

UNDER THE GUIDANCE OF MRS. VEENA B G
ASSISTANT PROFESSOR



DEPARTMENT OF MECHANICAL ENGINEERING

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU -562157 DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

Certified that the internship entitled "INDUSTRIAL ROBOTICS & NX CAD" is a bonafide work carried out by RAVI B K of USN: 1MV18ME066 a student of VIII semester in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of Sir M Visvesvaraya Institute of Technology, Bengaluru during the year 2022-23. And has successfully submitted the report. It is certified that all corrections suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The internship Report has been approved as it satisfies the academic requirements in respect of INTERNSHIP (18MEI85) prescribed for the Bachelor of Engineering Degree.

Mrs VEENA B G

25.5.7093 Dr. KS Shanmukharadhya

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnedeyarayananar Hunasamaranahalli International Airport Road, Bangalore-562 157 Hunasamaranahalli

Assistant Professor

Professor and Head of Department

PRINCIPAL

Dept. Mechanical Engineering Dept. of Mechanical Engineering

Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

Names of the examiners

Signature with Date

ACHUDHANANDAN 5



### ಸರ್ಕಾರಿ ಉಪಕರಣಾಗಾರ ಮತ್ತು ತರಬೇತಿ ಕೇಂದ್ರ (ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನೋಂದಾಯಿತ ಸೊಸೈಟ)

### **Government Tool Room & Training Centre**

(A Registered Society under Government of Karnataka)

### LETTER OF INTERNSHIP

To,

Date: 29/09/2022

The Principal, SIR M. Visvesvaraya Institute of Technology Bangalore-57

Respected Sir / Madam,

Subject: Completion of Student Internship Program.

Government Tool Room and Training Centre is pleased to inform you that Mr.RAVI B K [USN-1MV18ME066] student of 3<sup>rd</sup> year, Mechanical Engineering branch of your institution was admitted for internship with us and he was offered internship in the domain of "INDUSTRIAL ROBOTICS & NX CAD" and the training program was scheduled from 1st September 2022 to 28th September 2022.

The student was facilitated to work as anInternshipTrainee of our company for the duration of 4 weeks under the guidance and supervision of Mr. Promit Kumar Patra & Mrs. Madhuri M. to him based on his regular attendance and performance.

**Best Regards** 

Authorized Signatory

Govl. Tool Room & Training Centre Rajainagar Industrial Estate Bangatoro-560 016

> "ಕನ್ನಡ ಕಾಯಕ ವರ್ಷ 2020-21" ಭಾರತ ಸರ್ಕಾರದಿಂದ ಮಾನ್ಯತೆ ಪಡೆದ ವೈಜ್ಞಾನಿಕ ಮತ್ತು ಕೈಗಾರಿಕಾ ಸಂಶೋಧನಾ ಸಂಸ್ಥೆ A Scientific & Industrial Research Organisation Recognised by Govt. of India Rajajinagar Industrial Estate, Bengaluru-560010 Tel No. 080-23152118, 23152119, 23152262, 23301683 Website: www.gttc.co.in e-mail: md.gttc@gmail.com

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI



VIII Semester B.E. (Mechanical Engineering) Internship Report
"Elemental Motor Works Pvt. Ltd."

Submitted by

SHUBHAM ANAND 1MV19ME055

Under the Guidance of

Mr. Shivakumar S

Assistant Professor, Department of Mechanical Engineering.



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022-23



### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

This is to certify that Mr. SHUBHAM ANAND, USN: 1MV19ME055 a student of VIII semester B.E. in Department of Mechanical Engineering at Sir M. Visvesvaraya Institute of Technology has successfully completed the internship at "Elemental Motor Works Pvt. Ltd." and has submitted the report to fulfill the academic requirement of Internship for the Bachelor of Engineering degree.

Assistant Professor

Dept of Mech Engg

Sir MVIT, Bengaluru

1805.83 Dr K S Shanmukharadhya

Professor and Head

Dept of Mech Engg

Sir MVIT, Bengaluru

Krishnadayadayanadan hiy International Airport Road, Bangalore-562 157

Sir MVIT.

Bengaluru

Names of the Examiners

1. Avinasha P.S

Signature with Date

25/5/23

### Internship Certificate



### CERTIFICATE OF COMPLETION

UNIQUE CERTIFICATE ID EMWINEMDO75 Issued on 10, Sep. 2022

THIS IS TO CERTIFY THAT

SHUBHAM ANAND

HAS SUCCESSFULLY COMPLETED THE 3 WEEK REMOTE INTERNSHIP PROGRAMME ON

### ELECTRIC MOTORCYCLE DESIGN AND DEVELOPMENT

UNDER THE GUIDANCE OF ELEMENTAL MOTOR WORKS CONDUCTED FROM 21TH Aug. 2022 TO 10TH Sep. 2022.

tearn.elementalmotorworks.in

CO-FOUNDER

# VISUELVARAVATECHNOLOGICAL UNIVERSITY

"Jmana Sangama", Belaguvi-590 018



# Internship Report

on

# "METHOD TO DETECT, MEASURE AND ANALYSE TEMPERATURE AND VIBRATION OF ELECTRIC MOTOR USING IOT"

submitted in partial fulfillment of the requirements for the award of the Degree of

# BACHELOR OF ENGINEERING

Z

# MECHANICAL ENGINEERING

Submitted by

# SHUBHAM KUMAR USN: 1MV19ME057

Under the Guidance of

Internal Guide
Mr. Shivakumar S.
Assistant Professor
Mechanical Engg
Dept SIR MVIT, Bengaluru

External Guide
Mr. Prashanth
Lead Engineer - IoT
Harmonizer India PVT Ltd, Bengaluru



# Department of Mechanical Engineering

# Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157 (Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

22-2023

# Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Scanned with OKEN Scanner

Department of Mechanical Engineering



# CERTIFICATE

deposited in the department library. The internship report has been approved as it satisfies the corrections/suggestions indicated for Internal Assessment have been incorporated in the report award of the degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya INSTITUTE OF TECHNOLOGY, Bengaluru in partial fulfillment for the requirements for the Mr. SHUBHAM KUMAR, USN 1MV19ME057, a bonafide student of Sir M VISVESVARAYA ANALYSE TEMPERATURE AND VIBRATION OF ELECTRIC IoT" carried out by Certified that the internship entitled "METHOD TO DETECT, MEASURE AND academic requirements in respect of internship work prescribed for the above-mentioned degree. Technological University, Belagavi during the year 2022-2023. It is certified that all

Mr. Shivakumar S

Signature of HOD

Shanmukharadhya

SIR M. VISVESTANA VISV

International Airport Road, Bangalore-562 157

**EXTERNAL VIVA** 

Name of Examiners

Avinasha.p.)

Signature with Date

25/5/23



### HARMONIZER INDIA PVT LTD BENGALURU

### CERTIFICATE

Certified that the internship entitled "METHOD TO DETECT, MEASURE AND ANALYSE TEMPERATURE AND VIBRATION OF ELECTRIC IoT" carried out by Mr. SHUBHAM KUMAR, USN:1MV19ME057 a bonafide student of Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru in partial fulfilment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that he has completed the internship satisfactorily.

### Prashanth

Lead Engineer - IoT Harmonizer India PVT Ltd Marilingappa Extension, Bengaluru

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jaana Sangama", Belagavi - 590 018, Karnataka, India



### INTRNSHIP REPORT ON

### "ROTARY WING & RESEARCH DEPARTMENT (H.A.L)"

Submitted in partial fulfillment of the requirements for the award of the Degree

BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by

SHUBHAM KUMAR JHA

**USN: 1MV19ME058** 

Under the Guidance of

Mr. EJAZ AHMED
Associate Professor
Department of Mechanical Engineering.



## DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya nagar, Hunasamaranahalli, Bangalore -562157

**MAY 2023** 

### SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE-562157

### Department of Mechanical Engineering



### CERTIFICATE

This is to certify that the internship work entitled "ROTARY WING RESEARCH & DEVELOPMENT" is a bonafide Work carried out SHUBHAM KUMAR JHA (1MV19ME058) of Sir M. Visvesvaraya Institute of Technology, Bangalore, in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report submitted to department library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for Bachelor of Engineering degree.

Mr. EJAZ AHMED Associate Professor Dept. of Mech Engg.

Sir MVIT Bengaluru

25.5.2023 Dr. K S SHANMUKHARADHYA

Professor and HOD Dept. of Mech Engg. Sir MVIT Bengaluru

SIR M. VISVĖSVARAYA INSTITUTE QE

Krishnade PROFACE AKESH S International Airport Resida Bangalore-562 15

SIR MVIT Bengaluru

PROJECT REVIEW

Name of the Examiners

1. Avinosha RS 2. Lhivaturas

Signature with Date

2.

ta 10 25/5/23

्वरध्ये २००७ चव्हेंबरदर्ग स्वक्षु २००६ हेरव्यु तरी विष अनुसंधान व अभिकल्प केन्द्र अपूर क्रव्सावर अभिकल्प काम्प्लेक्स व्यवस्त्रुल २८०१ त्वर्था ट्रिकेटिक व्यवस्त्रुल २८०१ तिमिटेड व्यवस्त्राम् एरोनॉटिक्स लिमिटेड

# | Born | Fax : 01 - 80 - 2231 1747



ROTARY WING RESEARCH & DESIGN CENTRE DESIGN COMPLEX HINDUSTAN AERONAUTICS LIMITED

Bengaluru - 560 017, India

ट्रीकटीकार्थ / दूरभाष / Ph.: 91 - 80 - 2232 3149 91 - 80 - 2231 1284

HAL/DC/RWRDC/HR/INTRNSHP/ 1174 /2022

20th September 2022

### CERTIFICATE

This is to certify that Mr. Shubham Kumar Jha (USN:1MV19ME058), student of B.E(Mechanical Engineering), Sir M. Visvesvaraya Institute of Technology, Bangalore has undergone Internship on No-pay-No-fee basis from 21.08.2022 to 20.09.2022 at Ground Test Centre, Rotary Wing Research & Design Centre, Hindustan Aeronautics Limited, Bengaluru.

2. His Punctuality, Behavior, Conduct, Progress in Training were 'Excellent' as rated by the Department Head during his training period with us.

(U SUDHAKAR)
SENIOR MANAGER (HR)

Mr. Shubham Kumar Jha
USN: 1MV19ME058
B.E (Mechanical Engineering)
Sir M. Visvesvaraya Institute of Technology
Bangalore



ಕೋಂದಾಯತ ಕಚೇರಿ : ೧೫/೧, ಕಬ್ಬನ್ ರಸ್ತೆ, ಬೆಂಗಳೂರು-೫೬೦೦೦೧, ಭಾರತ पंजीकृत कार्यालय : 15/1, कब्बन रोड़, बेंगलूरु - 560 001, भारत Registered Office : 15/1, Cubbon Road, Bengaluru - 560 001, India

부 = 의하/ सी आई एन/CIN:L35301KA1963GOI001622 역/ ﴿/ E: hr.rwrdc@hal-india.co.in

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belgavi-590 018, Karnataka, India



An Internship Report

# Design and Development of Rotary Air-crafts

Submitted in Partial Fulfillment of the requirement for the award of the degree of

### BACHELOR OF ENGINEERING MECHANICAL ENGINEERING

Submitted By Siddharth S Hasavimath USN: 1MV19ME059

RWRDC, HAL, Bengaluru Carried out at

Under the Guidance of

Dept. Of ME, SMVIT Mr. K Ejaz Ahmed Internal Guide Associate Professor

Mr. Rajashekar RWRDC, HAL External Guide



### Sir M Visvesvaraya Institute of Technology Department of Mechanical Engineering

[Affiliated to Visvesvaraya Technological University, Belgaum] Bengaluru-562157

# Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum] Bengaluru-562157 2022-2023



### CERTIFICATE

INTERNSHIP prescribed for the said degree. of Mr. K Ejaz Ahmed. The report has been approved as it satisfies the academic requirements in respect of certified that all corrections/suggestions indicated for INTERNSHIP havebeen executed under the directions Engineering of the Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical by Siddharth S Hasavimath bearing USN: 1MV19ME059 a Bonafide student of Sir M Visvesvaraya Certified that the Internship Report entitled "Design and Development of Rotary Air-crafts" carried out Visvesvaraya Technological University, Belagavi during the year 2022-23. It is

Signature of Guide

Mr.K Ejaz Ahmed Associate Professor Dept of ME

SIR MVIT

Signature of HOD

Dr. K S Shanmukharadhya **HOD** and Professor

Dept of ME SIR MVIT

I raminel:

Signature of Principal PRINCIPAL

SIR M. URPOSTARRAKESTUS GITECHNOLOGY KrishmidevoraPrincipalasimaranahali International Amerikan Sangarore-562 157

S. Somegrapist

## COMPANY CERTIFICATE

रोटरी विंग अनुसंधान व अधिकल्प केन्द्र ਈਰਸਪਰਧਾ-ਸੁ⊾ਹਰਨਾ≟ ਪ੍ਰਸ਼ਹਤ / ਖੇਸ਼ਗ੍ਰਾ - 560 017, ਬਾਜ਼ ਬੜ੍ਹਾ / ਬੈਕਜ਼ / Fax : 91 - 80 - 2231 1747 ವಿನ್ನಾಸ ಸಂಕೀರ್ಣ/अभिकाप जाम्योक्त हिन्दुस्तान एरोनॉटिक्स लिमिटेड ವರೋನಾಟಕ್ ಲಿಮಟೆಡ್



Bengahru - 560 017, India DESIGN COMPLEX ROTARY WING RESEARCH & DESIGN CENTRE

400

HAL/DC/RWRDC/HR/INTRNSHP/ 117/ /2022

20th September 2022

### CERTIFICATE

student of B.Tech(Mechanical Engineering), Sir M. Visvesvaraya Institute of Centre, Hindustan Aeronautics Limited, Bengaluru. 25.08.2022 to 20.09.2022 at Ground Test Centre, Rotary Wing Research & Design Technology, Bangalore has undergone Internship on No-pay-No-fee basis from This is to certify that Mr. Siddharth S Hasavimath(USN: 1MV19ME059),

www.hal-india.co.in

as rated by the Department Head during his training period with us. His Punctuality, Behavior, Conduct, Progress in Training were 'Very Good'

SENIOR MANAGER (HR) (U SUDHAKAR

Mr. Siddharth S Hasavimath

USN: 1MV19ME059

Sir M. Visvesvaraya Institute of Technology B.Tech (Mechanical Engineering)

Bangalore



Registered Office: 15/1, Cubbon Road, Bengaluru - 560 001, India ನೋಂದಾಯಿತ ಕಚೇರಿ : ೧೫/೧, ಕಟ್ಟನ್ ರಕ್ತ, ಬೆಂಗಳೂರು-೫೬೦೦೦೧, ಧಾರತ पंजीकृत कार्यालय : 15/1, कम्बन रोड, बेंगलूर - 560 001, भारत

최 ৯ ৯৫기 सी आई एन / CIN:L35301KA1963GO1001622 영/ 왕/ E: hr.nwrdc@hal-india.co.in

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI-590018



### **Internship Report**

At

"Larsen & Toubro Construction Equipment Limited"



### L&T Construction Equipment

Submitted in partial fulfilment of the requirements for the award of

### **BACHELOR OF ENGINEERING**

In

### MECHANICAL ENGINEERING

Submitted by

### SIDHARTH VENUGOPAL

1MV19ME060

Under The Guidance Of

### Dr. K S Shanmukharadhya

Professor, Department of Mechanical Engineering



Estd. 198

### DEPARTMENT OF MECHANICAL ENGINEERING, SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY,

Krishnadevarayanagar, Hunasamaranahalli, Bengaluru-562157

Academic year: 2022-2023

### **CERTIFICATE**

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU - 562 157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

Certified that the Internship entitled "FABRICATION AND PRODUCTION" is a bonafide work carried out by SIDHARTH VENUGOPAL, USN 1MV19ME060, student of VII Semester in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of Sir M Visvesvaraya Institute of Technology, Bengaluru during the year 2022-2023 has successfully completed the internship at "L&T CONSTRUCTION EQUIPMENT LIMITED" and has successfully submitted the report. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Internship Report has been approved as it satisfies the academic requirements in respect of Internship (18ME185) prescribed for the Bachelor of Engineering degree.

W.5.2023

PROFESSOR & HEAD

Department of Mechanical Engineering Sir M. Visvesvaraya Institute of Techonology Bengaluru-562 157

Name of the Examiners

1) Dr. SACHUDHANANDAN. 5

2) SB Herlin

PRINCIPAL

SIR M. VISVÈSVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Aktrost Road, Bangatore-562, 157

Signature with date

krsk



L&T Construction Equipment Limited flormerly known as L&T Construction Machinery Limited? Survey No. 27/28, Thammashettihalli Kasaba Hobli, Doddaballapur Taluk Bengahiru Rural District – 561 203, Karnataka, INDIA Tel. + 91 80 2217 5100

LTCEL/HR/INTERNSHIP/2022

17-September-2022

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Sidharth Venugopal (1MV19ME060) of Sir M Visvesvaraya Institute of Technology Bengaluru, has undergone Internship at our Organization from 22-08-2022 to 19-09-2022. During the above period he has completed Internship at L&T Construction Equipment Limited, Doddaballapura.

The Conduct of the Student was found Satisfactory during the Internship.

We wish him all the best for his future endeavors.

for L&T Construction Equipment Limited.

(S D Satish Chandra)

DGM-HR & IR





### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018, Karnataka, India



An Internship Report

On

### "Template for Online YOGA Training Center"

Submitted in Partial Fulfillment of the requirement for the award of the degree of

### BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

**Submitted By** 

SOURABH C P

1MV19ME061

Carried out at Compsoft Technologies



Under the Guidance of

Internal Guide
Dr. G. BALAKUMAR
Associate Professor
Dept. Of ME, SIR MVIT

External Guide
Mr. NITHIN
Trainer
Compsoft Technologies



### DEPARTMENT OF MECHANICAL ENGINEERING Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]
Bangaluru-562157
2022-2023

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

It is certified that the Internship work entitled "TEMPLATE FOR ONLINE YOGA TRAINING CENTER" is a bonafide work carried out by SOURABH C P (1MV19ME061) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Orle G Balakumar

Associate Professor Mechanical Department Sir MVIT, Bengaluru Dr. K S Shanmukharadhya

Professor and Head of Mechanical Department Sir MVIT, Bengaluru SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Airport Road, Sangalore-562 157

PRINCIPAL

Prof. Rakesh S G

Principal

Sir MVIT, Bengaluru

Names of the Examiners

1. Dr. SACHUDHANANDAN 5

2 So Halim

Signature with Date

25/05/23

### Company Certificate



### **Compsoft Technologies**

Providing a Complete Suite of IT Solutions

Certificate ID - 1CSTFSM265

Date - 30/09/2022

### Certificate of Internship

This is to certify that Mr SOURABH C P (1MV19ME061) has done his Full Stack Web Development Internship in Compsoft Technologies, RajajiNagar, Bangalore, from 25th August 2022 to 29th September 2022.

He has worked on a project titled Template For Online Yoga Training Center. This project was aimed at creating a cutting edge website for a client of ours, As part of the project, he designed functional webpages, Backend Databases to collect, store, and sort data, by understanding the design briefs and client Specifications that were provided in the Proposal.

During the internship, he demonstrated good design skills with a selfmotivated attitude to learning new things. His performance exceeded expectations and was able to complete the project successfully on time, We wish him all the best in his future endeavours.

Warm regards.



No. 363, 19th main road, ck Rajajinagar Bangalore 560010





\*Search Engine Optimisation

\*Development

\*ML & Research

\*Branding and Design

\*Content Writing

\*Embedded Systems and IOT

### VESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



### INTERNSHIP REPORT ON

### "EMBEDDEDSYSTEMS&IOT"

Submitted in partial fulfilment of the requirements for the award of

BACHELOR OF ENGINEERING

In

MECHANICALENGINEERING

Submitted By

SUDEEP V R - 1MV19ME062

INTERNSHIP CARRIED OUT AT TAKE IT SMART(OPC) PVT LTD

Under the Guidance of SAMPATH KUMAR L Asst. Professor Department of mechanical engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M.
VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022-23



### SIR M. VISVESVARAYAINSTITUTE OF TECHNOLOGYBENGALURU-562157, KARNATAKA, INDIA DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

This is to certify that the Internship report entitled "EMBEDDED SYSTEMS & IOT" is bonafide work carried out by SUDEEP V R (1MV19ME062) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified thatall corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Intership report has been approved as it satisfies the academic requirements in respect of Internship (18MEI85) prescribed for the Bachelor of Engineering degree.

Mr. Sampath kumar L Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya Professor and Head of

Mech Dept, Sir MVIT,

Bengaluru

Dr. Rakesh S G

Principal

Sir MVIT, Bengaluru

PRINCIPAL

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLO
Krishnadevarayanagar, Hunasamaranahal

Internal good Airport Pend Diagoalore-562 1

Names of the Examiners

1. DY, SACH

DY, SACHUDHANANDAN.S

2. 83 Journ

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI-590018



### INTERNSHIP REPORT ON LCH FINAL ASSEMBLY

Submitted in partial fulfilment of the requirements for the award of

Bachelor of Engineering MECHANICAL ENGINEERING

Submitted By

SUDHAMSHU A C 1MV19ME063

Internship carried out

HINDUSTAN AERONAUTICS LIMITED, Helicopter Division Bangalore complex, Ramesh Nagar, Vimanapura, Bengaluru, Karnataka 560017 (Duration:22-08-2022 to 21-09-2022)

Internal Guide Dr. Hanamantraygouda M B Assistant professor

Dept. of Mech Engg, Sir MVIT

External Guide Mr. Girish D J Chief Manager, LCH Final Assy, HAL, Helicopter Division



DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU Academic year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



This is to certify that SUDHAMSHU A C (1MV19ME063), a bonafide student of SIR M. Visvesvaraya Institute of Technology, Bengaluru has satisfactorily completed Industrial training (18ME185) from Hindustan Aeronautics Limited, Helicopter Division in partial fulfilment of the requirements as prescribed by the VTU for the award of Bachelor of Engineering in Mechanical Engineering and submitted this report during the academic year 2022 – 2023.

Dr. Hanamantraygouda M B

Assistant professor Dept of Mech Engg

Sir MVIT, Bengaluru

Dr K S Shanmukharadhya

Professor and Head

Dept of Mech Engg

Sir MVIT, Bengaluru

PRINCIPAL

SIR M. VISVESVARAYA MISTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranar alli International Amboli Rodu, Bangalore-562 157

Principal

Sir MVIT,

Bengaluru

Names of the Examiners

1. Shivatumas )

2. PRAKASHA. A.M

Signature with Date

A 26/5/23 Amf 26/5/23

### CERTIFICATE FROM THE INDUSTRY

मानव संसयन विभाग हेलिकॉप्टर प्रभाग (हैका) हिन्दुस्तान एरोनाटिक्स लिमिटेड धेस्ट बैग संख्य 1790, बेंगलूर - 560017, भारत



HR DEPARTMENT
HELICOPTER DIVISION (HC)
HINDUSTAN AERONAUTICS LIMITED
Post Bag No.1790, Bangalore-560 017, India
Ph. (दूराम्य): 91-80-2231 7891, 2232 2918
Fax (फैक्स): 91-80-22314717

Ref: H/A/HR/CM (PR)/2022

September 21, 2022

### CERTIFICATE

This is to certify that Mr. Sudhamshu A C (USN No: 1MV19ME063) student of BE – Mechanical Engineering, Sir. M. Visvesvaraya Institute of Technology, Bangalore, has undergone "Internship" in LCH Final Assembly, HAL-Helicopter Division from 22.08:2022 to 21.09.2022.

- 2. His Punctuality, Conduct, Behaviour and Progress during the period of "Internship" was Satisfactory.
- 3. We wish Mr. Sudhamshu A C all the very best in all his future endeavors.

For HAL-Helicopter Division

(G. H. Raju)

Chief Manager (Public Relations)

ager (Public Relations) स्र कथ कथ्याकी पर स्त्र कि अस्त स्वाद स्टाम्स्ट्रिक (क्यांकी)

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पंजीकृत कार्यलय : 15/1, कब्बन रोड, बेंगलूर – 560001, भारत

Registered Office: 15/1, Cubbon Road, Bangalore-560 001, India CIN: U35301KA1963GOI001622 E(t): hr.hcop@hal-india.com

www.hal-india.com

### VISVESVARAYA INSTITUTE OF TECHNOLOGY, BELAGAVI – 590 018



An Internship Report on

### "METHODS AND TOOLING DEPARTMENT"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering

in

MECHANICAL ENGINEERING

Submitted By

SUHAS S (1MV19ME064)

Internship carried out

At

"HAL - HELICOPTER DIVISION"

Hindustan Aeronautics Limited, Bangalore - 560 017, India

Internal Guide

Mr. Nataraj M

Assistant Professor

Department of Mechanical Engineering

External Guide

Mr. Hemanth D M

Manager

HAL - Helicopter Division



SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE – 562 157 DEPARTMENT OF MECHANICAL ENGINEERING

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE - 562 157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

This is to certify that the Internship Report on "METHODS AND TOOLING DEPARTMENT" submitted by SUHAS S bearing 1MV19ME064 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. The Internship Report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering Degree.

Mr. Nataraj M Assistant Professor Dept. of Mechanical Engg., Dr. K S Shanmukharadhya Head of the Department, Dept. of Mechanical Engg., Sir MVIT, Bangalore

Dr. Rakesh S G Principal, Sir MVIT, Bangalore

Name of the Examiners

1. Ainachi P.S 2. Shirabens

Signature with date

### CERTIFICATE

माना संसदान विभाग श्रीत्वाधार संचार (केंबर) शरूकाल एएंजारिक्स निविदेश their de trium areas deept - heavily with



HE DEPARTMENT
HELICOPTER DIVISION (HC)
HINDUSTAN AERONAUTICS LIMITED
Post Bay No. 1790, Bangatore 560 017, India
Ph. (gramy : 91-86-1317 7891, 3313 2916
PAX (\$949) : 81.88-133178717

Ref: H/A/HR/CM (PR)/2022

September 21, 2022

### CERTIFICATE

This is to certify that Mr. Suhas S (USN No : 1MV19ME064) student of BE - Mechanical Engineering, Sir. M. Visvesvaraya Institute of Technology, Bangalore, has undergone "Internship" in Methods & Tooling Department, HAL-Helicopter Division from 22.08.2022 to 21.09.2022.

- His Punctuality, Conduct, Behaviour and Progress during the period of "Internship" was Satisfactory.
- We wish Mr. Suhas S all the very best in all his future endeavors.

For HAL-Helicopter Division

(G. H. Raju) Chief Manager (Public Relations)

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24/04/22

पंजीकृत कार्यातव : 15/1, कथ्यत रोड, केंग्राप - 560001, मान Registered Office: 15/1, Cubbon Road, Sangshore-560 UCL, India CHICUTES TO LEA 1963 G DIOO 1627 130 hthoughtful mela co

www.hal-India.com

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

### "STUDY OF POWER PACK AND MAINTENANCE IN DIESEL HHP LOCO"

Submitted in partial fulfilment of the requirements for the award

of

**BACHELOR OF ENGINEERING** 

In

MECHANICAL ENGINEERING

Submitted By

**SURAJA** 

1MV19ME065

Internship carried out at

DIESEL LOCO SHED KRISHNARAJAPURA-560036





Under the Guidance of

Mrs. VEENA B G
Assistant Professor
Department of Mechanical Engineering

SRI, SRINIVAS RAO D

Asst. Divisional Mechanical Engineer Diesel Loco Shed, Krishnarajapura

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157



### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

It is certified that the Internship work entitled "STUDY OF POWER PACK AND MAITENANCE IN DIESEL HHP LOCO" is a bonafide work carried out by SURAJ A 1MV19ME065 in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18MEI85) prescribed for the course of Bachelor of Engineering.

Mrs. VEENA B G Assistant Professor Sir MVIT, Bengaluru

25-5-2023 Dr. K S Shanmukharadhya

Mech. Dept., Sir MVIT, Bengaluru Krishnadeva Syahaga dhuga barnaranahal International Airport Road, Bangalore-562 1

Names of the Examiners

CHUDHANANDAN!S

Signature with Date



### DIESEL LOCO SHED, KRISHNARAJAPURAM

BANGALORE DIVISION, BANGALORE-36, SOUTH WESTERN RAILWAY

### CERTIFICATE

This is to certify that the below mentioned student, perusing B.E (Mechanical Engineering) in SIR.M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU – 562157 has successfully undergone internship in our organization from August 29, 2022 to September 24, 2022. During this period he has completed a project entitled "Study of Diesel HHP Loco Power pack system"

### SURAJ.A (1MV19ME065)

During this period, his conduct and behavior was found good and he has shown keen interest to learn.

This certificate is solely issued for education purpose to provide industrial exposure to students.

We wish success in his future endeavors.

Date: 24.09.2022

Place: Krishnarajapuram

(YOGESH BHALEKAR) Sr. Divisional Mechanical Engineer

Sr. Divisional Mechanical Engineer इ.प.रं. वृद्धाराभाषुरम SW.Ry Krishnarajspuram चेंगलूर-Bangalore-560 036

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY INANASANGAMA, BELAGAVI - 590 018, KARNATAKA



### An Internship Report on

### "MAINTENANCE & SAFETY GUARDING IN INDUSTRY"

Submitted in partial fulfillment of the requirement for the award of degree

### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by:

(1MV20ME406)

VIII Semester

Internship carried out

AI

### "INDIAN TOBACCO COMPANY LTD"

PRIMARY MANUFACTURING DEPARTMENT ITC LIMITED, Banglore-562157, INDIA

Internal Guide

Mr. S B HALESH

Associate Professor

Sir M. Visvesvaraya Institute of Technology

External Guide

Mr. RISHAB GARG

Manager

ITC-PMD Division





### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

International Airport Road, Hunasamaranahalli, Yelahauka, Bengaluru-S62157

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022 - 2023

1

### SIF M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

This is to certify that the Internship Report on "MAINTENANCE & SAFETY GUARDING IN INDUSTRY" submitted by KEERTHI D bearing 1MV20ME406 respectively is a bonafide student of Sir M. Visvesvaraya Institute of Technology, has successfully completed the Internship programme in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering prescribed by Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. The Internship report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering degree.

Signature of He

Mr. S B Halesh Dr. K S Shanmukharadhya

Internal Guide

PRINCIPAL

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGI Krishnadevarayanaca. Hunasamaranahalii International Agreetis and Baggarage 562 x53

International Arriver to ad Sangalore-562 157
Signature of Principal

Prof. Rakesh S G

External Viva

Name of the Examiners:

1. Almsh. Pl

2. flyntings

Signature with date

A) 25/5/27

ii

### CERTIFICATE



If CLimited INDIA TOBACCO DIVISION Manustanta Village Jole Hebbi Bengaluru (Florth) - 562 157

ARCHAI

tel 0091 80 28467709/10/11/12/14/15

September 27, 2022

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Keerthi D. of Sir M. Visvesvaraya Institute of Technology. Bengaluru bearing Reg. No. 1MV20ME406 has successfully completed a project on "Maintenance and Safety Guarding in Industry" at Production Department at ITC Limited, Bengaluru Factory from 23<sup>rd</sup> August, 2022 to 23<sup>rd</sup> September, 2022.

He has done this project under the guidance of Mr. Rishab Garg of Production Department.

He has completed this project to the satisfaction of all concerned.

We wish him all the best in his future endeavours.

**HUMAN RESOURCES MANAGER** 



### Visvesvaraya Technological University Belagavi, Karnataka-590 018



Internship Report on

### "EMBEDDED SYSTEM & IOT"

Internship Report submitted in partial fulfilment of the requirement for the award of

**Bachelor of Engineering** In Mechanical Engineering Submitted by MAHESH AINAPURE 1MV20ME407 Internship carried out at TAKE IT SMART PVT LTD

VIJAYANAGAR-560040





Under the guidance of

Mr. Chandrasekhar B

Assistant Professor Sir MVIT, Bengaluru Mr. Jagannath Trainer Take it Smart

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 2022-2023



### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

It is certified that the Internship work entitled "EMBEDDED SYSTEM AND IOT" is a bonafide work carried out by MAHESH AINAPURE(1MV20ME407) in partial fulfillment for the award of the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK(18MEI85) prescribed for the course of Bachelop of Engineering.

Mr. Chandrasekhar B Assistant Professor Sir MVIT, Bengaluru

Dr. K S Shanmukharadhya Professor and Head of Mech.Dept., Sir MVIT, Bengaluru

25.23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOG Krishnedayarayaraçar, Hunasamaranahali International Airport Road, Bangalore-562 15 Dr.Rakesh S G

Principal Sir MVIT, Bengaluru

PRINCIPAL

Names of the Examiners

1. Dr. SACHUDHANANDAN S

Signature with Date

### INTERNSHIP CERTIFICATE



### Smart (OPC) PVT LTD

# 14, SGN Arcade, 1st Floor, 2nd stage, 1st Main Rd, RPC Layout, Vijayanagar, Bengaluru - 560 040 Mob.: 8050104212 / 8792697647 www.takeitsmart.in

TAKE IT SMART

Reg No.: 150027

ISO 9001:2015

### Internship Certificate

This Certifies that

### MAHESH AINAPURE

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Student of.

**Embedded System and IoT** Has completed Internship in

28th January 2023 to 28th February 2023

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her And Wish him / her all the best for him / her future.





Mallikarjun Kumbar Director

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI-590018



### An InternshipReport On

### "VERTICAL INDUCTION HARDENING MACHINE"

Submitted in partial fulfilment of the requirements for the award of degree of Bachelor of Engineering

In

Mechanical Engineering

Submitted by

PREMSAGAR G

1MV20ME408

Internship carried out at
BHARAT EARTH MOVERS LIMITED
K.G.F

Internal guide,

Dr. PRASHANT S HUMNABAD

Assistant professor
Department of Mechanical Engineering
Sir M. Visvesvaraya Institute of Technology

External guide, Mr. BASAVARAJ

General Manager
Bharat earth movers limited
K.G.F







### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru-562157
DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022 - 2023

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157



### DEPARTMENT OF MECHANICAL ENGINEERING

### CERTIFICATE

This is to certify that the internship work entitled, "VERTICAL INDUCTION HARDENING MACHINE" is a bonafide work carried out by PREMSAGAR G (1MV20ME408) in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING of the Visvesvaraya Technological University, Belagavi during the year 2022-23. The report has been approved as it satisfies the academic requirements with respect to internship work prescribed by the VTU of the abovementioned degree.

Signature of Internal Guide Dr. PRASHANT S HUMNABAD

Assistant professor

Department of Mechanical

Engineering

Signature of HOD

Dr. K S SHANMUKHARADHYA

Professor and HOD

Dept. of Mech Engg., SMVIT

PRINCIPAL

syr sametanatralli serior residenti dari jubbre 552 157

Signature of Principal Dr. RAKESH S G

Principal Sir MVIT Bangalore

External Viva

Name of the Examiners:

1 A .. L . D . 1

2. Shivakum )

Signature with date

AJ 2x/5/23



### बी ई एम एल लिमिटेड

### BEML LIMITED

(A Govt. of India Mini Ratne Company under Ministry of Defence)



### Corporate Office:

"BEML SOUDHA", Bangalore - 560 027. Tel.: 080-22223065 E-mail: office@pr.berl.co.in

### Manufacturing Units:

Bangatore Complex Tel.: 060-25241752 e-mail : bemicgmr@vsnl.com

Mysore Complex Tel.: 0821-2402333 e-mail: bemimys@sanchamet.in

International Business Division Tel.: +91-80-22963229 e-mail: office@export.beml.co.in

Aerospace Division Tel.: +91-80-22963506 / 575 e-mail: edd@beml.co.in

Trading Division
Tel.: +91-80-2296 3522 / 524
e-mail: office@trading.beml.co.in

### Regional Offices:

Bilaspur

Tel.: 07752-252745 e-mail: billaspur@rm.beml.co.in

Chennal
Tel.: 044-28220844
e-mail: chennal@mm.beml.co.in

Tel.: 0326-2222 385 e-mail: dhanbad@rm.beml.co.in

Hyderabad Tel.: 040-2322 7032 e-mail: hyderabad@rm.beml.co.in

Kolkata Tel.: 033-22826314 e-mail : kolkatta@rm.beml.co.in

Mumbal Tel.: 022-22049490 e-mail : mumbal@rm.beml.co.in

Nagpur Tel.: 0712-2248435 e-mail: nagpur@rm.beml.co.in

New Delhi Tel.: 011-23316500 e-mail: delhi@m.berl.co.in

Ranchi Tel.: 0651-2560370 e-mail: ranchi@rm.beml.co.in

Sambalpur Tel.: 0663-2521604 e-mail : sambalpur@m.bemi.co.in

Singraufi Tel: 07805-268260 e-mail ; singrauf@rm.beml.co.in Ref: EKT/2022/1-141

Dtd: 01.10.2022



### INTERNSHIP TRAINING CERTIFICATE

This is to certify that

Mr. PREMSAGAR G (1MV20ME408) BE in (Mechanical Engineering) student of Sir M, Visvesvaraya Institute of Technology Bangalore has undergone Internship Training in our Organization at BEML Limited, K.G.F Complex from 02,09,2022 To 01.10,2022

In the following Divisions

- 1) Earth Mover Division
- 2) Hydraulic & Power Line Division

His Character and Conduct were Good during the above period.

for BEML LIMITED.

(MALATESH G TULAJANNAVARA) SENIOR MANAGER-TRAINING

भी है एम एल नगर, मोलार गोल्ड फील्डस - 663 115

BEMI. Nagar, Kolar Gold Fields - 563 115, Kamataka, India Ph. : 08153-263777, 263213, Fax : 08153-263274, 263660 a-mail : ede@bemi.co.in ek@bemi.co.in

008205654745

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANASANGAMA, BELAGAVI - 590 018, KARNATAKA



An Internship Report on

### "STUDY ON BOILERS AND REFRIGERATION UNITS"

Submitted in partial fulfillment of the requirement for the award of degree

### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by: PUNEETH N

(1MV20ME409)

VIII Semester

Internship carried out

4

### "KOLAR-CHIKKABALLAPURA COOPERATIVE MILK PRODUCERS SOCIETIES UNION LIMITED"

Kolar Dairy Premises, NH 75, Huthur, Post, Kolar, Karnataka 563102

Internal Guide

Dr. Prashant S Humnabad

Assistant Professor SMVIT, Bengaluru, Karnataka External Guide

Mr. Rajeev K V

Manager

KOMUL, Kolar, Karnataka



### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru-562157

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022 - 2023

### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

This is to certify that the Internship Report on "STUDY ON BOILERS AND REFRIGERATION UNITS" submitted by PUNEETH N bearing 1MV20ME409 respectively is a bonafide student of Sir M. Visvesvaraya Institute of Technology, has successfully completed the Internship programme in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering prescribed by Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. The Internship report has been approved as it satisfies the academic requirements in respect of seminar

prescribed for the Bachelor of Engineering degree.

SIR M. VISVESY! Krishnadova

Signature of Internal Guide

Dr. Prashant S Humnabad

Assistant Professor

Dept. of Mech Engg., SMVIT

Signature of HOD

Dr. K S Shanmukharadhya

Professor and HOD

Dept. of Mech Engg., SMVIT

International Au-Prof. Rakesh S'G"2 157

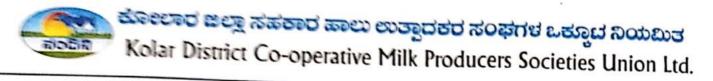
PRINCIPAL

External Viva

Name of the Examiners:

Signature with date

### CERTIFICATE



KMU: ADMN: 5292

: 2022-23

Date: 23.09.2022

### CERTIFICATE

This is to certify that PUNEETH N (Reg No : 1MV20ME409) Sir M Visvesvaraya Institute Of Technology, Bengaluru student studying BE (Mechanical Engineering) has undertaken Internship Project in dairy entitled 25 "A STUDY ON BOILERS AND REFRIGERATION UNITS" at Kolar District Co-operative Milk Producers Societies Union Ltd., Kolar. For the Period from 24.08.22 to 23.09.2022.

For Kolar Milk Union Limited,

ವ್ಯವಸ್ಥಾಪಕರು (ಆಡಳಿತ)

ಕೋಲಾರ ಜಿಲ್ಲಾ ಸಹಕಾರ ಹಾಲು ಒಕ್ಕೂಟ ನಿ.

ಕೋರಾರ

ಕೋಲಾರ ಡೇರಿ ಆವರಣ, ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ - 75, ಹುತ್ತೂರು ಆಂಚೆ, ಕೋಲಾರ - 563 102

Kolar Dairy, NH-75, Huttur Post, Kolar - 563 102. (ISO-22000; 2005 Certified)

Ph: 08152-282300, Fax: 08152-282303

E-mail: komulmd@yahoo.co.in komulmd@gmail.com website: www.komul.coop

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590 018



Internship Report On

## "STUDY OF DIFFERENT MANUFACTURING PROCESS AT HMT"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering

MECHANICAL ENGINEERING

Submitted By

## RAJATH H V IMV20ME410

For the academic year 2022-2023

7

## "HMT MACHINE TOOLS LIMITED"

Bangalore Complex

HMT colony, HMT Estate, Jalahalli, Bengaluru, Karnataka 560013 Duration: 1 Month (22-08-2022 to 19-09-2022)



Under the guidance of

Internal Guide Mr. S B HALESH

Associate Professor Dept. of Mechanical Engineering. Sir MVIT Bengaluru

External Guide Mr. ATMANAND N

Training Officer HMT Machine Tools Limited Jalahalli, Bengaluru



# DEPARTMENT OF MECHANICAL ENGINEERING

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157 (Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Academic year: 2022-23

# SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157 (Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

## DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

PROCESS" carried out by Mr. RAJATH H V (USN: 1MV20ME410), a bonafide student of Certified that the internship entitled "STUDY OF DIFFERENT MANUFACTURING Sir M. Visvesvaraya Institute of Technology, Bengaluru in partial fulfilment for the requirements for the award of the degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. The internship report has been approved as it satisfies the academic requirements in respect of internship work prescribed for the above-mentioned degree.

JUL CYPT 25 /05 /25 /15 Signature of HOD II. K S SHANMUKHARADHYA

Separature of Guide

SIR Al. VISVÈSVARRELL PETETUTE OF TECHNOLOGY Krishnadevarayannagur, riunaussmerenanalli Internationst ghattire of Principale -562 157

Prof. RAKESH S G

**External Viva** 

Name of the Examiners:

1. Winach P. 1 Chindern

Signature with date

20(2(22)2)73

### CERTIFICATE

ISO 9001 : 2008 Unit



र्क्यूबरी बजीर रूप्स निविदेषु रफ्तमी निविद्य की कर्ज स्वक्रिक्ट क्रूपरी कार कारत के अफकर स्वीकृत केर्

हेगतुर कॉन्य्तेक्स जान्यक्सी चै.ध्रे, हेगतुर ५६० १६८ घरा

हुत्याच : +11-80-2828 8265 केस्स : +11-80-2828 2797

ई-मेत : mbxtrg@hmtmachinetools.com देव मार्डर : www.hmtmachinetools.com hmit A

HMT MACHINE TOOLS LIMITED

(A Wholly owned Subsidiary of HMT Ltd.)
(A Government of India Undertaking)

TRAINING CENTER BANGALORE COMPLEX

Jalahalli PO., Bengaluru - 560 013, INDIA

Phone: +91-80-2538 6365 Fax: +91-80-2638 2797

E-mail: mbxtrp@hmtmachinetools.com

Website: www.hmimachinetools.com

Ref: MBX/TC/2022-23

21-09-2022

### CERTIFICATE

This is to certify that Mr. Rajath II V (USN 1MV20ME410), Student of BE- Mechanical Engineering from Sir M Visvesvaraya Institute of Technology, Bengaluru has successfully completed his "INTERNSHIP" at HMT MACHINE TOOLS LIMITED, BANGALORE COMPLEX from 22-08-2022 to 19-09-2022 as partial fulfillment for the award of degree.

During the period of Internship, the student was found to be regular and his conduct was good.

For HMT Machine Tools Ltd.



Officer IC(TC)

सर्वकृत सर्वातः - एक्सर्यं सन् १९ केमर्थं से, रेज्युन-१८८ १८८ सत् विकासका शिवा शिकानः १९ तिका विका विकास विकास

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI – 590 018, KARNATAKA



An Internship Report on

### "STUDY ON BOILERS AND REFRIGERATION UNITS"

Submitted in partial fulfillment of the requirement for the award of degree

Bachelor of Engineering
In
MECHANICAL ENGINEERING

Submitted by: VAMSHI V (1MV20ME411) VIII Semester

Internship carried out

At

### "KOLAR-CHIKKABALLAPURA COOPERATIVE MILK PRODUCERS SOCIETIES UNION LIMITED"

Kolar Dairy Premises, NH 75, Huthur, Post, Kolar, Karnataka 563102

Internal Guide

Dr. Prashant S Humnabad

Assistant Professor SMVIT, Bengaluru, Karnataka External Guide

Mr. RAJEEV K V

Manager

KOMUL, Kolar, Karnataka



DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY OF TECHNOLOGY, BENGALURU

ACADEMIC YEAR: 2022 - 2023

#### Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvarava Technological University, Belagavi, Kamataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship Report on "STUDY ON BOILERS AND REFRIGERATION UNITS" submitted by VAMSHI V bearing IMV20ME401 respectively is a bonafide student of Sir M. Visvesvaraya Institute of Technology, has successfully completed the Internship program in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering prescribed by Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. The Internship report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering degree.

Signature of Internal Guide

Dr. Prashant S Humnabad Assistant Professor Dept. of Mech Engg, Sir MVIT Signature of HOD

Dr K S Shanmukharadhya

Professor and Head

Dept. of Mech Engg. Sir MVII

Signature of Principal

Dr. Rakesh S G

Phincipal

Sir MWIII. Bangalore

Name of the Examiners:

Signature with date

#### CERTIFICATE



# ಕೋಲಾರ ಜಲ್ಲಾ ನಹಕಾರ ಹಾಲು ಉತ್ತಾದಕರ ಸಂಘಗಳ ಒಕ್ಕೂಟ ನಿಯಮಿತ Kolar District Co-operative Milk Producers Societies Union Ltd.

KMU: ADMN: 5291

2022-23

Date: 23.09.2022

#### CERTIFICATE

This is to certify that VAMSHI V (Reg No : 1MV20ME411) Sir M Visvesvaraya Institute Of Technology, Bengaluru student studying BE (Mechanical Engineering) has undertaken Internship Project in dairy entitled as "A STUDY ON BOILERS AND REFRIGERATION UNITS" at Kolar District Co-operative Milk Producers Societies Union Ltd., Kolar. For the Period from 24.08.22 to 23.09.2022.

For Kolar Milk Union Limited,

ವ್ಯವಸ್ಥಾಪಕರು (ಆಡಳಿತ) ಕೋಲಾರ ಜಿಲ್ಲಾ ಸಹಕಾರ ಹಾಲು ಒಕ್ಕೂಟ ವಿ. ಕೋರಾರ

ಕೋಲಾರ ಡೇರಿ ಆವರಣ, ರಾಷ್ಟ್ರೀಯ ಹೆದ್ದಾರಿ - 75, ಹುತ್ತೂರು ಅಂಚೆ, ಕೋಲಾರ - 563 102

Kolar Dairy, NH-75, Huttur Post, Kolar - 563 102. (ISO-22000 ; 2005 Certified)

Ph : 08152-282300, Fax : 08152-282303

E-mail: komulmd@yahoo.co.in komulmd@gmail.com website: www.komul.coop

### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI



#### Internship Report

Submitted in partial fulfillment of the requirements for the award of

BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted by

BALARAJU K 1MV20ME400

Under the Guidance of

Mr. Sampath Kumar L.

Assistant Professor

Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

CONTROL" is a bonafied work carried out by BALARAJU K, USN: IMV20ME400 a student of VIII Semester in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of Sir M Visvesvaraya Institute of Technology, Bengaluru during the year 2022-2023 has successfully completed the internship at "SPACENEX AREO PRIVATE LIMITED" and has successfully submitted the report. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Internship Report has been approved as it satisfies the academic requirements in respect of Internship (18ME185) prescribed for the Bachelor of Engineering degree.

Mr. Sampath Kumar L

Associate Professor

Dept. of Mech Engg.

Sir MVIT, Bengaluru.

Dr. K. S. Shanmukharadhya ... Dr. Rakesh & Carrey

Professor & HOD

Dept. of Mech Engg.

Sir MVIT, Bengaluru .

Principal Pan

Sir MVIT, Bengaluru.

Names of the Examiners

1. DT. SACHUDHAN ANDAN . 5

2. BB Halinh

Signature with Date

25/05/23

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018, KARNATAKA, INDIA



#### INTERNSHIP REPORT ON

### "EMBEDDED SYSTEMS & IOT"

Submitted in partial fulfillment of the requirements for the award of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

Submitted By

BHARATH T S

1MV20ME401

INTERNSHIP CARRIED OUT AT

Under the Guidance of

SAMPATH KUMAR L

Asst. Professor Department of mechanical engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA

Academic Year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGYBENGALURU-562157, KARNATAKA, INDIA

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship report entitled "EMBEDDED SYSTEMS & IOT" is bonafide work carried out by BHARATH T S (1MV20ME401) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The Intership report has been approved as it satisfies the academic requirements in respect of Internship (18ME185) prescribed for the Bachelor of Engineering degree.

Mr. Sampath kumar L Assistant Professor Sir MVIT, Bengaluru

Dr. K S Shanmukharadhya Dr. Rakesh S G Professor and Head of

Mech Dept, Sir MVIT,

Bengaluru

Principal

Sir MVIT, Bengaluru

PRINCIPAL

Names of the Examiners

SACHUDHANANDAN. 5

Take It Smart (OPC) PVT LTD

# 14, SGN Arcade, 1st Floor, 2nd stage, 1st Main Rd, RPC Layout, Vijayanagar, Bengaluru - 560 040 Mob. : 8050104212 / 8792697647 www.takeitsmart.in

TISMART

No.: 150027

ISO 9001:2015

# Internship Certificate

This Certifies that

BHARATH T.S

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Student of

**Embedded System and IOT** 

Has completed Internship in

28th January 2023 to 28th February 2023

From\_

we found him/her sincere, Hardworking, Dedicated and Result oriented, She/he Worked well as Part of the team during his/her tenure. We take this opportunity to thank him / her And Wish him / her all the best for him / her future.





#startupindia

Mallikarjun Kumbar Director



#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018, KARNATAKA, INDIA



#### INTERNSHIP REPORT ON

#### STUDY ON FABRICATION AND TOTAL QUALITY MANAGEMENT OF STAINLESS STEEL

Submitted in partial fulfillment of the

requirements for the award of

BACHELOR OF ENGINEERING

MECHANICAL ENGINEERING

Submitted By

CHANDRU KUMAR H V 1MV20ME402

INTERNSHIP CARRIED OUT AT

#### SIDDHI VINAYAKA FAB ENGINEERING PRIVATE LIMITED

No.206, 11th main 3rd Phase, Peenya Industrial Area, Bangalore - 560058

Internal Guide

Mr.Chandrasekhar B

Assistant Professor

Sir M Vivesvaraya Institute of Technology

External Guide

Mohammed Basheer Ahmed

Technical Director

Siddhi Vinayaka Fab Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA

Academic Year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157, KARNATAKA, INDIA

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the Internship report entitled "STUDY FABRICATION AND MANAGEMENT OF TOTAL QUALITY STAINLESS STEEL " is bonafide work carried out by CHANDRU KUMAR H V (1MV20ME402) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in thedepartmental library. The Intership report has been approved as it satisfies the academic requirements in respect of Internship (18MEI85) prescribed for the Bachelor of Engineering degree.

Mr.Chandrasekhar B Assistant Professor

Sir MVIT, Bengaluru

Professor and Head of Mech Dept, Sir MVIT, SIR M. VISVESVAZAYA INISTITUTE OF TECHNOLOGY Krishnedevarayanaga Hunasemaranahalil

International Apport Rakesh S Gore-502 157

Principal

Sir MVIT, Bengaluru

Names of the Examiners

Signature with Date

CHUDHANANDAN.S

#### CERTIFICATE



### SIDHI VINAYAKA FAB ENGINEERING PVT. LTD.

No. 206, 11th Main, 3rd Phase, Peanya Industrial Area, Bangalore - 560 058. Phone: 28390891, 41171891, 41179631, Telefax: 080-28390891 E-mail: sve@sichvinayakafab.com, Website: www.sichvinayakafab.com

CIN No. LI27320KA2005PTC038311

Certification Under ISO 9001:2015, EN 15085-2 CL1, ASME 'U' & 'UM'



REF: SVE/32/2022-23

DATE: 22/09/2022

#### TO WHOM SO EVER IT MAY CONCERN

This is to certify that MR. CHANDRU KUMAR H V Pursuing B.E. (Mechanical Engineering) department at SIR M . VISVESVARAYA INSTITUTE OF TECHNOLOGY affiliated to VTU Belagavi bearing USN Number 1MV20ME402 has completed Internship in our company for the duration of 30 days From 22/08/2022 TO 22/09/2022.

During the above period his conduct was good and he showed eagerness to learn the concept.

We wish him very best in all his future endeavors.

SIDHI VINAYAKA FAB ENGINEERING PVT.LTD.

MOHAMED BASHEER AHMED (TECHNICAL DIRECTORING

Specialist in : Pressure Vessels (MS & SS) Stainless Steel Fabrication & Precision Machined Components.



# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590018, KARNATAKA, INDIA



Internship Report On

#### "CNC PROGRAMMING AND OPERATION"

Submitted in Partial Fulfillment of the requirement for the award of the degree of

#### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

Submitted By:

DRAKSHAYINI

1MV20ME403

Under the Guidance of Mr. SAMPATH KUMAR L Dept of Mechanical Engineering SMVIT Bengaluru-562157



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562157 Academic Year: 2022-2023

:

# Sir M Visvesvaraya Institute of Technology

[Affiliated to Visvesvaraya Technological University, Belgaum]

Bangaluru-562157

2022-2023

#### CERTIFICATE

Certified that the Internship entitled "CNC PROGRAMMING AND OPERATION" carried out by Ms. DRAKSHAYINI bearing USN: 1MV20ME403 a Bonafied student of Sir M V Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections/suggestions indicated for Internship have been executed under the directions of Mr. SAMPATH KUMAR L. The report has been approved as it satisfies the academic requirements in respect of Internship prescribed f or the said degree.

Signature of Guide

Mr. SAMPATH KUMAR L Assistant Professor Dept of Mech Engg SIR MVIT MY 15.5.23

Signature of HOD

Dr.K.S.Shanmukharadhya HOD & Professor Dept of Mech Engg SIR MVIT SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranaha/li International Almont Royal, Respectors

PRINCIPAL

Signature of Principal

Dr. Rakesh S G Principal SIR MVIT

Names of the Examiners

1. TX , SACHUTHANAND AN . S

25/05/23

2. 8B Herry

Signature with Date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI-590 018



An Internship Report On

# "STUDY OF DIFFERENT MANUFACTURING PROCESS AT HMT"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering MECHANICAL ENGINEERING

> Submitted By: EKANTH P MOHITHE (1MV20ME404)

> > Internship carried out

#### "HMT MACHINE TOOLS LIMITED"

Bangalore Complex

HMT colony, HMT Estate, Jalahalli, Bengaluru, Karnataka 560013 Duration:1Month (05-09-2022 to 01-10-2022)

Internal Guide Dr. PRASHANT S HUMNABAD

Assistant Professor Sir M. Visvesvaraya Institute of Technology External Guide

Mr. ATMANAND N Training Officer

HMT Machine Tools Limited



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562 157

Academic Year: 2022-2023

#### SIT M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka) International Airport Road, Hunasamaranahalli, Yelahanka, Bengaluru 562157



#### CERTIFICATE

This is to certify that the Internship Report on "HMT Machine Tools Limited" submitted by EKANTH P MOHITHE bearing 1MV20ME404 respectively is a bonafide student of Sir M. Visvesvaraya Institute of Technology, has successfully completed the Internship program in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering prescribed by Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. The Internship report has been approved as it satisfies the academic requirements in respect of seminar prescribed for the Bachelor of Engineering degree

nature of Internal Guide Dr. PRASHANT S HUMNABAD

Assistant Professor Dept. of Mech Engg., SMVIT Signature of HOD

Dr. K S Shanmukharadhya Professor and HOD

Dept. of Mech Engg., SMVIT

PRINCIPAL

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnedevarayanagar, Hunasamaranahalli International Airport Road, Bangalore-562 Signature of PRINCIPAL

Prof. Rakesh S G

External Viva

Name of the Examiners:

Signature with date

ISO 9001: 2008 Dwit



एसएमटी महीत हुन्या जिसिटेड mot lidding de omplingsterangels ALL ROOM IS NOWED other for times attraction straying that done you may may \$76W +51-95-385K \$305 \$100 +5-45-2038 2797 \$-fin moving@nemiconineouss.com BY INTO WWW.TRIDINGCHINGUES.COM

hrnk /

HMT MACHINE TOOLS LIMITED

(A Whichly comment Schnidsbury of Half (56)) A Comment of the processing TRAINING CENTER

BARGALORE COMPLEX

Jonati FS, Sergioni - 96 113, MSX From 151-45-3006-0085

fax: +91-65-3038-259

CAR MANGEMENTANIA

Ref: MBX/TC/2022-21

66-05-3832

#### CERTIFICATE

This is to certify that Mr. Ekanth P Mobishe (USN 1569/28568/484), Student of SE. Mechanical Engineering from Sir M Ververnacrya Institute of Justinology. Rengalura fluo successfully completed his "INTERNSHIP" at HMT MACHINE 1000L9 LIMITED. BANGALORE COMPLEX from 05-09-2022 to 01-10-2022 at gustial fulfillment for the award of degree

During the period of Internship, the student was found to be regular and his conduct was good.



For HMT Machine Tools Ltd.

Dy. Martingers 15 1 DARGALORIC ANT INT

William water - quipalt was, 50, \$most fix, \$1005-500 CSI. WAY Registered Office Half Branser, 59, Sellary Road, Sengature - 500 CSI. Incia



#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Internship Report on

#### "AUTODESK INVENTOR SOFTWARE"

Submitted in partial fulfilment of the requirements for the award

BACHELOR OF ENGINEERING

MECHANICAL ENGINEERING

Submitted By

KANTEPPA

1MV20ME405

Internship carried out at

TAKE IT SMART PVT. LTD VIJAYNAGAR-560040





Under the Guidance of

Mr. Chandrashekar B

Asst. Professor Department of Mechanical Engineering Mr. RAGHUVENDRA

Asst. Designer Mechanical Engineer Take It Smart Vijaynagar

DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022-23

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

# DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

It is certified that the Internship work entitled "TAKE IT SMART PVT. LMT" is a bonafide work carried out by KANTEPPA (1MV20ME405) in partial fulfillment for the awardof the Degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-23. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of INTERNSHIP WORK (18ME185) prescribed for the course of Bachelor of Engineering.

Mr.Chandrashekar B

Assistant Professor Sir MVIT, Bengaluru Dr. K S Shanmukharadhya

Professor and Head of Mech. Dept., Sir MVIT, Bengaluru

PRINCIPAL

R.M. VISVESVARAYA INSTITUTE OF TECHNOLO

Krishnadevarayanagar, Hunasamaranahall

ternational Air Dr. Rakesh S Ge-562 15

Principal Sir MVIT, Bengaluru

Names of the Examiners

1. DO. SACHUDHANANDAN. 5

2. 8R Haling

Signature with Date

#### INTERNSHIP CERTIFICATE



#### Sri Krishnadevaraya Educational Trust

### Sir M. Visvesvaraya Institute of Technology, Bengaluru

#### Department of Mechanical Engineering

# MINI-PROJECT STUDENT LIST

SI. NO	GROUP NO	USN	NAME	GUIDE
	01	IMV2IME406	Chethan K	Dr V Shantha
2	01	1MV21ME409	Deepak Raju N	
3	01	IMV21ME431	Puneeth J	
4	01	1NIV21ME448	Yashwanth M	
5	02	IMV21ME405	Charan Kumar S	Mrs Veena B G
6	02	1MV21ME424	Mohammed Adnan Shariff	
-	02	IMV21ME426	Nandan Kumar N	
8	02	IMV21ME439	Sirisha S	!
Ų	03	1MV20ME031	Rajeev K L	Mr.Janardhana K
10	03	1MV20ME038	Srujan K	
11	03	1MV20ME040	Sukshith	
12	03	1MV20ME044	Venkatesh	·
13	04	1MV20ME009	Bhaskar M L	Mr. Natraja M.
14	04	1MV20ME016	<b>D</b> ivya K	
15	04	1MV20ME032	Rakesh N	
16	04	1MV20ME033	Rishikesh	
17	05	IMV21ME408	Darshan N	Dr Prashant S H
18	0.5	IMV21ME425	Mahammed Samiuddin	
19	05	1MV21ME438	Shiv Kumar	
20	05	IMV21ME441	Suresh A	
21	06	1MV20ME007	Anup Nirmal Abraham	Mr. K Ejaz Ahmed
22	06	1MV20ME008	Bharatha H S	A Line
23	06	IMV20ME025	Mayur Prakash	,
24	06	1MV20ME036	Shoaib Affan M	
25	07	IMV21ME414	Hariharan S	Mr. Sampth Kumar L
26	07	IMV21ME440	Sumeet II	Mit Sampui Kunjar L
27	$-\frac{1}{07}$	IMV21ME444	Tejesh D	
28	07	IMV21ME445	U Sandesh	
29	08	IMV2IME400	Ajaykanth G V	Man Aska D
30	08	IMV21ME412	Hanish N	Mrs Asha Rani A
31	08	IMV21ME413	Hareesha V A	
32	08	IMV21ME415	Hemanth	
33	09	IMV20ME014	Dinesh B	Mr. Kumaraswamy R

; ,	1-3	INIV 20ME 015	Dinesh H M	
i,	139	MN 20MH 020	Kishor Kumai R	
16	(14)	1/1/20/11/022	Lakshmisha R	
	112	IMV2IME417	Koustubha Vishnu S	Dr G Balakumar
/ <b>3</b>	$\mathcal{A}_{\mathcal{F}}$	IMN 21NH 421	Mahesh R	
4)	1)	FMN 21 MI 146	Umesh S	•
4 <sup>k</sup> 1	+ 3	- MNI : MH,450	Yogesh H K	,
<b>,</b>		1MV2.MI 443	Tejas S	Dr. K S Shanmukharadhya
1_	ļ	IMN21ML44*	Vijava Kumar K R	
45	11	IMN21ME420	Mahanthesha M H	
44		IMN 21 ME428	Nithin A	•
i i	-	FMV20ME011	Dev Prakesh Pandey	Dr. K S Shanmukharadhya 🔝
<i>;</i> ,,	• 2	* NEV 20NIT 019	Karan Rathore	
<b>;</b> *	** ***	FMN 29NH.028	Prancy Jason Dsouza	
48	12	EMN 20MF 035	Shantaveer	•
<u> </u>	1 7	IMV21ME118	M Nithish Kumar	Dr Hanamantraygouda M B 🥕
511		*MN 2 *ME 419	Madhu J S	•
Ξ.	1	(MN2)MF127	Naveed Pasha	
\$ <u></u>	; ×	MVLAH	Raviteja B	
53	1.4	"MV 29ME93"	Harish yerma	Dr V Shantha
54	1.4	MV20ME018	Jeevan Kumar C R	•
5.5	. 1	NN 20NH 023	M S Prayeen Sai	•
56	5 I . →	1NtN 20 <b>Nt</b> F021	Malfikarjan Sajjan	
57	, 4	*MV 20 <b>V</b> [] 066	Aistadh B	Dr G Balakumar 🗸
58		MN 20MH063	Dharshao	·
50	-   5	MV20ML043	Varuna B	· · · · · · · · · · · · · · · · · · ·
60	15	MN 20MI 045	Vishiyas Rao	
61	l h	1M121MF423	Meena H I	Mr. K Madhukumar
62	16	MV2(ME430)	Payan Kumar D A	<del>-</del> -
63	16	MV2/ME434	Risheck Kamble	
64	l ts	IMV21ML436	Sagar P Kalapur	•
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66	1 -	1MN 20MT 012	Dhanush S	•
6*	1-	*MV 20MF 076	Nishaoth Kalvan N	
68	1 -	1MN 20Mf 6/39	Sulias N M	
69	18	1MN 24ML 403	Arayind	Mr. H S Yeshyantha
<b>~</b> ()	18	1MV21ML407	Danesh Upaladının	•
7	18	IMN 21MI 429	Payan Kalmadi	-
72	18	MV21MF435	Sachin Patil	,
-;	19	1MV20MF001	Abhdash G S	Mr. S B Halesh
~1	10	EMN 20MH 003	Adarsh D R	· •
75	19	FMV20MF004	Adithya S Patil	

<sup>2</sup> Off International Airport Road, Hunasamaranahalli, Bengaluru North - 562157

()	19	1MV20ME010	Bhuyaneshwara.P	Value M
7	20	IMV20ME021	Kuber	Dr Kiran Kumar M
8	20	1MV20ME034	Sachin Agarwal	
9	20	1MV20ME037	Shreyas Belliappa K K	1
)	20	1MV20ME041	Suraj Chavan	Mr. B Chandrashekar
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2	21	LMV21ME410	Divakarababu G S	_ contrast
3	21	1MV21ME411	Gurukiran K	
	21	1MV21ME416	Kiran	Mr Ramesh C G
5	, 55	1MV21ME401	Akshay-Kumar	
86	, 22	IMV21ME402	Apsar G M	
7	22	1MV21ME449	Yogesh G E	Mr. Prashanth L
88	23	IMV21ME432	Rakshitha B	Maio a comment
39	23	IMV2IMI 437	Sai Tarakaram V	
90	23	IMV21ML442	Syed Suhel Siddigh	. 1

Project Coordinator

Project Co Coordinator

28.4.23

1 1 28. 4. 202: HOD

PROFESSOR & HEAD

Department of Mechanical Engineering
Sir M. Visvesy naya Inchance of Technology
Bangaluru-56.3 Co.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



Mini Project Report on

#### Multi-Blade Vegetable Cutting Machine

Submitted in partial fulfilment of the requirements for the award of Bachelor of Engineering

IN

#### **MECHANICAL ENGINEERING**

Submitted By

CHETHAN K DEEPAK RAJU N PUNEETH J YASHWANTH M

1MV21ME406 1MV21ME409 1MV21ME431 1MV21ME448

Under the guidance of
Dr.V.Shantha
Professor
Department of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGULURU
Academic year: 2022-2023

#### SIR M. VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the project work entitled "MULTI-BLADE VEGETABLE CUTTING MACHINE" bonafide work carried out by CHETHAN K - 1MV21ME406, DEEPAK RAJU N - 1MV21ME409, PUNEETH J - 1MV21ME431, YASHWANTH M - 1MV21ME448, in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Mini Project Work (18MEMP68) prescribed for the Bachelor of Engineering degree.

Dr. K. S. SHANMUKHARADHYA Krisnepderara

SIR H. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Professor

Professor and Head of

Principal

Sir MVIT, Bengaluru

Mech Dept, Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

Names of the Examiner

1. Dr. Pradont His. 2Dr.B.J. Praved bonn

Signature with date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



A project report on

# POWER GENERATION USING SWING MOTION Submitted in partial fulfillment of the requirement, for the award of

Bachelor of Engineering

IN

#### MECHANICAL ENGINEERING

Submitted By

Charan Kumar, S

1MV21ME405

Mohammed Adnan Shariff

1MV21ME424

Nandan Kumar N

1MV21ME426

Sirisha. S

**IMV21ME439** 

Under the Guidance of Mrs. Veena B G Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022 - 23

# SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the project work entitled "POWER GENERATION USING SWING MOTION" is a bonafide work carried out by Charan Kumar.S 1MV21ME405, Sirisha.s 1MV21ME439, Nandan Kumar N 1MV21ME426, Mohammed Adnan Shariff 1MV21ME424 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

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PRINCIPAL

SIR M. VISVÈSVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalii
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Mrs. Veena B G

Dr. K S Shanmukharadhya

Porf. Rakesh S G

Assistant professor

Professor and Head

PRINCIPAL

Mech. Engg.

Dept. of Mech. Engg.

Sir M VIT.

Sir M V I T, Bengaluru

Sir M V I T, Bengaluru

Bengaluru

Names of the Examiner

Dr. Prashant H.S.

2. Bo: B. S. PRAVEEN Kennya

Signature with date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



A Mini Project Report On

#### "MODELLING AND FABRICATION OF FLOOD RESISTANCE HOUSE"

Submitted in partial fulfillment of the requirements

For the award of

BACHELOR OF ENGINEERING

IN

#### MECHANICAL ENGINEERING

Submitted By

RAJEEV K L

1MV20ME031

SRUJAN K

1MV20ME038

SUKSHITH VIDYASAGAR SHIVALENKAMATH

1MV20ME040

**VENKATESH** 

1MV20ME044

Under the Guidance of Mr. Janardhana K Associate professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY,
BENGALURU- 562157

Academic year: 2022-23

## SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

## DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

This is to certify that the project work entitled "MODELLING AND FABRICATION OF FLOOD RESISTANCE HOUSE" is bonafide work carried out by RAJEEV K L (1MV20ME031), SRUJAN K (1MV20ME038), SUKSHITH VIDYASAGAR SHIVALENKAMATH (1MV20ME040), VENKATESH (1MV20ME044) partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been in corporate in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect to of Project Work prescribed for the Bachelor of

Dr.K S Shanmukharadilyhvisves Krishnadevaraya Prik Professor and Head International Airput Rich

Associate Professor

Engineering degree.

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Dept of Mechanical Engineering

Sir MVIT.

Signature with Date

Dept of Mechanical Engineering Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

Bengaluru

Names of the Examiner

2D6.B. S. PRAVOEN luman

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



A Mini Project Report On

# "FABRICATION OF AUTOMATIC SOLAR TRACKING SYSTEM"

Submitted in partial fulfillment of the requirements

For the award of

**BACHELOR OF ENGINEERING** 

IN

**MECHANICAL ENGINEERING** 

Submitted By

BHASKAR M L

1MV20ME009

DIVYA K

1MV20ME016

**RAKESH N** 

1MV20ME032

**RISHIKESH** 

1MV20ME033

Under the Guidance of Mr. NATRAJA M Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY,
BENGALURU- 562157
Academic year: 2022-23

#### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

This is to certify that the Mini project work entitled "FABRICATION OF AUTOMATIC SOLAR TRACKING SYSTEM" is bonafide work carried out by by BHASKAR ML (1MV20ME009), DIVYA K (1MV20ME016), RAKESH N (1MV20ME032), RISHIKESH (1MV20ME033) partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been in corporate in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect to of Project Work prescribed for the Bachelor of Engineering degree.

Mr. NATRAJA M

Dr.K S Shanmukharadhya

Prof.Rakesh S G

Assistant Professor

Professor and Head

PRINCIPAL

Dept of Mechanical Engineering Sir MVIT, Bengaluru

Dept of Mechanical Engineering Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

Names of the Examiner

2. Do. A. J. PROVEDEN burn

Signature with Date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



A mini project report on

# INFLUENCE ON TOOL GEOMETRY ON FRICTION STIR WELDED JOINTS.

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

IN

#### **MECHANICAL ENGINEERING**

Submitted By

DARSHAN N 1MV21ME408
MOHAMMED SAMIUDDIN 1MV21ME425
SHIV KUMAR 1MV21ME438
SURESH A 1MV21ME441

Under the Guidance of Dr Prashant S H Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022 - 23

# SIR M.VISVESVARAYAINSTITUTE OF TECHNOLOGY

# BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "Influence on tool geometry on friction stir welded joints" bonofide work carried out by DARSHAN N1MV21ME408, MOHAMMED SAMIUDDIN 1MV21ME425, SHIV KUMAR 1MV21ME438, SURESH A 1MV21ME441 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Dr prashant S H

Dr. K S Shanmukharadhya

Prof. Rakesh S G

Assistant professor

Professor and Head

PRINCIPAL

Mech Engg

Dept of Mech Engg

Sir M VIT,

Sir M V I T, Bengaluru

Sir M V I T, Bengaluru

Bengaluru

Names of the Examiner

The Brankmant His

2. P. B. - S. - S. P. CANDEN Kumon

Signature with date

( Trappin

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, "Jnana Sangama", Belagavi - 590018, Karnataka, India



#### A mini project report on

# DEVELOPMENT OF REGENERATIVE BRAKING SYSTEM USING FLYWHEEL

Submitted in partial fulfilment of the requirements for the award of

**BACHELOR OF ENGINEERING** 

IN

#### MECHANICAL ENGINEERING

#### Submitted By

ANUP NIRMAL ABRAHAM	1MV20ME007
BHARATHA H S	1MV20ME008
MAYUR PRAKASH	1MV20ME025
SHOAIB AFFAN M	1MV20ME036

Under the Guidance of
Mr. K. EJAZ AHMED
Associate Professor
DEPARTMENT OF MECHANICAL ENGINEERING



Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022 - 23

# SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "DEVELOPMENT OF REGENERATIVE BRAKING SYSTEM USING FLYWHEEL" bonafide work carried out by ANUP NIRMAL ABRAHAM 1MV20ME007, BHARATHA H S 1MV20ME008, MAYUR PRAKASH 1MV20ME025, SHOAIB AFFAN M 1MV20ME036 in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Mr. K.Ejaz Ahmed

Associate Professor

Mechanical Engg.

Sir MVIT, Bengaluru

18.7.2023

SIR M. VISVĖSVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli

Dr. K S Shanmukharadhya International Air Brofo Rakestalor 562 157

Professor and Head

PRINCIPAL

Department of Mech Engg.

Sir MVIT,

Sir MVIT, Bengaluru

Bengaluru

Name of the Examiner

Signature with Date

2 Do. B. S. Promont Kunson

F 19/2/2

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



Mini Project Progress Report On
"SYNTHESIS AND CHARACTERIZATION OF NANO PARTICLES"
Submitted in partial fulfillment of the requirements for the award Of

# BACHELOR OF ENGINEERING

IN

# MECHANICAL ENGINEERING

Submitted By

HARIHARAN

1MV21ME414 1MV21ME440

SUMEET HUGAR TEJESH D

1MV21ME444

U SANDESH

1MV21ME445

Under the Guidance of

Mr. L .SAMPATH KUMAR

Assistant Professor

Department of Mechanical Engineering Sir MVIT Bengaluru-562157.



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

# SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY **BENGALURU - 562 157** DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Mini Project Work [18MEMP68] entitled "SYNTHESIS AND CHARACTERIZATION OF NANO PARTICLES" is a Bonafide work carried out by Hariharan S (1MV21ME414), Sumeet Hugar (1MV21ME440), Tejesh (1MV21ME444) and U Sandesh (1MV21ME445) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements in respect of Mini Project Work prescribed for the Bachelor of Engineering Degree.

Mr.Sampath Kumar L

Assistant Professor Dept. Of Mech Engg.

Sir MVIT, Bengaluru

Dr. K. S. Shanmukharadhaganal Alpon ar Pinkasha

Professor And HOD

Dept. Of Mech Engg. Sir MVIT, Bengaluru

PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECH

Principal Bangalore 562 167

Sir MVIT, Bengaluru

Name of the Examiners

2. Do. A. S. Prason lemon

Signature with Date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



A mini project report on

Analysis and Fabrication study of Multi Crop Machine

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

IN

#### MECHANICAL ENGINEERING

#### Submitted By

AJAYKANTH G V 1MV21ME400 HANISH N 1MV21ME412 HAREESHA V A 1MV21ME413 HEMANTH S 1MV21ME415

> Under the Guidance of Mrs. Asha Rani A Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022 - 23

# SIR M.VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the mini project work entitled "Analysis and Fabrication study of Multi Crop Machine" bonafide work carried out by AJAY KANTH G V 1MV21ME400, N 1MV21ME412, HAREESHA HANISH 1MV21ME413, HEMANTH S 1MV21ME415 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Assistant professor

Mech Engg.

Sir M V I T, Bengaluru

17.7.2023

Dr. K S Shanmukharadhya International Ambar Road, Bangalore-562 to

Professor and Head

Dept of Mech Engg.

Sir M V I T, Bengaluru

**PRINCIPAL** 

Sir M VIT,

Bengaluru

Names of the Examiner

2. Bo. B. J. Roseon Curta

CS CamScanner

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI – 590018



Mini Project Report on

# "MODELLING AND FABRICATION OF 360° FLEXIBLE DRILLING MACHINE"

Submitted in partial fulfillment of the requirements for the award of degree

#### BACHELOR OF ENGINEERING

In

#### **MECHANICAL ENGINEERING**

Submitted by

DINESH B

1MV20ME014

**DINESH M** 

1MV20ME015

KISHOR KUMAR R

1MV20ME020

LAKSHMISHA R

1MV20ME022

Under the Guidance of

#### MR. KUMAR SWAMY R

Assistant Professor
Department Of Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

Academic year: 2022 - 23

CS CamScanner

# SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

### DEPARTMENT OF MECHANICAL ENGINEERING



### **CERTIFICATE**

Certified that the Project Work [18MEMP68] entitled "MODELLING AND FABRICATION OF 360° FLEXIBLE DRILLING MACHINE" is a bonafide work carried out by Dinesh B(1MV20ME014), Dinesh M(1MV20ME015), Kishor Kumar R(1MV20ME020) and Lakshmisha R (1MV20ME022) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering Degree.

Mr. Kumar swamy R

Assistant Professor Sir MVIT, Bangalore Dr. K S Shanmukharadhya

Professor and Head of

Mech. Dept., Sir MVIT, Bangalore Krishnadevet (1)

m. Hordover (1975) Iunasamaranahalli Hahmadaver (1976) Iunasamaranahalli Waatin Ilan 1986 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1576 | 1

Names of the Examiners

Dr. Dradbant Ha

2.00. B. S. PRAVEEN KUMAR

Signature with Date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



A mini project report on

# DESIGN AND FABRICATION OF AUTOMATIC SIDE STAND

Submitted in partial fulfilment of the requirements for the award of

Bachelor of Engineering

IN

#### MECHANICAL ENGINEERING

Submitted By:

KOUSTUBHA VISHNU S 1MV21ME417

MAHESH R 1MV21ME421

UMESH S 1MV21ME446

YOGESH H K 1MV21ME450

Under the Guidance of
Dr. G Balakumar
Associate professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022 - 23

## SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY

#### BENGALURU-562157

## **DEPARTMENT OF MECHANICAL ENGINEERING**



#### **CERTIFICATE**

Certified that the project work entitled "DESIGN AND FABRICATION OF AUTOMATIC SIDE STAND" bonafide work carried out by KOUSTUBHA VISHNU S 1MV21ME417, MAHESH R 1MV21ME421, UMESH S 1MV21ME446 and YOGESH H K 1MV21ME417 in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Dr. G Balakumar

Dr. K S Shanmukharadhya

Prof. Rakesh S G

Associate professor

Professor and Head

**PRINCIPAL** 

Mech Engg

Dept of Mech Engg

Sir M V I T,

Sir M V I T, Bengaluru

Sir M V I T, Bengaluru

Bengaluru

Names of the Examiner

1 Dr G Balakeman

2 ABhilach . S. 4

Signature with date

M-19/7/23

19/07/23

[i]

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



#### A mini-project report on

# "FABRICATION OF HYDRAULIC ARM" Submitted in partial fulfilment of the requirements for the award of Bachelor of Engineering

IN

#### **MECHANICAL ENGINEERING**

#### Submitted By

MAHANTHESHA M H	
NITHIN A	
TEJAS S	
VIJAYA KUMAR K R	

IMV21ME420 IMV21ME428

1MV21ME443

1MV21ME447

Under the guidance of Dr.K S Shanmukharadhya Professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY,
BENGALURU - 562 157

Academic year: 2022-2023

### SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU - 562157 DEPARTMENT OF MECHANICAL ENGINEERING



Certified that the project work entitled "FABRICATION OF HYDRAULIC ARM" bonafide work carried out by MAHANTHESH H M (1MV21ME420), NITHIN A(1MV21ME428), TEJAS S (1MV21ME443), VIJAYA KUMAR K R

(1MV21ME447) in partialfulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Dr.K S Shanmukharadhya

1.2003

Professor and HOD Dept. of Mech Eng

Sir MVIT, Bengaluru

PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Dr. K S Shanmukharadh a ma Rakesh S G Bangalore-562 157

Professor and HOD

Dept. of Mech Engg

Sir M V I T,

Sir M V I T, Bengaluru

Bengaluru

Principal

Names of the Examiner Signature with date

2 AGNilara 8.4 2 19/03/23

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY JNANA SANGAMA BELGAVI -590018



# MINI PROJECT REPORT "DESIGN & FABRICATION OF SHAFT DRIVEN BICYCLE"

Submitted in partial fulfilment of the requirements for the award of degree of

# BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

#### Submitted by

DEV PRAKASH PANDEY 1MV20ME011
KARAN RATHORE 1MV20ME019
PRANOY JASON D'SOUZA 1MV20ME028
SHANTAVEER 1MV20ME035

Under the Guidance of
Dr. K S Shanmukharadhya
Professor & HOD, Mechanical Engineering



DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Academic Year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

This is to certify that the project work entitled "DESIGN & FABRICATION OF SHAFT DRIVEN BICYCLE" is a bonafide work carried out by Dev Prakash Pandey 1MV20ME011, Karan Rathore 1MV20ME019, Pranoy Jason D'Souza 1MV20ME028 and Shantaveer 1MV20ME035 in partial fulfilment for the award of Degree of Bachelor of Engineering in Mechanical Engineering under Visvesvaraya Technological University, Belgaum during the year 2020-2024. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The mini project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelors of Engineering Degree.

Signature with date

Signature with date

Dr. K S Shanmukharadhya

Professor & HOD

Dept. of Mechanical Engineering

Sir MVIT, Bangalore

Dr. K S Shanmukharadhya

Professor & HOD

Dept. of Mechanical Engineering

Sir MVIT, Bangaiore

PRINCIPAL

SIR M. VISVESYARAYA INSTITUTE OF TECHNOLOGY Krishnadeverayanagar, Hunasamaranahalli International Aircort Road, Bangalore-562 157
Prof Rakesh S G

Principal Sir MVIT, Bangalore

Name Of Examiner

MP 19/3/23 Rg. 19/07/23

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



A Mini Project Report On

# "LPG LEAKAGE ALERT USING GSM"

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering

IN

### MECHANICAL ENGINEERING

Submitted By

M NITHISH KUMAR 1MV21ME418

MADHU J S 1MV21ME419

NAVEED PASHA 1MV21ME427

RAVITEJA B 1MV21ME433

Under the Guidance of
Dr Hanamantraygouda M B
Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU
Academic year: 2022 - 23

# SIR M. VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157

#### DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the project work entitled "LPG LEAKAGE ALERT USING **NITHISH KUMAR** bonafide work carried out by GSM" 1MV21ME418, MADHU J S 1MV21ME419, NAVEED PASHA 1MV21ME427, RAVITEJA B 1MV21ME433 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Dr. Hanamantraygouda M B Dr. K S Shanmukhara

International Airport Post Bangalore-562 157

Assistant professor

Professor and Head

Sir M V I T,

Mech Engg

Dept of Mech Engg

Sir M V I T, Bengaluru

Sir M V I T, Bengaluru

Bengaluru

Names of the Examiner

1 Dr. G. Balduwar 2 Abhilash 5.9

Signature with date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI-590018



#### Mini Project Report on

# "DESIGN AND FABRICATION OF SOLAR BASED SAFETY MONITORING SYSTEM"

Submitted in partial fulfilment of the requirements for the award of

Bachelor of Engineering

IN

MECHANICAL ENGINEERING Submitted By

HARISH VERMA

1MV20ME017

JEEVAN KUMAR C R

1MV20ME018

M S PRAVEEN SAI

1MV20ME023

MALLIKARJUNA SAJJAN

1MV20ME024

Under the Guidance Of

Guide: Dr. V. Shantha



Estd.1986

DEPARTMENT OF MECHANICAL ENGINEERING
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic year: 2022-23

### SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the Mini project entitled "DESIGN AND FABRICATION OF SOLAR BASED SAFETY MONITORING SYSTEM" is a bonafide work carried out by, HARISH VERMA (1MV20ME017), JEEVAN KUMAR C R (1MV20ME018), M S PRAVEEN SAI (1MV20ME023), MALLIKARJUNA SAJJAN (1MV20ME024) are students of VI Semester in fulfilment for the Course of degree of Bachelor of Engineering in Mechanical Engineering at Sir M Visvesvaraya Institute of Technology, Bengaluru during the year 2022-2023 has successfully submitted the report. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Mini Project Report has been approved and it satisfies the academic requirements in respect of Mini Project (18MEMP68) prescribed for the Bachelor of Engineering degree.

Dr. V. Shantha.

Dr. K. S. Shanmukharadhya

Prof. Rakesh S G

Professor

Professor & Head

**PRINCIPAL** 

Dept. of Mechanical Engg

Dept. of Mechanical Engg

Sir MVIT

Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

Bengaluru

Name of the Examiners

Signature with Date

1. Dr G Balakuman 2. Abhilash S.4

B\_ 19/08/23

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



# A mini project report on

# MOTORISED SCOTCH YORK MECHANISM PISTON

Submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering

IN

# MECHANICAL ENGINEERING

Submitted By

SYED SUHIL SIDDIQH YOGESH G.E 1MV21ME442 1MV21ME449

Under the Guidance of
Dr G Balakumar
Associate Professor



DEPARTMENT OF MECHANICAL ENGINEERING

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic Year: 2022-23

# SIR M.VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



### CERTIFICATE

Certified that the project work entitled "MOTORIZED SOCOTI YOKE MECHANISM PISTON" bonafide work carried out by SYED SUHIL SIDDIQH 1MV21ME442, YOGESH G E 1MV21ME449, in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Dr. K S Shanmukharadhyikrishnodeynmyanagar, Hunasamaranahali International Amburthode Shingsick 562 157

PRINCIPAL

PRINCIPAL

Associate professor

Professor and Head

Mech Engg

Dept of Mech Engg

Sir M VIT.

Sir M V I T, Bengaluru

Sir M V I T, Bengaluru

Bengaluru

Names of the Examiner

1 Shirelings 5

2. PIPTanhantha.

Signature with date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, **BELAGAVI, 590018**



A project report on

# HOME AUTOMATION SYSTEM USING GSM TECHNOLOGY Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

IN

MECHANICAL ENGINEERING

Submitted By

MEENA H.E

-1MV21ME423

PAVAN KUMAR D. A - 1MV21ME430

RISHEEK KAMBLE - 1MV21ME434

SAGAR.P.KALLAPUR - 1MV21ME436

Under the Guidance of Mr. K MADHUKUMAR Assistant professor



DEPARTMENT OF MECHANICAL ENGINEERING Sir M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU Academic year: 2022-23

# SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

# DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "HOME AUTOMATION SYSTEM USING GSM TECHNOLOGY" bonafide work carried out by MEENA H.E (1MV21ME423), PAVANKUMAR D.A (1MV21ME430), RISHEEK KAMBLE (1MV21ME434), SAGAR P KALLAPUR (1MV21ME436) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Mr. K Madhukumar

Assistant professor

Dr. K S Shanmukharadhymernatbile Airpartises Bascalore-562 157 Professor and Head

**Principal** 

Mech Engg

of Mech Dept

Sir MVIT,

PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Sir MVIT, Bengaluru

Sir MVIT, Bengaluru

Bengaluru

Names of the Examiner

1 Dr. G. Belakumar 2 Abh: lash: 5.9

Signature with date

A SA DE SE A COMPANY DE SE L'AND SE L'A

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



Mini Project report on

# "TESTING OF METAL MATRIX COMPOSITES (Al6061-ZrO2) OF DEVELOPED COMPOSITES FOR HARDNESS AND MICROSTRUCTURE ANALYSIS"

Submitted in partial fulfilment of the requirements for the award of degree

Bachelor of Engineering
IN
MECHANICAL ENGINEERING

Submitted By

ABHISHEK S

1MV20ME002

**DHANUSH S** 

1MV20ME012

NISHANTH KALYAN N

1MV20ME026

SUHAS N M

1MV20ME039

Under the Guidance of
Mr. SHIVAKUMAR S
Assistant professor, Department of Mechanical Engineering



SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU DEPARTMENT OF MECHANICAL ENGINEERING Academic year: 2022-23

# SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU-562157

# DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the mini project work entitled TESTING OF METAL MATRIX COMPOSITES (A16061-ZrO2) DEVELOPED **COMPOSITES** FOR **HARDNESS** MICROSTRUCTURE ANALYSIS is a bonafide work carried out by ABHISHEK S (1MV20ME002), DHANUSH S (1MV20ME012), NISHANTH KALYAN N (1MV20ME026), SUHAS N M (1MV20ME039) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Assistant professor Dept of Mech Engg

Sir MVIT, Bengaluru

Dr K S Shanmukharadhya

Professor and Head

Dept of Mech Engg

Sir MVIT, Bengaluru

Prof. Rakesh S G

Principal

Sir MVIT,

Bengaluru

Names of the Examiners

1 Dr. G. Bola Keewar 2. Abhilosh S. G

Signature with Date

MQ TS 13/23

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590 018



# Mini Project Progress Report On

# "SOLENOID ENGINE"

Submitted in partial fulfillment of the requirements for the award Of

# **BACHELOR OF ENGINEERING**

. IN

# MECHANICAL ENGINEERING

Submitted By

ARAVIND C B

1MV21ME403

DANESH U

1MV21ME407

PAVAN K A

1MV21ME429

SACHIN PATIL

1MV21ME435

Under the Guidance of

# Dr. H.S YESHWANTHA

**Assistant Professor** 

Department of Mechanical Engineering Sir MVIT Bengaluru-562157.



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157

Academic Year: 2022-2023

# SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY **BENGALURU - 562 157 DEPARTMENT OF MECHANICAL ENGINEERING**



#### CERTIFICATE

Certified that the Mini Project Work [18MEMP68] entitled "SOLENOID ENGINE" is a Bonafide work carried out by Aravind C B (1MV21ME403), Danesh U (1MV21ME429) and Sachin Patil (1MV21ME407), Pavan K A (1MV21ME435) in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements in respect of Mini Project Work prescribed for the Bachelor of Engineering Degree.

Assistant Professor

Dept. Of Mech Engg. Sir MVIT, Bengaluru

Dr. K. S. Shanmukharadhya

Professor And HOD

Dept. Of Mech Engg.

Sir MVIT, Bengaluru

Prof. Rakesh S. G

**Principal** 

Sir MVIT, Bengaluru

Name of the Examiners

1. Dr GBelakurar 2. Abhilosh. s.g

Signature with Date

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY "Jnana Sangama", Belagavi - 590018



### MINI-PROJECT REPORT ON

# "ALCOHOL DETECTION SYSTEM FOR THE SAFETY OF AUTOMOBILE USERS"

Submitted in partial fulfillment of the requirements for the award of the Degree

#### BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING

#### Submitted by

ABHILASH G S

USN: 1MV20ME001

BHUVANESHWARA P

**USN: 1MV20ME010** 

KUBER

**USN: 1MV20ME021** 

SACHIN AGRAWAL

**USN: 1MV20ME034** 

#### Under the Guidance of

Mr. HALESH S B
Associate Professor
Department of Mechanical Engineering.



# DEPARTMENT OF MECHANICAL ENGINEERING SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevaraya nagar, Hunasamaranahalli, Bangalore -562157

2022 - 2023

### SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE-562157

### Department of Mechanical Engineering



#### **CERTIFICATE**

This is to certify that the project entitled "ALCOHOL DETECTION SYSTEM FOR THE SAFETY OF AUTOMOBILE USERS" is a bonafide Work carried out by ABHILASH G S (1MV20ME001), BHUVANESHWARA P(1MV20ME010), KUBER(1MV20ME021),

SACHIN AGRAWAL(1MV20ME034).of Sir M. Visvesvaraya Institute of Technology, Bangalore, in partial fulfillment for the award of degreeof Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report submitted to department library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for Bachelor of Engineering degree.

/23	Sulamb
Dr. KS SHANMUKHARADHYA Professor and HOD,	PRINCIPAL SIR M. VISVESVARIYA DISTITUTE OF TECHNOL Krishnabet A. Frank Holless Grand Internation of the part of th
Dept. of Mech Engg.	SIR MVIT
Sir MVIT Bengaluru	Bengaluru
	Professor and HOD, Dept. of Mech Engg.

Name of the Examiners	Signature with Date
1,	1,
2	2

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018



A mini project report on

# "DESIGN AND FABRICATION OF OBSTACLE AVOIDING ROBOT"

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

ដោ

#### MECHANICAL ENGINEERING

#### Submitted By

ADARSH D R

ADITHYA S PATIL

SHEYAS BELLIAPPA KK

SURAJ CHAVAN

IMV20ME004

IMV20ME041

Under the Guidance of

Dr KIRAN KUMAR M

Assistant Professor



DEPARTMENT OF MECHANICAL ENGINEERING

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU

Academic Year: 2022 - 23

# SIR M.VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### **CERTIFICATE**

Certified that the project work entitled "OBSTACLE AVOIDING ROBOT" bonafide work carried out by ADARSH DR 1MV20ME003, ADITYA S PATIL 1MV20ME004, SHREYAS BELLIAPPA 1MV20ME037, SURAJ CHAVAN 1ME20ME041 in partial fulfillment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Dr KIRAN KUMAR M Assistant Professor

Mechanical engineering
Sir M V I T, Bengaluru

Dr. KS SHANMUKHARADHYA

Professor and HOD

Dept of Mechanical Engg

Sir M V I T, Bengaluru

Prof. RAKESHSG

Principal

Sir M V I T,

Bengaluru

Names of the Examiner

2. Chrodenned.

Signature with date

A) 20/7/27

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI - 590 018



# Mini Project Report On "MODELLING AND DEVELOPMENT OF TOOLS FOR SOLID STATE WELDING"

Submitted in partial fulfilment of the requirements for the award of

### **BACHELOR OF ENGINEERING**

in

### **MECHANICAL ENGINEERING**

Submitted By

BHARATHA	1MV21ME404	
DIVAKARA BABU G S	1MV21ME410	
GURU KIRAN K	1MV21ME411	
KIRAN	1MV21ME416	

Under the Guidance of Mr. CHANDRASEKHAR B

**Assistant Professor** 



DEPARTMENT OF MECHANICAL ENGINEERING SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU- 562 157 Academic Year: 2022-2023

# SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY BENGALURU - 562 157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the Mini Project Work [18MEMP68] entitled "MODELLING AND DEVELOPMENT OF TOOLS FOR SOLID STATE WELDING" is a Bonafide work carried out by BHARATHA(1MV21ME404), DIVAKARA BABU G S(1MV21ME410), GURUKIRAN(1MV21ME411), KIRAN(1MV21ME416) in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi, during the year 2022 - 2023. It is certified that all corrections suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements in respect of Mini Project Work prescribed for the Bachelor of Engineering Degree.

Mr. Chandrasekhar B **Assistant Professor** 

Dr. K. S. Shanmukharadhya Professor and HOD

Prof. Rakesh S. G Principal

Name of the Examiners

Signature with Date

Les 20/0/20

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI – 590 018



### Mini Project Report On

"FABRICATION OF BENCH TAPPING MACHINE"
Submitted in partial fulfilment of the requirements for the award of
Bachelor of Engineering

In
MECHANICAL ENGINEERING
Submitted By

ANTRUDH B 1MV20ME006 DHARSHAN YADAV K 1MV20ME013 VARUNA B 1MV20ME043 VISHWAS RAO K 1MV20ME045

Under the Guidance of
Mr. RAMESH C G
Assistant Professor
DEPARTMENT OF MECHANICAL ENGINEERING
Sir MVIT Bengaluru – 562 157



SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY,
BENGALURU
Academic Year 2022-23

## SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY **BENGALURU - 562 157** DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

Certified that the project work entitled "FABRICATION OF BENCH TAPPING MACHINE" is a bonafide work carried out by ANIRUDH B 1MV20ME006, DHARSHAN YADAV K 1MV20ME013, VARUNA B 1MV20ME043, VISHWAS RAO K 1MV20ME045 in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree.

Mr. Ramesh C G

**Assistant Professor** 

Mechanical Engg.

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18.7.2023 Dr. K S Shanmukharadhya

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Name of the Examiners

2 Abhilach : S. G

Signature with Date

M1977/23

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, 590018



#### A Mini Project Report on

### FLOUR FILTER SIEVE MACHINE

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering

IN

#### **MECHANICAL ENGINEERING**

Submitted By

**AKSHAY KUMAR** 

1MV21ME401

APSAR G M

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Assistant Professor



DEPARTMENT OF MECHANICAL ENGINEERING
Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY,
BENGALURU

Academic Year: 2022-23

# SIR M.VISVESVARAYAINSTITUTE OF TECHNOLOGY BENGALURU-562157 DEPARTMENT OF MECHANICAL ENGINEERING



#### CERTIFICATE

Certified that the project work entitled "FLOUR FILTER SIEVE MACHINE" bonafide work carried out by AKSHAY KUMAR 1MV21ME401, APSAR G M 1MV21ME402, RAKSHITHA B 1MV21ME432, and SAI TARAKARAM V1MV21ME437, in partial fulfilment for the award of degree of Bachelor of Engineering in Mechanical Engineering /Industrial Engineering and Management of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all correction suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering degree. 18.7.2023

Mr. Prashanth L

Assistant professor

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Sir M V I T, Bengaluru

Professor and Head Dept of Mech Engg

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Names of the Examiner

Signature with date

2 Stivaleness

12/2/27