

## INDEX

### CRITERION 1.3.3 Percentage of students undertaking project work/field work/internship (Data for the latest completed academic year)

#### DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR	DETAILS OF PROJECT WORK/FIELD WORK/INTERNSHIP/IHT	PAGE NO
<b>INTERNSHIP 2020-2021</b>		
2020 - 21	Certificate - Veelsons Energy Systems Pvt Ltd, Trichy.	7
	Certificate - Baby Engineering Private Ltd, Trichy	8
	Certificate - Hwashin Automotive India Pvt. Ltd, Chennai	9
	Certificate - Srivari Metal Works Pvt, Hosur	10
	Certificate - Sun V Technology, Coimbatore	11
	Certificate - Yamaha industrial, Chennai	13
	Certificate - Hi Tech Engineering Industry, Thanjavur	14
	Certificate - Hi Tech CNC automation, Coimbatore	15
	Certificate - Everest industries, Coimbatore	17
	Certificate - Fumes Renewable Energy limited , Chennai	18
	Certificate - Greentech Industries, Coimbatore	19
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	Report - Veelsons Energy Systems Pvt Ltd, Trichy.	23
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	Report - Hwashin Automotive India Private Limited, Chennai	76
	Report - Best Forgings India Private Limited, Coimbatore	81
	Report - Velmurugan Heavy Engineering Works , Trichy	85
	<b>IHT 2020-2021</b>	
	Hindustan Motors, Bangalore	92
	Ashok Leyland, Chennai	99
	Larson & Toubro, Coimbatore	112
	Ram Industries, Thanjavur	122
	Wheels India, Padi, Chennai	128
	Vee Son , Thuvakudy, Trichy	137
	Arignar Anna Sugar Mills, Kurungulam, Thanjavur	144



**Department of Mechanical Engineering**  
**Academic year 20-21 (Odd & Even)**  
**Student Internship details**

**Class: II Mech**

sno	Register number	Name of the student	Name of the Company	Duration
1	821119114001	AAKASH J	Veesons Energy Systems Pvt Ltd, Trichy.	05.01.2021 – 25.01.2021
2	821119114002	AATHI BUBESH A		
3	821119114004	ARAVINDAN B		
4	821119114009	DEEPANRAJ S		
5	821119114010	DINESH A		
6	821119114011	GOPI G		
7	821119114012	GUNAL P		
8	821119114013	HARIHARAN D		
9	821119114014	HARIHARAN M		
10	821119114015	HARIHARAN M		
11	821119114016	HARIHARAN M		
12	821119114017	HARISH GOWTHAM M		
13	821119114018	IYAPPAN A		
14	821119114019	KALAIMUHILARASAN S		
15	821119114040	VEERAMANI R		
16	821119114005	BALAGANAPATHY S	BABY ENGINEERING PRIVATE LTD, TRICHY	06.02.2021 – 26.02.2021
17	821119114006	BALAVIGNESH D		
18	821119114007	BARATHBABU A		
19	821119114008	BHARATHICHOZHAN S		
20	821119114020	KAVIARASAN R		
21	821119114021	KISHORE R		
22	821119114022	MULLAIVENDHAN G		
23	821119114023	MUTHUKUMAR K		
24	821119114024	NARENDRAN R		
25	821119114026	NITHISH A		
26	821119114027	PRADEEPRAJAN S		
27	821119114028	PRAVEENKUMAR S		
28	821119114029	PRIYADHARSAN L		
29	821119114030	PURUSHOTHAMAN S		
30	821119114031	PURUSOTHAMAN G		
31	821119114033	ROOBAN K	Hwashin Automotive India Pvt. Ltd, Chennai	01.03.2021 – 18.03.2021
32	821119114034	SATHIYARAJ S		
33	821119114035	SATHIYASEELAN B		
34	821119114036	SIVABALAN A		
35	821119114037	SYEDU USMANALI M		
36	821119114038	VEERAGURU M		
37	821119114039	VEERAMANI K		
38	821119114041	VENKATESH S		
39	821119114042	VIGNESHWARAN M		



**Department of Mechanical Engineering**  
**Academic year 20-21 (Odd & Even)**  
**Student Internship details**

**Class: III Mech**

sno	Register number	Name of the student	Name of the Company	Duration
1	821118114012	Aswin D	SRIVARI METAL WORKS PVT, Hosur	22.01.2021 -21.02.2021
2	821118114013	Ayyappan D		
3	821118114004	Akash B		
4	821118114006	Akash (06.05.2001)		
5	821118114011	R Arunpandiyan		
6	821118114023	S Jegathish S		
7	821118114302	Ramanan V		
8	821118114038	Naveen S		
9	821118114039	Pavithraj D		
10	821118114053	Senthil kumar C		
11	821118114057	Ramanan V		
12	821118114053	Vanjinathan A		
13	821118114067	Senthil kumar C		
14	821118114067	Vijayaparthiban M		
15	821118114005	Akash (23.01.2001) R	Sun V Technology, Coimbatore	01.02.2021 -14.02.2021
16	821118114037	Muthukumaran U		
17	821118114040	Pradheesh P		
18	821118114046	Ranjith B		
19	821118114055	Surya S		
20	821118114056	Tamilarasan S		
21	821118114012	Aswin D		
22	821118114013	Ayyappan D		
23	821118114004	Akash B		
24	821118114006	Akash (06.05.2001) R		
25	821118114011	Arunpandiyan S		
26	821118114023	Jegathish S		
27	821118114038	Naveen S		
28	821118114039	Pavithraj D		
29	821118114302	Ramanan V		
30	821118114057	Vanjinathan A		
31	821118114053	Senthil kumar C		
32	821118114067	Vijayaparthiban M		
33	821118114003	Abinash B	Yamaha industrial, Chennai	20.02.21 to 10.03 .21
34	821118114020	Gowthaman R		
35	821118114063	Venkatesh E		
36	821118114029	Keerthi gopal M M		
37	821118114024	Jerome X	Hi Tech Engineering Industry, Thanjavur	27.02.21 to 12.03.21
38	821118114027	Karthik karan S		
39	821118114061	Vengatesh R		
40	821118114065	Vigneshwaran J		

41	821118114501	Dhanasekar E		
42	821118114007	Akashraja D	Hi Tech CNC automation, Coimabatore	01.04.21 to 17.04.21
43	821118114014	Birithivaraj D		
44	821118114018	Fazil ahamed S		
45	821118114022	Jayaraj B		
46	821118114025	Kailashkumar M		
47	821118114031	Krithick roshan S		
48	821118114032	Maheswaran M		
49	821118114066	Vigneshwaran K		
50	821118114026	Karthikeyan R		



**Department of Mechanical Engineering**  
**Academic year 20-21 (Odd & Even)**  
**Student Internship details**

**Class: IV Mech**

sno	Register number	Name of the student	Name of the Company	Duration
1	821117114025	Kabilan S	Everest industries, Coimbatore	18.10.2020 -20.11.2020
2	821117114003	Abishek S		
3	821117114046	Muthu S		
4	821117114048	Pragatheesh R		
5	821117114301	Ajithkumar K		
6	821117114305	Raja Rajeshweran B		
7	821117114307	Vijaychandru J		
8	821117114059	Santhosh Kumar N		
9	821117114063	Senthamil Priyan BD		
10	821117114061	Sarathkumar M		
11	821117114032	Kaviyarasan N	Fumes Renewable Energy limited , Chennai	20.10.2020 -22.11.2020
12	821117114034	Krishna S		
13	821117114036	Mohamed Yasin Sharif R		
14	821117114011	Augustine Albert J		
15	821117114062	Sathiyamoorthy m		
16	821117114063	Senthamsudar k		
17	821117114065	Senthil r		
18	821117114068	Shirharan r		
19	821117114050	Prakash m		
20	821117114501	Sasikumar k		
21	821117114016	Dhivakaran K	GREENTEC INDUSTRIES, Coimbatore	22.10.2020 -24.11.2020
22	821117114019	Hariharan V		
23	821117114038	Manimaran G		
24	821117114037	Maheswaran C		
25	821117114027	Kannan K		
26	821117114701	Ajithkumar K		
27	821117114051	Prasanth M		
28	821117114052	Premkumar K		
29	821117114070	Suriya A		
30	821117114304	Murugaesen A		
31	821117114018	Hariharan R	Hwashin Automotive India Private Limited, Chennai	2.01.2021 to 27.01.2021
32	821117114021	Infant Raja S		
33	821117114033	Keerthivasan K		
34	821117114013	Balamurugan M		
35	821117114005	Alagesan K		
36	821117114014	Bharath M		
37	821117114028	Karan K		
38	821117114049	Prakash B		
39	821117114053	Raghu Devan P		
40	821117114054	Raghul T		

41	821117114056	Rengarajan N		
42	821117114057	Ruban S		
43	821117114001	Abbas Mohamed S	BEST FORGINGS INDIA PRIVATE LIMITED, Coimbatore	20.01.2021 to 22.02.2021
44	821117114035	Madhesh D		
45	821117114024	Jerome Nicholas A		
46	821117114039	Manimaran S		
47	821117114047	Muthu Manikandan J		
48	821117114006	Annamalai K		
49	821117114017	Enoch Ebenezer P		
50	821117114031	Kathiravan R		
51	821117114002	Abdul Shimak J		
52	821117114029	Karthick (24.11.1999) M		
53	821117114007	Aravindasamy R		
54	821117114008	Arjun Kumar R		
55	821117114502	Vignesh Kumar J	Velmurugan Heavy Engineering Works , Trichy	02.02.2021 -25.02.2021
56	821117114072	Thirupugazh D		
57	821117114079	Vishnu S		
58	821117114080	Wilber Judson R L		
59	821117114306	Santhosh Shivan		
60	821117114071	Sutharsan P		
61	821117114703	Mukilan R		
62	821117114066	Shriram Sundar K		
63	821117114069	Subaneshwaran M		
64	821117114075	Venkatesh M		
65	821117114076	Venkateswaran M		
66	821117114303	Dinesh E		
67	821117114067	Siva S		



**Veelsons Energy Systems Pvt Ltd**

**No 14/2-C Industrial Estate, Thuvakkudi, Trichy - 620015**

**Phone Number: (0431) 2501010, 2501011, 2501015**

**25.01.2021**

**TO WHOM IT MAY CONCERN**

This is to certify a list of mentioned 2<sup>nd</sup> year student of **Kings College Of Engineering, Punalkulam** has successfully completed his implant training from **05.01.2021 to 25.01.2021** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this implant training.

We wish him the very best in all his future endeavours.

S. NO	REGISTER NUMBER	NAME
1	821119114001	AAKASH J
2	821119114002	AATHI BUBESH A
3	821119114004	ARAVINDAN B
4	821119114009	DEEPANRAJ S
5	821119114010	DINESH A
6	821119114011	GOPI G
7	821119114012	GUNAL P
8	821119114013	HARIHARAN D
9	821119114014	HARIHARAN M
10	821119114015	HARIHARAN M
11	821119114016	HARIHARAN M
12	821119114017	HARISH GOWTHAM M
13	821119114018	IYAPPAN A
14	821119114019	KALAIMUHILARASAN S
15	821119114040	VEERAMANI R

Thanking you,  
With regards

(Mr.SENTHILKUMAR R)  
Plant Manager



**Baby Engineering Pvt Ltd, Thuvakkudi**  
**No 37, D P Estate, Thuvakkudi, Trichy - 620015**  
**Phone Number: (+0431) 2500800, 3041300**

Date: 26.02.2021

**CERTIFICATE OF APPRECIATION**

This is to certify that list of below mentioned 2<sup>nd</sup> year students of **Kings College of Engineering, Punalkulam** has successfully completed his implant training at **Baby Engineering Pvt Ltd, Thuvakkudi** from **06.02.2021 to 20.02.2021**.

The candidates were found to be enthusiastic and observant during training period at **Baby Engineering Pvt Ltd**. Their performance has been assessed as very good.

S.NO	REGISTER NUMBER	STUDENT NAME	S.NO	REGISTER NUMBER	STUDENT NAME
1.	821119114005	BALAGANAPATHY S	9.	821119114024	NARENDRAN R
2.	821119114006	BALAVIGNESH D	10.	821119114026	NITHISH A
3.	821119114007	BARATHBABU A	11.	821119114027	PRADEEPRAJAN S
4.	821119114008	BHARATHICHOZHAN S	12.	821119114028	PRAVEENKUMAR S
5.	821119114020	KAVIARASAN R	13.	821119114029	PRIYADHARSAN L
6.	821119114021	KISHORE R	14.	821119114030	PURUSHOTHAMAN S
7.	821119114022	MULLAIVENDHAN G	15.	821119114031	PURUSOTHAMAN G
8.	821119114023	MUTHUKUMAR K	16.	821119114032	RAJASEKARAN T K

(Dr.K. Rengaraj Krishnan)  
Human Resource – Manager

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**E-37, Developed Plot Estate, Thuvakkudi,  
Tiruchirapalli - 620 015,  
Tamil Nadu, India.**

**+91 431 2500800, 2501474  
info@babyengg.com**



**Hwashin Automotive India Pvt. Ltd.**

Malayambakkam, Chennai, tamilnadu 602117

Phone: 044-45146558 Mobile: 9600862458

E-mail id: [hwashinautomotiveindia@haipl.com](mailto:hwashinautomotiveindia@haipl.com)

Date: 18.03.2021

### **CERTIFICATE OF EXPERIENCE**

This is to certify that list of below mentioned second year students of **KINGS COLLEGE OF ENGINEERING, PUNALKULAM** has done inhouse training at Hwashin Automotive India Pvt. Ltd. From **01.03.2021 to 18.03.2021** under the guidance of Mr.Sreekanth R.

We have found them to be a self starter who is motivated, duty bound and hard-working

They worked sincerely on his assignment and his performance was par excellence.

We wish him best of luck for him future.

**Students Details are Listed Below:**

S.NO	REGISTER NUMBER	STUDENT NAME
1.	821119114033	ROOBAN K
2.	821119114034	SATHIYARAJ S
3.	821119114035	SATHIYASEELAN B
4.	821119114036	SIVABALAN A
5.	821119114037	SYEDU USMANALI M
6.	821119114038	VEERAGURU M
7.	821119114039	VEERAMANI K
8.	821119114041	VENKATESH S
9.	821119114042	VIGNESHWARAN M
10.	821119114301	ABINESH P
11.	821119114302	POOVAEASAN A
12.	821119114303	SIVASUBRAMANIYAM S
13.	821119114501	ARAVINDHAN G

**Hwashin Automotive India Pvt. Ltd.**

**Asha Acharya**  
**(HR Manager)**

# SRIVARI METAL WORKS PVT

E-14, Phase V, SIDCO Industrial Estate, Hosur-635 126, Tamil Nadu

Tele: 91-4344-270607, 505045, 505046

Mobile: 91-9894785780, 9899696621

Email: [srivarimetals@touchindia.net](mailto:srivarimetals@touchindia.net)

Fax: 91-4344-505044

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20.02.2021

## TO WHOM IT MAY CONCERN

This is to certify that, in-plant training (22.01.2021 -21.02.2021) at our organization in Assembly & Detailing of Condenser, Evaporator, and Power generation by III Year students were completed. During the course of training, the students conduct and character were found to be good. The in-plant training completed students were,

1. Aswin D
2. Ayyappan D
3. Akash B
4. Akash (06.05.2001) R
5. Arunpandiyam S
6. Jegathish S
7. Ramanan V
8. Naveen S
9. Pavithraj D
10. Senthil kumar C
11. Ramanan V
12. Vanjinathan A
13. Senthil kumar C
14. Vijayaparthiban M

Thanking you,

With regards



(SANDEEP KUMAR)

Plant Manager



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN :33ADXP08629H1ZO

+91 86107 42919

+91 63822 17201

Date:14.02.2021

## CERTIFICATE

*This is to certify that*

**Mr. TAMILARASAN.S**

**Reg. No. 821118114056**

*Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai- 613 303 Sucessfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021*

*During this period the student learned about the machine, Manufacturing Method and Operation Very well.*



*Authish*  
Authorised Signatory



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN :33ADXP08629H1ZO

+91 86107 42919

+91 63822 17201

Date:14.02.2021

## CERTIFICATE

*This is to certify that*

**Mr. SURYA.S**

**Reg. No. 821118114055**

*Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai- 613 303 Sucessfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021.*

*During this period the student learned about the machine, Manufacturing Method and Operation Very well.*



*Authish*  
Authorised Signatory



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN :33ADXP08629H1ZO

+91 86107 42919

+91 63822 17201

Date:14.02.2021

## CERTIFICATE

*This is to certify that*

**Mr. SAMUEL.S**

**Reg. No. 821118114049**

*Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai- 613 303 Sucessfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021.*

*During this period the student learned about the machine, Manufacturing Method and Operation Very well.*



*Authish*  
Authorised Signatory



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN :33ADXP08629H1ZO

+91 86107 42919

+91 63822 17201

Date:14.02.2021

## CERTIFICATE

*This is to certify that*

**Mr. RANJITH. P**

**Reg. No. 821118114046**

*Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai- 613 303 Sucessfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021.*

*During this period the student learned about the machine, Manufacturing Method and Operation Very well.*



*Authish*  
Authorised Signatory



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN: 33ADXPJ8629H1ZO

+91 86107 42919 | +91 63822 17201

## CERTIFICATE

*This is to certify that*

**Mr. Pradeesh.P**

Reg. No. 821118114040

Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai - 613 303 Successfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021.

During this period the student learned about the machine, Manufacturing Method and Operation Very well.



*Pradeesh*

Authorised Signatory



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN: 33ADXPJ8629H1ZO

+91 86107 42919 | +91 63822 17201

Date:14.02.2021

## CERTIFICATE

*This is to certify that*

**Mr. MUTHUKUMARAN.U**

Reg. No. 821118114037

Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai - 613 303 Successfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021.

During this period the student learned about the machine, Manufacturing Method and Operation Very well.



*Muthu*

Authorised Signatory



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN: 33ADXPJ8629H1ZO

+91 86107 42919 | +91 63822 17201

Date:14.02.2021

## CERTIFICATE

*This is to certify that*

**Mr. AAKASH.R**

Reg. No. 821118114005

Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai- 613 303 Successfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021.

During this period the student learned about the machine, Manufacturing Method and Operation Very well.



*Pradeesh*

Authorised Signatory



# SUN V TECHNOLOGY

CNC / CAD / CAM SOLUTION

No.7, Dharani Nagar 8th Street, Ganapathy Pudur, Ganapathy (Po), Coimbatore - 641 006

sunvtechnology@gmail.com | GSTIN: 33ADXPJ8629H1ZO

+91 86107 42919 | +91 63822 17201

Date:14.02.2021

## CERTIFICATE

*This is to certify that*

**Mr. RANJITHKUMAR.M**

Reg. No. 821118114303

Mechanical Engineering Third Year student of Kings College of Engineering, punalkulam, pudukkottai- 613 303 Successfully Completed his INTERNSHIP TRAINING in our concern from 01.02.2021 to 14.02.2021.


During this period the student learned about the machine, Manufacturing Method and Operation Very well.



*Ranjith*

Authorised Signatory

**MARUTHI MOTORS**  
Authorized Main Dealer For : India Yamaha Motor Pvt. Ltd.,  
No. 1/10, Vaniyambadi Main Road,  
Don Bosco Nagar, TIRUPATTUR, Vir. Dt. T.N. -635601

  
*The call of the BLUE*

Date : .....  
Date: 11.03.2021

TO WHOME EVER IT MAY CONCERN

This is to certify that, Master.B.Abinash, (Reg. No: 821118114003.) Student of 3<sup>rd</sup> Year BE, (Mechanical Engineering) at KINGS COLLEGE OF ENGINEERING, GANDARVAKOTTAL, PUDHUKOTTAI- 613 303, Has Successfully completed "In plant Training" in our Organization in Service Department, during the period from 20.02.2021 to 10.03.2021.


During the training period, we found him sincere and attentive.

We wish him all success in his Future Endeavors!

For, Maruthi Motors  
**M/s. MARUTHI MOTORS,**  
Yamaha Main Dealer,  
1/10, Vaniyambadi Main Road,  
Tirupattur, (VLR-Dt.)  
Ph: 04179-228230

Phone : 04179-228230 Cell : 9443280423, 9443442409

**MARUTHI MOTORS**  
Authorized Main Dealer For : India Yamaha Motor Pvt. Ltd.,  
No. 1/10, Vaniyambadi Main Road,  
Don Bosco Nagar, TIRUPATTUR, Vir. Dt. T.N. -635601

  
*The call of the BLUE*

Date : .....  
Date: 11.03.2021

TO WHOME EVER IT MAY CONCERN

This is to certify that, Master.E.Venkatesh, (Reg. No: 821118114063.) Student of 3<sup>rd</sup> Year BE, (Mechanical Engineering) at KINGS COLLEGE OF ENGINEERING, GANDARVAKOTTAL, PUDHUKOTTAI- 613 303, Has Successfully completed "In plant Training" in our Organization in Service Department, during the period from 20.02.2021 to 10.03.2021.


During the training period, we found him sincere and attentive.

We wish him all success in his Future Endeavors!

For, Maruthi Motors  
**M/s. MARUTHI MOTORS,**  
Yamaha Main Dealer,  
1/10, Vaniyambadi Main Road,  
Tirupattur, (VLR-Dt.)  
Ph: 04179-228230

Phone : 04179-228230 Cell : 9443280423, 9443442409

**MARUTHI MOTORS**  
Authorized Main Dealer For : India Yamaha Motor Pvt. Ltd.,  
No. 1/10, Vaniyambadi Main Road,  
Don Bosco Nagar, TIRUPATTUR, Vir. Dt. T.N. -635601

  
*The call of the BLUE*

Date : .....  
Date: 11.03.2021

TO WHOME EVER IT MAY CONCERN

This is to certify that, Master.M.M.Keerthi Gopal, (Reg. No: 821118114029) Student of 3<sup>rd</sup> Year BE, (Mechanical Engineering) at KINGS COLLEGE OF ENGINEERING, GANDARVAKOTTAL, PUDHUKOTTAI- 613 303, Has Successfully completed "In plant Training" in our Organization in Service Department, during the period from 20.02.2021 to 10.03.2021.


During the training period, we found him sincere and attentive.

We wish him all success in his Future Endeavors!

For, Maruthi Motors  
**M/s. MARUTHI MOTORS,**  
Yamaha Main Dealer,  
1/10, Vaniyambadi Main Road,  
Tirupattur, (VLR-Dt.)  
Ph: 04179-228230

Phone : 04179-228230 Cell : 9443280423, 9443442409

**MARUTHI MOTORS**  
Authorized Main Dealer For : India Yamaha Motor Pvt. Ltd.,  
No. 1/10, Vaniyambadi Main Road,  
Don Bosco Nagar, TIRUPATTUR, Vir. Dt. T.N. -635601

  
*The call of the BLUE*

Date : .....  
Date: 11.03.2021

TO WHOME EVER IT MAY CONCERN

This is to certify that, Master.R.Gowthaman, (Reg. No: 821118114029) Student of 3<sup>rd</sup> Year BE, (Mechanical Engineering) at KINGS COLLEGE OF ENGINEERING, GANDARVAKOTTAL, PUDHUKOTTAI- 613 303, Has Successfully completed "In plant Training" in our Organization in Service Department, during the period from 20.02.2021 to 10.03.2021.

During the training period, we found him sincere and attentive.

We wish him all success in his Future Endeavors!

For, Maruthi Motors  
**M/s. MARUTHI MOTORS,**  
Yamaha Main Dealer,  
1/10, Vaniyambadi Main Road,  
Tirupattur, (VLR-Dt.)  
Ph: 04179-228230

Phone : 04179-228230 Cell : 9443280423, 9443442409


**Hi Tech Engineering**  
Mktg. / All Color Machineryes  
(Approved By Color Board Govt of India)  
 Office: 112/6, Landammoppu,  
 Namburkadu P.O.,  
 Pattukkottai - 614602  
 Ph : 04373 222633  
 Cell : 9955240524  
 Workshop : No : 84, Thanjavur Road, Pattukkottai - 614601, Thanjavur Dist, Tamilnadu.

Date: **12.03.2021**

**CERTIFICATE**

This is to certify that **Mr. J.Vigneshwaran** Third year Mechanical Engineering student of **Kings College of Engineering** has successfully completed his **Inplant Training** in our company.

He has visited our company from **27.02.2021 to 12.03.2021**.

During the Training period, his initiative and behavior was found to be good.

We wish him the best in all for his future endeavours and career.


**Hi Tech Engineering**  
Mktg. / All Color Machineryes  
(Approved By Color Board Govt of India)  
 Office: 112/6, Landammoppu,  
 Namburkadu P.O.,  
 Pattukkottai - 614602  
 Ph : 04373 222633  
 Cell : 9955240524  
 Workshop : No : 84, Thanjavur Road, Pattukkottai - 614601, Thanjavur Dist, Tamilnadu.

Date: **12.03.2021**

**CERTIFICATE**

This is to certify that **Mr. X.Jerome** Third year Mechanical Engineering student of **Kings College of Engineering** has successfully completed his **Inplant Training** in our company.

He has visited our company from **27.02.2021 to 12.03.2021**.

During the Training period, his initiative and behavior was found to be good.

We wish him the best in all for his future endeavours and career.


**Hi Tech Engineering**  
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 Office: 112/6, Landammoppu,  
 Namburkadu P.O.,  
 Pattukkottai - 614602  
 Ph : 04373 222633  
 Cell : 9955240524  
 Workshop : No : 84, Thanjavur Road, Pattukkottai - 614601, Thanjavur Dist, Tamilnadu.

Date: **12.03.2021**

**CERTIFICATE**

This is to certify that **Mr. R.Vengatesh** Third year Mechanical Engineering student of **Kings College of Engineering** has successfully completed his **Inplant Training** in our company.

He has visited our company from **27.02.2021 to 12.03.2021**.

During the Training period, his initiative and behavior was found to be good.

We wish him the best in all for his future endeavours and career.


**Hi Tech Engineering**  
Mktg. / All Color Machineryes  
(Approved By Color Board Govt of India)  
 Office: 112/6, Landammoppu,  
 Namburkadu P.O.,  
 Pattukkottai - 614602  
 Ph : 04373 222633  
 Cell : 9955240524  
 Workshop : No : 84, Thanjavur Road, Pattukkottai - 614601, Thanjavur Dist, Tamilnadu.

Date: **12.03.2021**

**CERTIFICATE**

This is to certify that **Mr. S.Karthik karan** Third year Mechanical Engineering student of **Kings College of Engineering** has successfully completed his **Inplant Training** in our company.

He has visited our company from **27.02.2021 to 12.03.2021**.

During the Training period, his initiative and behavior was found to be good.

We wish him the best in all for his future endeavours and career.


**Hi Tech Engineering**  
Mktg. / All Color Machineryes  
(Approved By Color Board Govt of India)  
 Office: 112/6, Landammoppu,  
 Namburkadu P.O.,  
 Pattukkottai - 614602  
 Ph : 04373 222633  
 Cell : 9955240524  
 Workshop : No : 84, Thanjavur Road, Pattukkottai - 614601, Thanjavur Dist, Tamilnadu.

Date: **12.03.2021**

**CERTIFICATE**

This is to certify that **Mr. E.Dhanasekar** Third year Mechanical Engineering student of **Kings College of Engineering** has successfully completed his **Inplant Training** in our company.

He has visited our company from **27.02.2021 to 12.03.2021**.

During the Training period, his initiative and behavior was found to be good.

We wish him the best in all for his future endeavours and career.



## HI-TECH CNC AUTOMATION

NO: 40, CHIDAMBARAM STREET, SRP MILLS, SARVANAMPATTI(P.O),  
COIMBATORE- 641 035.  
E-mail: hitechcncautomation@gmail.com

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. AKASHRAJ.D Reg. No. 821118114007 student of **Kings college of Engineering** at Thanjavur has successfully her internship training in our organization from 01.04.2021 – 15.04.2021.

During his period, he was very punctual and active.



Authorised Signatory

GSTIN:33AAHFH2964F12I



## HI-TECH CNC AUTOMATION

NO: 40, CHIDAMBARAM STREET, SRP MILLS, SARVANAMPATTI(P.O),  
COIMBATORE- 641 035.  
E-mail: hitechcncautomation@gmail.com

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. BIRTHIVARAJ Reg. No. 821118114014 student of **Kings college of Engineering** at Thanjavur has successfully her internship training in our organization from 01.04.2021 – 15.04.2021.

During his period, he was very punctual and active.



Authorised Signatory

GSTIN:33AAHFH2964F12I



## HI-TECH CNC AUTOMATION

NO: 40, CHIDAMBARAM STREET, SRP MILLS, SARVANAMPATTI(P.O),  
COIMBATORE- 641 035.  
E-mail: hitechcncautomation@gmail.com

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. FAZILAHAMED.S Reg. No. 821118114018 student of **Kings college of Engineering** at Thanjavur has successfully her internship training in our organization from 01.04.2021 – 15.04.2021.

During his period, he was very punctual and active.



Authorised Signatory

GSTIN:33AAHFH2964F12I



## HI-TECH CNC AUTOMATION

NO: 40, CHIDAMBARAM STREET, SRP MILLS, SARVANAMPATTI(P.O),  
COIMBATORE- 641 035.  
E-mail: hitechcncautomation@gmail.com

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. KAILASHKUMAR.M Reg. No. 821118114025 student of **Kings college of Engineering** at Thanjavur has successfully her internship training in our organization from 01.04.2021 – 15.04.2021.

During his period, he was very punctual and active.



Authorised Signatory

GSTIN:33AAHFH2964F12I



## HI-TECH CNC AUTOMATION

NO: 40, CHIDAMBARAM STREET, SRP MILLS, SARVANAMPATTI(P.O),  
COIMBATORE- 641 035.  
E-mail: hitechcncautomation@gmail.com



## HI-TECH CNC AUTOMATION

NO: 40, CHIDAMBARAM STREET, SRP MILLS, SARVANAMPATTI(P.O),  
COIMBATORE- 641 035.  
E-mail: hitechcncautomation@gmail.com

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. KRITHICKROSHAN.S Reg. No. 821118114031 student of **Kings college of Engineering** at Thanjavur has successfully her internship training in our organization from 01.04.2021 – 15.04.2021.

During his period, he was very punctual and active.



K.Sri

Authorised Signatory

GSTIN:33AAH2964F121

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. MAHESHWARAN.M Reg. No. 821118114032 student of **Kings college of Engineering** at Thanjavur has successfully her internship training in our organization from 01.04.2021 – 15.04.2021.

During his period, he was very punctual and active.



K.Sri

Authorised Signatory

GSTIN:33AAH2964F121



## HI-TECH CNC AUTOMATION

NO: 40, CHIDAMBARAM STREET, SRP MILLS, SARVANAMPATTI(P.O),  
COIMBATORE- 641 035.  
E-mail: hitechcncautomation@gmail.com

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. VIGNESHWARAN.K Reg. No. 821118114066 student of **Kings college of Engineering** at Thanjavur has successfully her internship training in our organization from 01.04.2021 – 15.04.2021.

During his period, he was very punctual and active.



K.Sri

Authorised Signatory

GSTIN:33AAH2964F121



## **Everest Industries Ltd (NSE Code – EVERESTIND)**

Ganeshapuram, Podanur, Tamil Nadu 641023

TELE:0422 241 3816

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20/11/2020

### **TO WHOM IT MAY CONCERN**

This is to certify that **K.AJITHKUMAR, B.RAJARAJESWARAN, J.VIJAYCHANDRU,N.SANTHOSHKUMAR,B.D.SENTHAMILPRIYAN,M.SARATHKUMAR** a students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **18.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavors.

Thanking you,

With regards

HR Manager



## **FUMES RENEWABLE ENERGY Pvt. Ltd.,**

NO.10/110, Brahmin St, Karambakkam, Buddhar Colony, Porur, Chennai, Tamil Nadu 600116

**22.11.2020**

### **TO WHOMSOEVER IT MAY CONCERN**

This is to certify that, in-plant training (20.10.2020 -22.11.2020) at our organization in wind turbine production and assembly in work stations by IV Year students were completed. During the course of training, the students conduct and character were found to be good. The in-plant training completed students were,

- 1 KAVIYARASAN N
- 2 KRISHNA S
- 3 MOHAMED YASIN SHARIF R
- 4 AUGUSTINE ALBERT J
- 5 SATHIYAMOORTHY M
- 6 SENTHAMILSUDAR K
- 7 SENTHIL R
- 8 SHIRHARAN R
- 9 PRAKASH M
- 10 SASIKUMAR K

Manager,  
(S. Mageshwaran)

# GREENTEC INDUSTRIES

Ajeesh Nagar, 2nd Cross St, AVP Azhagammal Nagar, Thanjavur, Tamil Nadu 613006

**Ph no:08623 276000 to 08623 276009**

---

**24.11.2020**

## **TO WHOMSOEVER IT MAY CONCERN**

This is to certify that, in-plant training (22.10.2020 -24.11.2020) at our organization in Manufacturing of steel and alloy steel water wall panels by IV Year students were completed. During the course of training, the students conduct and character were found to be good. The in-plant training completed students were,

- 1 DHIVAKARAN K
- 2 HARIHARAN V
- 3 MANIMARAN G
- 4 MAHESWARAN C
- 5 KANNAN K
- 6 AJITHKUMAR K
- 7 PRASANTH M
- 8 PREMKUMAR K
- 9 SURIYA A
- 10 MURUGAESEN A
- 11 KAVIYARASU P



Manager,  
(R.Nanilaraman)

# HWASHI

## **Hwashin Automotive India Pvt. Ltd.**

Malayambakkam, Chennai, tamilnadu 602117

Phone: 044-45146558 Mobile: 9600862458

E-mail id: [hwashinautomotiveindia@haipl.com](mailto:hwashinautomotiveindia@haipl.com)

Date: 30.01.2021

### Certificate Of Experience

This is to certify that the following students of KINGS COLLEGE OF ENGINEERING, punalkulam) has done implant training at Hwashin Automotive India Pvt. Ltd. From **2.01.21 to 27.01.21** under the guidance of Mr.Sreekanth R.

- |                  |                 |
|------------------|-----------------|
| 1.Hariharan R    | 7.Karan K       |
| 2.Infant Raja S  | 8.Prakash B     |
| 3.Keerthivasan K | 9.Raghu Devan P |
| 4.Balamurugan M  | 10.Raghul T     |
| 5.Alagesan K     | 11.Rengarajan N |
| 6.Bharath M      | 12.Ruban S      |

We have found him to be a self starter who is motivated, duty bound and hard-working. He worked sincerely on his assignment and his performance was excellence.

We wish him best of luck for him future.

For Hwashin Automotive India Pvt. Ltd.



Asha Acharya  
(HR Manager)



## **Best Forgings India Private Limited**

Date: 25.02.2021

### CERTIFICATE

This is to certify that the following students of Kings College of engineering, punalkulam has successfully completed his implant training at BEST FORGINGS INDIA PRIVATE LIMITED, Coimbatore from **20.01.2020 to 22.02.2020**.

- 1 Abbas Mohamed S
2. Madhesh D
3. Jerome Nicholas A
4. Manimaran S
5. Muthu Manikandan J
6. Annamalai K
7. Enoch Ebenezer P
8. Kathiravan R
9. Abdul Shimak J
- 10 Karthick (24.11.1999) M
- 11 Aravindasamy R
- 12 Arjun Kumar R

The candidates was found to be enthusiastic and observant during his shot period at BEST FORGINGS INDIA PRIVATE LIMITED. His performance has been assessed as very good.

For BEST FORGINGS INDIA Pvt. Ltd.

(K.Ramkumar)

Human Resource – Manager



**VELMURUGAN INDUSTRIES  
VELMURUGAN HEAVY ENGINEERING INDUSTRIES PVT. LTD**

E-53,54 & 55, Developed Plots Estate,

Thuvakudi, Tiruchirappalli-620 015

Tamil Nadu, South India.

E-mail:contactus@velmurugan.in

Phone Numbers : 0431 - 2500547, 2501247

Fax : 0431 – 2500947

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Date: 27.02.2021

**Certificate Of Experience**

This is to certify that the following students of KINGS COLLEGE OF ENGINEERING, (punalkulam) has done implant training at **VELMURUGAN HEAVY ENGINEERING INDUSTRIES PVT. LTD** From **02.02.2021 to 25.02.2021**

**LIST OF STUDENTS**

1 Vignesh Kumar J

2 Thirupugazh D

3 Vishnu S

4 Wilber Judson R L

5 Santhosh Shivan

6 Sutharsan P

7 Mukilan R

8 Shriram Sundar K

9 Subaneshwaran M

10 Venkatesh M

11 Venkateswaran M

12 Dinesh E

13. Siva S

We have found him to be a self starter who is motivated, duty bound and hard-working. He worked sincerely on his assignment and his performance was excellence.

We wish him best of luck for him future.

For VELMURUGAN HEAVY ENGINEERING INDUSTRIES PVT. LTD

Ganesh Kumar R  
(Manager)

## **Internship report**

**By**

<b>821119114001</b>	<b>AAKASH J</b>
<b>821119114002</b>	<b>AATHI BUBESH A</b>
<b>821119114004</b>	<b>ARAVINDAN B</b>
<b>821119114009</b>	<b>DEEPANRAJ S</b>
<b>821119114010</b>	<b>DINESH A</b>
<b>821119114011</b>	<b>GOPI G</b>
<b>821119114012</b>	<b>GUNAL P</b>
<b>821119114013</b>	<b>HARIHARAN D</b>
<b>821119114014</b>	<b>HARIHARAN M</b>
<b>821119114015</b>	<b>HARIHARAN M</b>
<b>821119114016</b>	<b>HARIHARAN M</b>
<b>821119114017</b>	<b>HARISH GOWTHAM M</b>
<b>821119114018</b>	<b>IYAPPAN A</b>
<b>821119114019</b>	<b>KALAIMUHILARASAN S</b>
<b>821119114040</b>	<b>VEERAMANI R</b>

**Company name :**      **Veelsons Energy Systems Pvt Ltd**  
**Thuvakkudi, Trichy – 620015.**

**Duration :**      **05.01.2021 – 25.01.2021**

## About the company

Boiler Manufacturers & EPC Contractors with 25+ Years of rich experience. Started as an ancillary to BHEL, manufacturing Pressure Parts for Super & Ultra Critical Boilers. Handle boiler capacities ranging from 1 TPH to 450 TPH and EPC up to 30 MW. Expertise in FBC, Oil Fired, Stoker Fired, WHRB / HRSG & CFBC Boilers. More than 4500 boilers manufactured till date. VEESONS ENERGY SYSTEMS PRIVATE LIMITED is located in Hyderabad, Telangana, India and is part of the Boiler, Tank, and Shipping Container Manufacturing Industry. There are 21 companies in the VEESONS ENERGY SYSTEMS PRIVATE LIMITED corporate family.

Website	<a href="http://www.veesons.com">http://www.veesons.com</a>
Industries	Industrial Machinery Manufacturing
Company size	1001-5000 employees
Type	Privately Held
Founded	1985
Specialties	Fluidized Bed Combustion, Cement & Sponge Iron Waste Heat Recovery Boiler, Stoker / Grate Fired Boilers, and EPC up to 30 MW

**Business scopes:**

- Boiler
- Tank
- Shipping Container Manufacturing
- Steel Product Manufacturing from Purchased Steel
- Fabricated Metal Product Manufacturing

**Weekly report**

**Week 1:** Learned about various welding process. at machine shop and basic welding operations.

**Week 2:** Training at boards and panel section. Learned about various Pressure Parts components in boilers.

**Week 3:** Training at Super & Ultra Critical Boilers components manufacturing.

**Week 4:** Training at fuel piping systems and coal piping systems.

## Photographs



## **Conclusion**

- In The internship, we got Immense training at the following sections:
  - Boiler
  - Tank
  - Shipping Container Manufacturing
  - Steel Product Manufacturing from Purchased Steel
  - Fabricated Metal Product Manufacturing
- Learning about Supply management
- Learning about Export and customer relations
- Estimation of Demand and supply ratio
- Financial accounting and estimation

## **Internship report**

**By**

821119114005 BALAGANAPATHY S  
821119114006 BALAVIGNESH D  
821119114007 BARATHBABU A  
821119114008 BHARATHICHOZHAN S  
821119114020 KAVIARASAN R  
821119114021 KISHORE R  
821119114022 MULLAIVENDHAN G  
821119114023 MUTHUKUMAR K  
821119114024 NARENDRAN R  
821119114026 NITHISH A  
821119114027 PRADEEPRAJAN S  
821119114028 PRAVEENKUMAR S  
821119114029 PRIYADHARSAN L  
821119114030 PURUSHOTHAMAN S  
821119114031 PURUSOTHAMAN G

**Company name : BABY ENGINEERING PRIVATE LTD, TRICHY**

**Duration : 06.02.2021 – 26.02.2021**

## **About the company**

Established in the year 1975 BEPL entered in to small fabrication works of M/s BEPL, Trichy. Today BEPL is in a position to boast itself as the pioneer in manufacture of components for power plant equipment namely boiler, heat exchanger, auxiliaries, HRSG, WHB, low and High pressure piping, structures etc., conforming to requirements of ASME, ANSI, IBR, ISO, NPCIL.

Excellent financial resources coupled with most dedicated team of technocrats, professionals and technicians aided with high quality management systems has ensured a growth rate of 15% per annum.

Today we are proud to say that BEPL have grown to the status of a global player especially with accreditation to ISO 9001 : 2008 by BVQI. BEPL is in the process of obtaining approval from ASME for using 's' and 'u' stamps.

BEPL is in the process of entering into licensing agreement with reputed European manufacturer of HRSGs for Combined cycle power plant.

BEPL is also in the process of establishing a full-fledged Projects division to enable to execute large scale assignment in power projects.

BEPLs ultimate motto is "power the entire world and beyond"

Website                      <http://babyengg.com>

Headquarters                      Tiruchirappalli, Tamil Nadu

**Business scopes:**

- **POWER PLANT**

The accrual of experience and know-how achieved through many years of existence are always the preliminary point for every new customer.

- **SOLAR**

Planning the future is continuous and never-ending activity at BEPL. The study of innovative solution and the applications of new technologies.

- **SHIP BUILDING**

The awareness that the total quality depends on every single aspect, has focused our attention to implementing strict control procedures.

### **Weekly report**

**Week 1:** Learned about various welding process at machine shop and basic welding operations.

**Week 2:** Training at Special grade boiler Contractor - CIB Approved

**Week 3:** Training at Special Mining Equipments

**Week 4:** Training at Automatic Panel Processing Machine

## Photographs



## Conclusion

- In The internship, we got Immense training at the following sections:
  - Gas Turbines
  - On site jobs-Boiler & Auxiliaries
  - Special Mining Equipments
  - Automatic Panel Processing Machine
- Learning about Steam Generating Stations (Up to 500 MV)
  - Boiler pressure Parts-Economizer, Super heater, Re-heater, Headers, Coils, Bends, Stubs, Cassette baffles, protective shields etc...
  - Waste heat Boiler-Bed Evaporator coils, Bank tubes, Water wall panels, stud and finned tubes.
  - LP and HP piping-carbon steel & Alloy steel-Pipes, plate formed pipes, fittings, hangers & supports, specialty clamps etc.,
  - Tubular and Regenerative Air heaters-Tubular Air heaters blocks, Hot and cold End baskets, Elements etc.,
  - Coal Mills-Mill Housing Armouring plates, Coal Chute, Inner and outer arms etc.,
  - Combustion system-Coal /Oil Compartment assembly, Coal/ Oil Nozzles, Air Nozzles, Coal feeder and parts etc.,
  - Ducts and Dampers-Re suction Ducts, Inlet and outlet ducts, Expansion Bellows, Isolation dampers, louver and Guillotine type dampers, Casting etc.,
  - Pressure Vessels-CBD, IBD Tanks, Oil / Air Storage Tanks etc.,

- Duct Collecting Equipments-Mech DC & E.S.Ps- Components and parts
- Heaters-LP & HP Heaters, Heat Exchangers
- Acoustic Control Equipments-Enclosures, Venturies, Sound Hood assemblies, Silencer Panel etc.,
- Supporting Structures: Welded type and bolted type structures.

## **Internship report**

**By**

<b>821119114033</b>	<b>ROOBAN K</b>
<b>821119114034</b>	<b>SATHIYARAJ S</b>
<b>821119114035</b>	<b>SATHIYASEELAN B</b>
<b>821119114036</b>	<b>SIVABALAN A</b>
<b>821119114037</b>	<b>SYEDU USMANALI M</b>
<b>821119114038</b>	<b>VEERAGURU M</b>
<b>821119114039</b>	<b>VEERAMANI K</b>
<b>821119114041</b>	<b>VENKATESH S</b>
<b>821119114042</b>	<b>VIGNESHWARAN M</b>

**Company name : Hwashin Automotive India Pvt. Ltd.**

**Malayambakkam,**

**Chennai, Tamilnadu 602117**

**Duration : 01.03.2021 – 18.03.2021**

## About the company

Registered in 2011 , Hwashin Automotive India Pvt Ltd has made a name for itself in the list of top service providers of in India. Hwashin Automotive is listed in Trade India's list of verified companies offering wide array of etc. Leading Manufacturer of automotive parts and spares.

Nature of Business	Manufacturer
Additional Business	Service Provider
Total Number of Employees	11 to 25 People
Legal Status of Firm	Individual - Proprietor
Annual Turnover	Rs. 50 Lakh - 1 Crore

### **Business scopes:**

- Automotive Parts
- Service & Repairs

## Weekly report

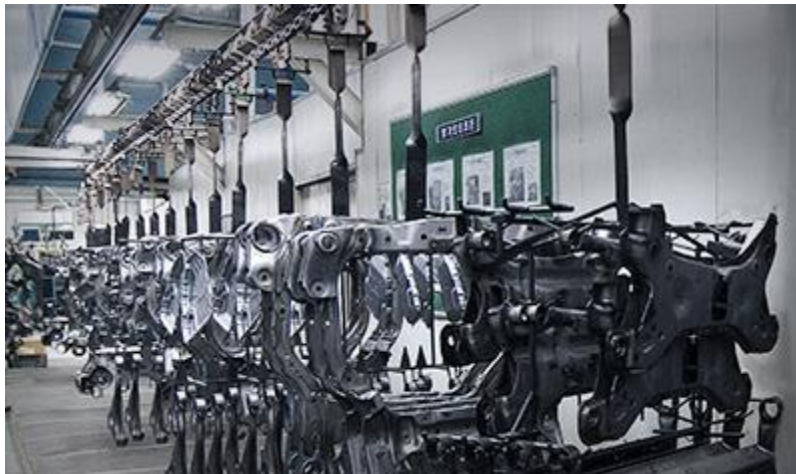
**Week 1:** Learned about various Machining Equipments Centre lathe, Shaping, Radial drilling, Portable drilling, portable magnetic vertical.

**Week 2:** Training at Surface preparation Abrasive / shot blasting and Sand blasting.

**Week 3:** Training at Non-Destructive Testing Isotope radiography, ultrasonic testing.

**Week 4:** Training at magnetic particle testing, liquid penetrant testing, hydrostatic testing and petrographic testing.

## Photographs





## **Conclusion**

- In The internship, we got Immense training at the following sections:
  - Automotive Part
  - Service & Repairs
- The accrual of experience and know-how achieved through many years of existence are always the preliminary point for every new customer.
- The awareness that the total quality depends on every single aspect, has focused our attention to implementing strict control procedures, at every critical stage to guarantee the conformity of every single component, to the projects requirement. This approach has been made possible due to continuous investments in the renewal of the production equipment.

## **Internship report**

**By**

- 1. Aswin D**
- 2. Ayyappan D**
- 3. Akash B**
- 4. Akash (06.05.2001) R**
- 5. Arunpandiyan S**
- 6. Jegathish S**
- 7. Ramanan V**
- 8. Naveen S**
- 9. Pavithraj D**
- 10. Senthil kumar C**
- 11. Ramanan V**
- 12. Vanjinathan A**
- 13. Senthil kumar C**
- 14. Vijayaparthiban M**

**Company name:** SRIVARI METAL WORKS PVT, Hosur

**Duration:** 22.01.2021 -21.02.2021

## About the company

Srivari Metal Works PVT. LTD. in Sidco Industrial Estate, Phase V, Hosur is known to satisfactorily cater to the demands of its customer base. The business came into existence in 2011 and has, since then, been a known name in its field. It stands located at E-14, Sidco Industrial Estate, Phase V, -635126. The business strives to make for a positive experience through its offerings.

Customer centricity is at the core of Srivari Metal Works PVT. LTD. in Sidco Industrial Estate, Phase V,, Hosur and it is this belief that has led the business to build long-term relationships. Ensuring a positive customer experience, making available goods and/or services that are of top-notch quality is given prime importance.

India's leading B2B market place, Jd Mart ensures engaging in business activities is a seamless process for small and medium enterprises as well as large businesses. In a wake to enable these businesses to reach their audience, this portal lets them showcase their offerings in terms of the products and/or services through a digital catalogue. This business has a wide range of product offerings and the product/catalogue list includes Coir Coco Peat, Coir, Electronic Component, Railway Equipment, Coir Product etc.

Kindly scroll up for the address and contact details of Srivari Metal Works PVT. LTD. in Hosur

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## **Weekly report**

**Week 1:** Training at Metal Cutting Section. Learned about various moulds of cutter and Tool.

**Week 2:** Training at Frames section. Learned about various Frames of boards like wood, metal and composite with chemical mixing.

**Week 3:** Training at steel section. Learned about various machining of steel sheets, bars and their bending mechanisms.

**Week 4:** Training at Boiler section. Learned about various types of boiling and customer related complaints.

**Week 5:** Training at machine shop and basic welding operations.

## Photographs



Frames and Bar



Metal Cutting Section

## **Conclusion**

- In The internship, we got Immense training at the following sections:
  - Frame
  - Metal Cutting
  - Steel sheets
  - Exports
- Learning about Supply management
- Learning about Export and customer relations
- Estimation of Demand and supply ratio
- Financial accounting and estimation

## **Internship report**

**By**

<b>821118114005</b>	<b>Akash (23.01.2001) R</b>	<b>821118114006</b>	<b>Akash (06.05.2001) R</b>
<b>821118114037</b>	<b>Muthukumaran U</b>	<b>821118114011</b>	<b>Arunpandiyan S</b>
<b>821118114040</b>	<b>Pradheesh P</b>	<b>821118114023</b>	<b>Jegathish S</b>
<b>821118114046</b>	<b>Ranjith B</b>	<b>821118114038</b>	<b>Naveen S</b>
<b>821118114055</b>	<b>Surya S</b>	<b>821118114039</b>	<b>Pavithraj D</b>
<b>821118114056</b>	<b>Tamilarasan S</b>	<b>821118114302</b>	<b>Ramanan V</b>
<b>821118114012</b>	<b>Aswin D</b>	<b>821118114057</b>	<b>Vanjinathan A</b>
<b>821118114013</b>	<b>Ayyappan D</b>	<b>821118114053</b>	<b>Senthil kumar C</b>
<b>821118114004</b>	<b>Akash B</b>	<b>821118114067</b>	<b>Vijayaparthiban M</b>

**Company name: Sun V Technology, Coimbatore**

**Duration: 01.02.2021 -14.02.2021**

## **About the company**

Sun v technology offer world class training in CNC Training, CAD/ CAM/ CAE Training. It have a great record of training lot of students and engineers in CNC Training. It is in Coimbatore, an industrial and engineering city in South India well known as Monchester of South India. This company offers training in computer aided manufacturing software used by manufacturing professionals. Certification is available at both the associate and professional levels

### **Business scopes:**

- CATIA Software
- CADM software
- ANSYS software
- Hardware and Networking.

## **Weekly report**

**Week 1:** Training at CAD

**Week 2:** Skill development session ArchiCAD.

**Week 3:** Hands on session on ANSYS analysis.

**Week 4:** Basic operations in Programming code G code and M code.

**Week 5:** Programming details about Solid works

## Photographs



## Conclusion

- In The internship, we got hands on training at the following softwares:
  - CATIA Software
  - CADM software
  - ANSYS software
  - Hardware and Networking.
- Learning about basic Programming language
- Learning about CNC programming
- Got detailed knowledge about Analysis Software.

## **Internship report**

**By**

<b>821118114003</b>	<b>Abinash B</b>
<b>821118114020</b>	<b>Gowthaman R</b>
<b>821118114063</b>	<b>Venkatesh E</b>
<b>821118114029</b>	<b>Keerthi gopal M M</b>

**Company name: Yamaha industrial, Chennai**

**Duration: 20.02.21 to 10.03 .21**

## **About the company**

IYM's Manufacturing facilities comprises of 3 state-of-the-art Plants at - Faridabad (Haryana), Surajpur (Uttar Pradesh) and Kanchipuram (Tamilnadu).

The infrastructure at all the plants supports production of motorcycles, scooters and its parts for the domestic as well as overseas market. At the core are the 5-S and TPM activities that fuel our agile Manufacturing Processes. They have In-house facility for Machining, Welding processes as well as finishing processes of Electroplating and Painting till the assembly line.

The stringent Quality Assurance norms ensure that the motorcycles, scooters meet the reputed International standards of excellence in every sphere.

### **Business scopes:**

- Assembly
- Design
- Testing
- Supply

## Weekly report

**Week 1:** Training at assembly section. Learned about various assembly of machine parts and hydraulics.

**Week 2:** Training at design section. Learned about various models of design with initial stages of drafting.

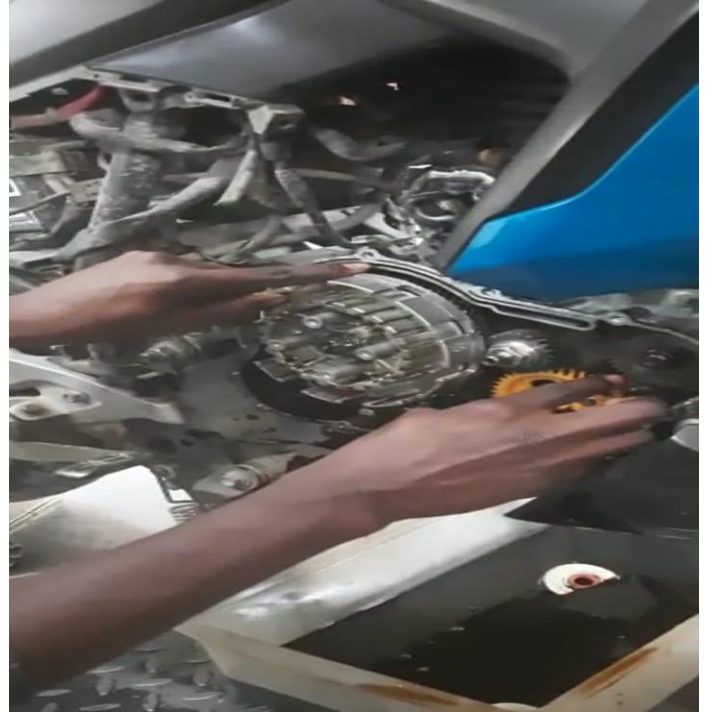
**Week 3:** Training at testing section. Learned about testing of engines, suspension systems, braking and pollution norms check.

**Week 4:** Training at supply section. Learned about supply chain management and demand ratio estimation.

**Week 5:** Training at service section and basic troubleshooting operations.

## Photographs





## Conclusion

- In The internship, we got Immense training at the following sections:
  - Machine parts
  - Buckles
  - Bearing
  - Enhancer
  - Components
  - Accessories
- Learning about design and development of a vehicle parts
- Learning about Export and customer relations
- Estimation of cost and machining
- Learning about spares and services
- Learning about workshop maintenance.
- Learning about testing and analyzing

## **Internship report**

**By**

**821118114024 Jerome X**  
**821118114027 Karthik karan S**  
**821118114061 Vengatesh R**  
**821118114065 Vigneshwaran J**  
**821118114501 Dhanasekar E**

**Company name: Hi Tech Engineering Industry, Thanjavur**

**Duration: 27.02.21 to 12.03.21**

## About the company

It is a ISO 9001:2000 certified company has located at Thanjavur , Pattukottai. The company also got a lot of certification from the Government regarding the quality of products and management and their works such as ISO, ICS, JAS, etc.,

The scopes are design, assembly, testing, supply, and services of industrial automation and energy saving electronic devices. Hi- Tech Engineering , manufactures Industrial Electronic Equipments and Agricultural equipments. Hi-Tech Engineering, a high tech electrical and electronics industry for manufacturing and servicing Electronic equipments. Its handling design, assembly, testing, supply, and services of industrial automation and energy saving electronic devices. And Farming Equipments.

Hi-Tech engineering is manufacturing ULTRA BRIGHT,the energy saver street light. It's a CFL (Compact Flourescent Lamp) street lights exclusively for outdoor application. Usually lamps like Mercury lamp, Halogen lamp, Metal Halide lamps are used in street lighting system which consumes more than 175 to 275 watts per hour. Keeping your mind to reduce the power consumption to large extent. While using this street light upto 70% of power saving. By Industrial Automation, Hi- Tech Engineering has given services to Textile Industry,Marine Engineering,Cement Plant,Machinery Automation.

### **Business scopes:**

- Assembly
- Design

- Testing
- Supply and
- Fabrication.

## **Weekly report**

**Week 1:** Training at assembly section. Learned about various assembly of components and dies.

**Week 2:** Training at design section. Learned about various models of design with initial stages of drafting.

**Week 3:** Training at testing section. Learned about testing of processed equipments and segregation.

**Week 4:** Training at supply section. Learned about supply chain management and demand ratio estimation.

**Week 5:** Training at service section and basic machining operations.

## Photographs





## Conclusion

- In The internship, we got Immense training at the following sections:
  - Dies
  - Machine parts
- Learning about design and development of a product
- Learning about Export and customer relations
- Estimation of cost and machining
- Learning about process planning and execution
- Learning about workshop maintenance.
- Learning about man power and machine utilization chart scheduling.

## **Internship report**

**By**

**821118114007 Akashraja D**  
**821118114014 Birthivaraj D**  
**821118114018 Fazil ahamed S**  
**821118114022 Jayaraj B**  
**821118114025 Kailashkumar M**  
**821118114031 Krithick roshan S**  
**821118114032 Maheswaran M**  
**821118114066 Vigneshwaran K**  
**821118114026 Karthikeyan R**

**Company name: Hi Tech CNC automation, Coimabatore**

**Duration: 01.04.21 to 17.04.21**

## **About the company**

HI-TECH CNC AUTOMATION company established on 1st June 2006. With happy customers and the quality of service they have now step into launching new unit Hi tech machining center.

They adapt the technology to suit exciting demands of the present Industrial Scenario and to meet the Industry's Quality, Strength and Tolerance level. The Ideology of the organization is deeply engraved in the manufacture and supply of quality CNC Machined and Turned components, Dies, Valves, Pumps, Automobiles, Aerospace & Textiles Industries components.

### **Business scopes:**

- Dies
- Valves
- Pumps
- Automotive and aerospace components

## Weekly report

**Week 1:** Training at dies section. Learned about various moulds, dies and their design . And basic training in CNC program

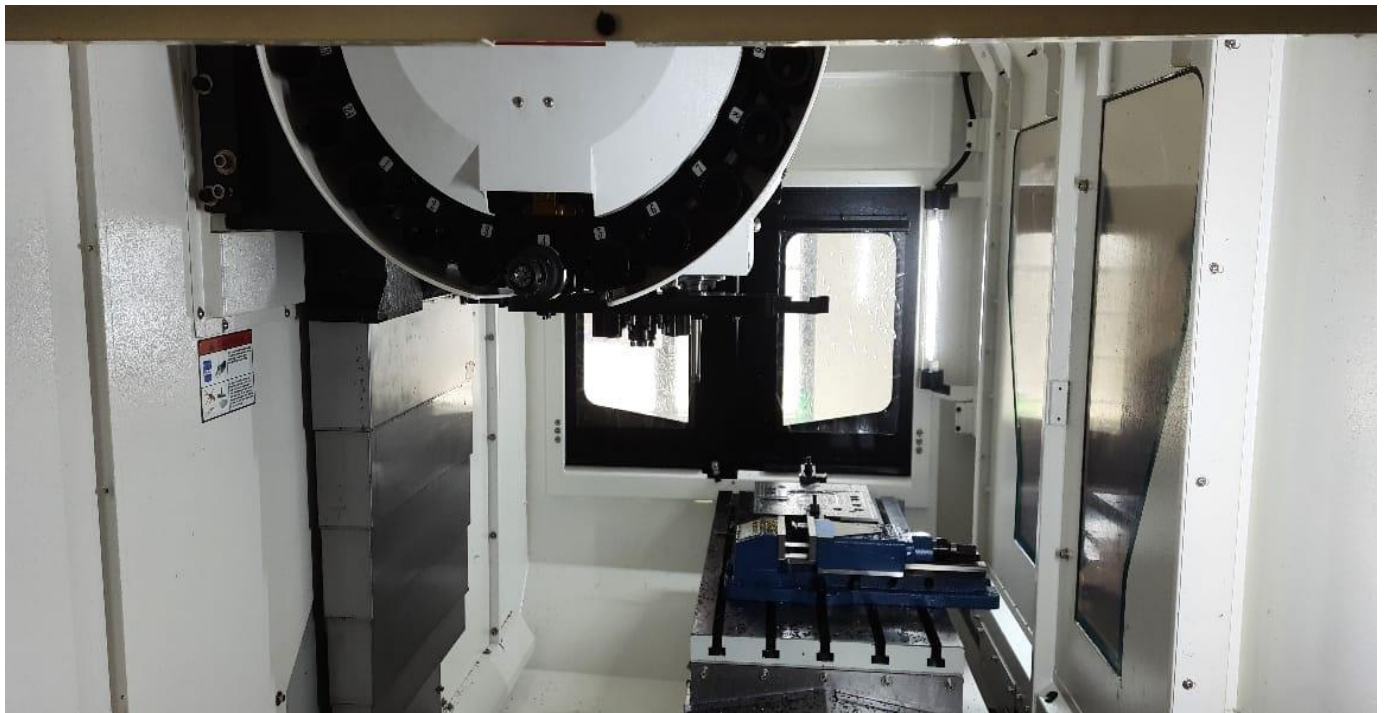
**Week 2:** Training at valve section. Learned about various moulds of valve like foot valves, drains, brake valves and joints.

**Week 3:** Training at pump section. Learned about various pump designs and execution of the design.

**Week 4:** Training at autoparts section. Learned about autopart design, aerospace and marine components like blades, channels, sleeves, pins and joints.

## Photographs





## **Conclusion**

- In The internship, we got Immense training at the following sections:
  - ✓ Dies
  - ✓ Pumps
  - ✓ Machine parts
- Learning about design and development of a product
- Learning about Export and customer relations
- Estimation of cost and machining
- Learning about process planning and execution
- Learning about workshop maintenance.
- Learning about man power and machine utilization chart scheduling.
- Learning about Basic CNC program.

## **Internship report**

**By**

**821117114025 Kabilan S**

**821117114003 Abishek S**

**821117114046 Muthu S**

**821117114048 Pragatheesh R**

**821117114301 Ajithkumar K**

**821117114305 Raja Rajeshweran B**

**821117114307 Vijaychandru J**

**821117114059 Santhosh Kumar N**

**821117114063 Senthamil Priyan BD**

**821117114061 Sarathkumar M**

**Company name: Everest industries, Coimbatore**

**Duration: 18.10.2020 -20.11.2020**

## **About the company**

Everest is one of India's leading and fastest growing complete building solutions providers. Incorporated in 1934, Everest has a rich history in manufacturing of building materials and Pre-Engineered Steel Buildings With the brand promise of delivering Strength, Speed and Safety to construction, Everest today offers a complete range of new age building products for roofing, ceiling, wall, flooring & cladding solutions and also manufactures Pre-Engineered Steel Buildings for industrial, commercial and residential applications. Its building products and solutions are available in more than 1,00,000 villages and 600 cities in India and also in over 35 countries globally. Everest has designed, manufactured and erected more than 2,000 Pre-Engineered Steel buildings across 275 cities in India. Backed by innovation, the Company has continuously introduced modern products & solutions over last eight decades to meet the contemporary requirements of the construction industry.

### **Business scopes:**

- Roofing
- Boards & Panels
- Steel Buildings
- Exports

## **Weekly report**

**Week 1:** Training at roofing section. Learned about various moulds of roofs and coloured roof chemical mixing.

**Week 2:** Training at boards and panel section. Learned about various moulds of boards like wood, metal and composite with chemical mixing.

**Week 3:** Training at steel section. Learned about various machining of steel sheets, bars and their bending mechanisms.

**Week 4:** Training at exports section. Learned about various exporting modules and customer related complaints.

**Week 5:** Training at machine shop and basic welding operations.

## Photographs



## **Conclusion**

- In The internship, we got Immense training at the following sections:
  - Roofing
  - Boards
  - Steel sheets
  - Exports
- Learning about Supply management
- Learning about Export and customer relations
- Estimation of Demand and supply ratio
- Financial accounting and estimation

## **INTERNSHIP REPORT**

**By**

**821117114032 KAVIYARASAN N**

**821117114034 KRISHNA S**

**821117114036 MOHAMED YASIN SHARIF R**

**821117114011 AUGUSTINE ALBERT J**

**821117114062 SATHIYAMOORTHY M**

**821117114063 SENTHAMILSUDAR K**

**821117114065 SENTHIL R**

**821117114068 SHIRHARAN R**

**821117114050 PRAKASH M**

**821117114501 SASIKUMAR K**

**Company name: Fumes Renewable Energy limited , Chennai**

**Duration: 20.10.2020 -22.11.2020**

## **About the company**

Fumes Renewable Energy Private Limited is a Private incorporated on 25 January 2019. It is classified as Non-govt company and is registered at Registrar of Companies, Chennai. Its authorized share capital is Rs. 1,000,000 and its paid up capital is Rs. 100,000. It is involved in Production , collection and distribution of electricity The government has announced that no new coal-based capacity addition is required beyond the 50 GW under different stages of construction likely to come online between 2017 and 2022. As fossil fuels are depleting and creating more pollution causing global warming, and also since energy demand is increasing day by day, energy production from renewable energy resources becomes the best solution in present condition as renewable energy resources are not exhaustible, clean, and green energy its epic advantage in making solar panels may be contributed more in renewable energy.

### **Business scopes:**

- Solar Roof tops
- Boards & Panels
- Solar traffic lights
- Solar power Generators

## **Weekly report**

**Week 1:** Training at Panel section. Learned about various solar roofs.

**Week 2:** Training at boards and panel section.

**Week 3:** Hands on session on power distribution through Solar panel

**Week 4:** Training Logistics section.

**Week 5:** Training at machine shop and soldering in panel operations.

## Photographs



## Conclusion

- In The internship, we got Immense training at the following sections:
  - ✓ Solar Roof tops
  - ✓ Boards & Panels
  - ✓ Solar traffic lights
  - ✓ Solar power Generators
- Learning about solar cell
- Learning about Export and customer relations
- Estimation of separate solar panel for houses
- Current distribution and usage

## **Internship report**

**By**

<b>821117114016</b>	<b>Dhivakaran K</b>
<b>821117114019</b>	<b>Hariharan V</b>
<b>821117114038</b>	<b>Manimaran G</b>
<b>821117114037</b>	<b>Maheswaran C</b>
<b>821117114027</b>	<b>Kannan K</b>
<b>821117114701</b>	<b>Ajithkumar K</b>
<b>821117114051</b>	<b>Prasanth M</b>
<b>821117114052</b>	<b>Premkumar K</b>
<b>821117114070</b>	<b>Suriya A</b>
<b>821117114304</b>	<b>Murugaesen A</b>

**Company name: Fumes Renewable Energy limited , Chennai**

**Duration: 22.10.2020 -24.11.2020**

## About the company

Greentech Industries (India) Pvt. Ltd. has been at the forefront of the Indian automobile industry's anti-pollution efforts by introducing spares in engines. It is the first Indian Company to introduce Volvo engine spares with Euro norms. Fully owned by the Greentech Industries (India) Pvt. Ltd. is a Foundry and Machine shop with the latest equipment from advanced countries and managed by experienced engineers from Taiwan & China that ensure the quality of the casting products to be of top grade. GTI is committed to assure manufacture world class Quality Auto Mobile products. Committed to the welfare of its employees, society and the country

### **Business scopes:**

- Carburetor
- Inner shell
- Piston and piston rings
- Butterfly valve

## **Weekly report**

**Week 1:** Training at Carburetor section

**Week 2:** Skill development session in Volvo Engine Spares Part. Four Wheeler Engine Oil Pump.

**Week 3:** Hands on session on Tow Piece Metal Seated Ball Valve.

**Week 4:** Training Car Parts. Engine Spares Part. Tow Wheeler Engine Oil Pump. Four Wheeler Rocker Springs.

**Week 5:** Training in Four Wheeler Rocker Springs arrangement Matrix.

## Photographs



## Conclusion

- In The internship, we got Immense training at the following sections:
  - Carburetor
  - Inner shell
  - Piston and piston rings
  - Butterfly valve
- Learning about Four Wheeler Rocker Springs
- Learning about Tow Piece Metal Seated Ball Valve
- Arrangement of Engine Spares Part

# **INTERNSHIP REPORT**

**BY**

1.HARIHARAN R	7.KARAN K
2.INFANT RAJA S	8.PRAKASH B
3.KEERTHIVASAN K	9.RAGHU DEVAN P
4.BALAMURUGAN M	10.RAGHUL T
5.ALAGESAN K	11.RENGARAJAN N
6.BHARATH M	12.RUBAN S

**Company name:** Hwashin Automotive India Private Limited, Chennai

**Duration:** 2.01.2021 to 27.01.2021

### About the company

Hwashin Automotive India Private Limited(HAI) was established in Chennai, India, in January 2002, as an advance base for internationalization.

As it is solely supplying the major components to Hyundai Motors India Plant, Hwashin India which have established with 100% investment of Hwashin, it is striving to establish a bridgehead of the European export market and the domestic market of India and to stably supply components according to an increase in production in the future.

### Product Process



01. SLITTING

1.



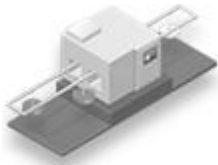
02. STAMPING

2.



03. WELDING

3.



04. PAINTING

4.



05. ASSEMBLY

5.



06. DELIVERY

6.

## **Weekly report**

### **Week 1: control system**

The control system operation of the SAP system and the coil management system.

### **Week 2: various machines**

With various machines including a hot stamping press, 2700-ton transfer, 2000-ton transfer, 1700-ton transfer, 1200-ton transfer, and small lines, Hwashin is supplying press products.

### **Week 3: electrodeposition coating**

The process, conducted for electrodeposition coating of welded products, is composed of washing, filming, electrodeposition, and dry and the electrodeposition capacity is 30 ton.

### **Week 4: Delivery process**

Delivery process is managed in accordance with a delivery plan so that products are delivered on time.

### **Week 5: Assembly process**

Assembly process is conducted to assemble a cross member, lower arm, and brackets with coated product

## Photographs



## Conclusion

Conveyors offer unlimited opportunities to continuously load and unload items over a long period of time. Large factories will have requirements where materials need to be moved between multiple levels or floors. Conveyors can be designed to transport materials across levels, with almost no limitation of height.

# **Internship report**

**By**

- 1 Abbas Mohamed S
2. Madhesh D
3. Jerome Nicholas A
4. Manimaran S
5. Muthu Manikandan J
6. Annamalai K
7. Enoch Ebenezer P
8. Kathiravan R
9. Abdul Shimak J
- 10 Karthick (24.11.1999) M
- 11 Aravindasamy R
- 12 Arjun Kumar R

**Company name: BEST FORGINGS INDIA PRIVATE LIMITED, Coimbatore**

**Duration: 20.01.2021 to 22.02.2021**

### **About the company**

Best Forgings India Private Limited are an ISO 9001:2008 certified company, a leading manufacturer, exporter and supplier of premium quality Ferrous and Non Ferrous Forged Components. Range of products offered by us is Forged Parts, Forged Pipe Fittings, Forged Valves, Automobile Components, Flanges, Non-Ferrous Components, Electrical parts, Agriculture Parts and Machined Components. In four years of Best Forging having expertise in designing, engineering and manufacturing products of high quality to meet demands of industry and use premium quality raw materials sourced from trusted vendors. The source of raw materials from vendors like VISL, VSP, RL Steels and Mukand. .

Some of the important aspects of Best Forgings India Private Limited

- We are backed by team of skilled technicians
- Our internationally certified quality management system
- Ability to deliver products in varied finishes
- Cost-effective products
- Timely delivery

## **Weekly report**

Week 1: Heating. Pre-forged metal starts with metal blocks called "ingots," which come in a variety of shapes and sizes depending on the part or component to be produced

Week 2: The preliminary stage is produced on a longitudinal forging machine, on the hammer or on a press.

Week 3: Preforming stage in the pressing tool:

Week 4: Pre-pressing stage in the pressing tool: Now the forging is once again inserted into the furnace and then goes to the hammer or spindle press for final forming.

Week 5: Final pressing stage in the pressing tool: Next, the forging is once again inserted into the furnace and then onto the hammer or spindle press

## **Photographs**





### **Conclusion**

- Parts manufactured by forging are easily identified by means of RITZ method
- It offers high ductility in any materials
- It is more reliable and less costly.
- It offers better response to heat treatment.
- It offers more consistent and better metallurgical properties.
- It refines structure of metal.
- It offers broad size range of products.

## **Internship report**

**By**

**Vignesh Kumar J**

**Thirupugazh D**

**Vishnu S**

**Wilber Judson R L**

**Santhosh Shivan**

**Sutharsan P**

**Mukilan R**

**Shriram Sundar K**

**Subaneshwaran M**

**Venkatesh M**

**Venkateswaran M**

**Dinesh E**

**Siva S**

**Company name: Velmurugan Heavy Engineering Works , Trichy**

**Duration: 02.02.2021 -25.02.2021**

## **About the company**

Velmurugan Industries (VMI) and Velmurugan Heavy Engineering Industries Private Limited (VHEI) belong to the Heavy Engineering Sector in Tamilnadu, India and are pioneers in manufacturing of Thermal Boiler Components. The Company was formed in 1979 and have 29 years of progressive growth and service to Nation. Our organizational Goal is to achieve supremacy in Technical Competence and match ever growing global competitiveness and thus satisfy our Customers. From this company incorporation since 1978, in manufacturing of Boiler Components, Plastic Moulding Machine parts such as Base Assemblies, Earth Moving Equipment Components, Diesel Storage Tank, Wind Turbine Assembly Components, Oil Cooler and similar general Fabrication. The manufacturing activities comprise in-house Engineering Fabrication, Welding and Machining.

### **Business scopes:**

- Boilers
- Water walls
- Economizer
- Turbine
- Super heater

## **Weekly report**

**Week 1:** Short term welding program in panel welding machine

**Week 2:** Detailed training on how to identify the defect in welding machines by means of RT,UT,PT and MT non destructive testing

**Week 3:**Basic training in drawing interpretaion

**Week 4:** Training at exports section. Learned about various exporting modules and customer related complaints.

**Week 5:** Training at machine shop and basic welding operations.

## Photographs



## Conclusion

- In The internship, we got Immense training at the following sections:
  - ✚ Boilers
  - ✚ Water walls
  - ✚ Economizer
  - ✚ Turbine
  - ✚ Super heater
- Help us to understand basic things in welding and forging in all type of materials and in all types of joints
- Learning about all types of non destructive testing process
- Indicate all type of failures in welding and easily provided with name of the defect in the enhanced Format (Radiographic film)
- All type of fabrication process can be clearly understood



## Department of Mechanical Engineering

**Academic Year 2020-2021**

### In-House Training Details

S. No	Reg. No	Name of the Student	Name of the Company	Duration
1	821117114001	Abbas Mohamed S	Hindustan Motors Bangalore	Sep' 20 to Nov' 20 (Weekend)
2	821117114035	Madhesh D		
3	821117114024	Jerome Nicholas A		
4	821117114039	Manimaran S		
5	821117114047	Muthu Manikandan J		
6	821117114006	Annamalai K	ASHOK LEYLAND HOUSUR	Sep' 20 to Nov' 20 (Weekend)
7	821117114017	Enoch Ebenezer P		
8	821117114031	Kathiravan R		
9	821117114002	Abdul Shimak J		
10	821117114029	Karthick (24.11.1999) M		
11	821117114072	THIRUPUGAZH D	ASHOK LEYLAND HOUSUR	Sep' 20 to Nov' 20 (Weekend)
12	821117114079	VISHNU S		
13	821117114080	WILBER JUDSON R L		
14	821117114306	SANTHOSH SHIVAN		
15	821117114071	SUTHARSAN P		
16	821117114703	MUKILAN R	Larson & Toubro Ltd, Coimbatore	Oct' 20 to Nov' 20 (Weekend)
17	821117114007	Aravindasamy R		
18	821117114008	Arjun Kumar R		
19	821117114018	Hariharan R		
20	821117114021	Infant Raja S		
21	821117114033	Keerthivasan K	Larson & Toubro Ltd, Coimbatore	Oct' 20 to Nov' 20 (Weekend)
22	821117114013	Balamurugan M		
23	821117114066	SHIRAM SUNDAR K		
24	821117114067	SIVA S		
25	821117114069	SUBANESHWAREN M		
26	821117114075	VENKATESH M		
27	821117114076	VENKATESHWAREN M		
28	821117114303	DINESH E		

S. No	Reg. No	Name of the Student	Name of the Company	Duration
29	821117114016	Dhivakaran K	Ram Industries, Thanjavur	Sep' 20 to Nov' 20 (Weekend)
30	821117114019	Hariharan V		
31	821117114038	Manimaran G		
32	821117114037	Maheswaran C		
33	821117114027	Kannan K		
34	821117114025	Kabilan S		
35	821117114003	Abishek S		
36	821117114046	Muthu S		
37	821117114048	Pragatheesh R		
38	821117114032	Kaviyarasan N		
39	821117114034	Krishna S		
40	821117114036	Mohamed Yasin Sharif R		
41	821117114011	Augustine Albert J		
42	821117114005	Alagesan K	Wheels India Ltd, Chennai	Oct' 20 to Nov' 20 (Weekend)
43	821117114014	Bharath M		
44	821117114028	Karan K		
45	821117114049	Prakash B		
46	821117114053	RAGHU DEVAN P	Wheels India Ltd, Chennai	Sep' 20 to Nov' 20 (Weekend)
47	821117114054	RAGHUL T		
48	821117114056	RENGARAJAN N		
49	821117114057	RUBAN S		
50	821117114502	VIGNESHKUMAR J		
51	821117114701	AJITHKUMAR K	VEE & Sons, Thuvakudy, Industrial Estate- Thiruverambur	Oct' 20 to Nov' 20 (Weekend)
52	821117114051	PRASANTH M		
53	821117114052	PREMKUMAR K		
54	821117114070	SURIYA A		
55	821117114304	MURUGAESEN A		
56	821117114702	KAVIYARASU P		
57	821117114301	AJITHKUMAR K	Arignar Anna Sugar Mills Kurungulam	Sep' 20 to Nov' 20 (Weekend)
58	821117114305	RAJA RAJEASHWERAN B		
59	821117114307	VIJAYCHANDRU J		
60	821117114059	SANTHOSH KUMAR N		
61	821117114063	SENTHAMIL PRIYAN BD		
62	821117114061	SARATHKUMAR M		
63	821117114062	SATHIYAMOORTHY M		
64	821117114064	SENTHAMILSUDAR K		
65	821117114065	SENTHIL R		
66	821117114068	SHIRHARAN R		
67	821117114050	PRAKASH M		
68	821117114501	SASIKUMAR K		

Dr. T.PUSHPARAJ M.E ,Ph.D  
PROFESSOR & HEAD  
MECHANICAL DEPARTMENT

08.10.2020

To

The HR Manager,  
Hindustan motors,  
Bangalore.

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	Abbas Mohamed. S	821117114001
2	Madhesh. D	821117114035
3	Jerome Nicholas. A	821117114024
4	Manimaran. S	821117114039
5	Muthumanikandan. J	821117114047

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you

T. Pushparaj  
8/10/20



## DEPARTMENT OF MECHANICAL ENGINEERING

### IN- HOUSE TRAINING 2020-2021

ACCEPTANCE: Hindustan Motors Bangalore THROUGH TELEPONIC CONVERSATION.

SUB: Deputation of **IHT Trainees to shop floor.**

The following in plant Trainees are directed to undergo training in your shop to study and collect the data necessary assistance may be provided to at your end.

DATE: **Sep' 20 to Nov' 20 (Weekend)**

SL.No	Register number	Name of the student
1	821117114001	Abbas Mohamed S
2	821117114035	Madhesh D
3	821117114024	Jerome Nicholas A
4	821117114039	Manimaran S
5	821117114047	Muthu Manikandan J

*T. Rukhany*

**HOD/MECH**



Hindustan Motors Limited

## HINDUSTAN MOTORS,

Siddhartha Layout, Kattriguppe Main Road, bsk 3rd Stage, Bengaluru, Karnataka.

Tele : +919342678795

20/11/2020

### TO WHOM IT MAY CONCERN

This is to certify that **S.ABBAS MOHAMED, D.MADHESH, A.JEROME NICHOLAS, S.MANIMARAN, J.MUTHU MANIKANDAN** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

(SS.MOHANKUMAR)

HR Manager



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**INHOUSE TRAINING REPORT**



<b>821117114001</b>	<b>ABBAS MOHAMED S</b>
<b>821117114035</b>	<b>MADHESH D</b>
<b>821117114024</b>	<b>JEROME NICHOLAS A</b>
<b>821117114039</b>	<b>MANIMARAN S</b>
<b>821117114047</b>	<b>MUTHU MANIKANDAN J</b>

**Training Details**

Training Date : Sep'20 to Nov'20 (Weekend)

Time : 09.30 am to 05.00 pm

Units Visited : Engine Assembly, Engine Overhauling,  
Piston Rings

Knowledge Gained : Assembly process, Safety Measures and Principles followed by industry.

## **Company Profile :Hindustan Motors Limited**

Hindustan Motors Limited was established during the pre-Independence era at Port Okha in Gujarat. Operations were moved in 1948 to Uttarpara in district Hooghly, West Bengal, where the company began the production of the iconic Ambassador. Equipped with integrated facilities such as press shop, forge shop, foundry, machine shop, aggregate assembly units for engines, axles etc and a strong R&D wing, the company currently manufactures the Ambassador (1500 and 2000 cc diesel, 1800 cc petrol, CNG and LPG variants) in the passenger car segment and light commercial vehicle 1-tonne payload mini-truck Winner (2000 cc diesel and CNG) at its Uttarpara and Pithampur plants.

The first and only integrated automobile plant in India, the Uttarpara factory, popularly known as Hind Motor, also manufactures automotive and forged components. [View details](#)

The company also has operations in Pithampur near Indore in Madhya Pradesh where it produces 1800 cc CNG and other variants of Winner.

Hindustan Motors is committed to core values of quality, safety, environmental care and holistic customer orientation.

### **Observation**

Hindustan Motors's first venture into automobile assembly with the Model A involved setting up assembly stands on which the whole vehicle was built, usually by a single assembler who fit an entire section of the car together in one place. This person performed the same activity over and over at his stationary assembly stand. To provide for more efficiency, Hindustan Motors had parts delivered as needed to each work station. In this way each assembly fitter took about 8.5 hours to complete his assembly task. By the time the Model T was being developed Hindustan Motors had decided to use multiple assembly stands with assemblers moving from stand to stand, each performing a specific function. This process reduced the assembly time for each fitter from 8.5 hours to a mere 2.5 minutes by rendering each worker completely familiar with a specific task.

Hindustan Motors soon recognized that walking from stand to stand wasted time and created jam-ups in the production process as faster workers overtook slower ones. In Detroit in 1913, he solved this problem by introducing the first moving assembly line, a conveyor that moved the vehicle past a stationary assembler. By eliminating the need for workers to move between stations, Hindustan Motors cut the assembly task for each worker from 2.5 minutes to just under 2 minutes; the moving assembly conveyor could now pace the stationary worker. The first conveyor line consisted of metal strips to which the vehicle's wheels were attached. The metal strips were attached to a belt that rolled the length of the factory and then, beneath the floor, returned to the beginning area. This reduction in the amount of human effort required to assemble an automobile caught the attention of automobile assemblers throughout the world. Hindustan Motors's mass production drove the automobile industry for nearly five decades and was eventually adopted by almost every other industrial manufacturer. Although technological advancements have enabled many improvements to modern day automobile assembly operations, the basic concept of stationary workers installing parts on a vehicle as it passes their work stations has not changed drastically over the years.

The development of the electric automobile will owe more to innovative solar and aeronautical engineering and advanced satellite and radar technology than to traditional automotive design and construction. The electric car has no engine, exhaust system, transmission, muffler, radiator, or spark plugs. It will require neither tune-ups nor—truly revolutionary—gasoline. Instead, its power will come from alternating current (AC) electric motors with a brushless design capable of spinning up to 20,000 revolutions/minute. Batteries to power these motors will come from high performance cells capable of generating more than 100 kilowatts of power. And, unlike the lead-acid batteries of the past and present, future batteries will be environmentally safe and recyclable. Integral to the braking system of the vehicle will be a power inverter that converts direct current electricity back into the battery pack system once the accelerator is let off, thus acting as a generator to the battery system even as the car is driven long into the future.

The growth of automobile use and the increasing resistance to road building have made our highway systems both congested and obsolete. But new electronic vehicle technologies that permit cars to navigate around the congestion and even drive themselves may soon become possible. Turning over the operation of our automobiles to computers would mean they would gather information from the roadway about congestion and find the fastest route to their instructed destination, thus making better use of limited highway space. The advent of the

electric car will come because of a rare convergence of circumstance and ability. Growing intolerance for pollution combined with extraordinary technological advancements will change the global transportation paradigm that will carry us into the twenty-first century.



**IHT Coordinator**

**HoD/Mech**

Dr. T.PUSHPARAJ M.E ,Ph.D  
PROFESSOR & HEAD  
MECHANICAL DEPARTMENT

08.10.2020

To

The Manager,  
Ashok Leyland,  
Chennai.

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	Annamalai. K	821117114006
2	Enoch Ebenezer. P	821117114017
3	Kathiravan. R	821117114031
4	Abdul Shimak. J	821117114002
5	Karthick. M	821117114029

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you

T. Pushparaj  
8/10/20



## DEPARTMENT OF MECHANICAL ENGINEERING

### IN- HOUSE TRAINING 2020-2021

ACCEPTANCE: ASHOK LEYLAND HOUSUR THROUGH TELEPONIC CONVERSATION.

SUB: Deputation of **IHT Trainees to shop floor.**

The following in plant Trainees are directed to undergo training in your shop to study and collect the data necessary assistance may be provided to at your end.

DATE: **Sep' 20 to Nov' 20 (Weekend)**

SL.No	Register number	Name of the student
1	821117114006	Annamalai K
2	821117114017	Enoch Ebenezer P
3	821117114031	Kathiravan R
4	821117114002	Abdul Shimak J
5	821117114029	Karthick (24.11.1999) M

*T. Purushotham*

**HOD/MECH**



## ASHOK LEYLAND

Madavaram Red Hills Rd, Grant Lyon, Puzhal, Chennai, Tamil Nadu 600052

Tel: 044 – 2220 6000

Fax: 044 – 2220 6001

Email id : [secretarial@ashokleyland.com](mailto:secretarial@ashokleyland.com)

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20/11/2020

### TO WHOM IT MAY CONCERN

This is to certify that **K.ANNAMALAI, P.ENOCH EBENEZER, R.KATHIRAVAN, J.ABDUL SHIMAK, M.KARTHICK** the students of **kings college of engineering, punalkulam** has, successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

A handwritten signature in black ink, appearing to be 'R. K. Kathiravan'.

Manager

**Dr. T.PUSHPARAJ M.E ,Ph.D**  
**PROFESSOR & HEAD**  
**MECHANICAL DEPARTMENT**

---

To

The Manager,  
Ashok Leyland,  
Chennai.

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	821117114072	THIRUPUGAZH D
2	821117114079	VISHNU S
3	821117114080	WILBER JUDSON R L
4	821117114306	SANTHOSH SHIVAN
5	821117114071	SUTHARSAN P
6	821117114703	MUKILAN R

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you

*T. Pushparaj*  
HOD / Mech.



## DEPARTMENT OF MECHANICAL ENGINEERING

### IN- HOUSE TRAINING 2020-2021

ACCEPTANCE: ASHOK LEYLAND HOUSUR THROUGH TELEPONIC CONVERSATION.

SUB: Deputation of **IHT Trainees to shop floor.**

The following in plant Trainees are directed to undergo training in your shop to study and collect the data necessary assistance may be provided to at your end.

DATE: **Sep' 20 to Nov' 20 (Weekend)**

SL.No	Register number	Name of the student
1	821117114072	THIRUPUGAZH D
2	821117114079	VISHNU S
3	821117114080	WILBER JUDSON R L
4	821117114306	SANTHOSH SHIVAN
5	821117114071	SUTHARSAN P
6	821117114703	MUKILAN R



**HOD/MECH**



ASHOK LEYLAND

## ASHOK LEYLAND

Madavaram Red Hills Rd, Grant Lyon, Puzhal, Chennai, Tamil Nadu 600052

Tel: 044 – 2220 6000 Fax: 044 – 2220 6001

Email id : [secretarial@ashokleyland.com](mailto:secretarial@ashokleyland.com)

---

20/11/2020

### TO WHOM IT MAY CONCERN

This is to certify that **D.THIRUPUGAZH, VISHNU S , WILBER JUDSON R L , SANTHOSH SHIVAN , SUTHARSAN P** , MUKILAN R, the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

Manager



## DEPARTMENT OF MECHANICAL ENGINEERING

### INHOUSE TRAINING REPORT



821117114072	THIRUPUGAZH D
821117114079	VISHNU S
821117114080	WILBER JUDSON R L
821117114306	SANTHOSH SHIVAN
821117114071	SUTHARSAN P
821117114703	MUKILAN R
821117114006	Annamalai. K
821117114017	Enoch Ebenezer. P
821117114031	Kathiravan. R
821117114002	Abdul Shimak. J
821117114029	Karthick. M

#### Training Details

Training Date	: 20.10.2020
Time	: 09.30 am to 05.00 pm
Units Visited	: Engine Boring, Engine Machining, Engine testing
Knowledge Gained	: Machining process, Safety Measures and Principles followed by industry.

## **INDEX**

<b>SL.NO</b>	<b>CONTENT</b>	<b>PG.NO</b>
<b>1.</b>	<b>COMPANY PROFILE</b>	<b>1</b>
<b>2.</b>	<b>HISTORY OF ASHOKLEYLAND</b>	<b>2</b>
<b>2.</b>	<b>PLANT DETAILS</b>	<b>3</b>
<b>3.</b>	<b>TRAINING PERIOD</b>	<b>4</b>
<b>4.</b>	<b>OBSERVATIONS</b>	<b>5</b>
<b>5.</b>	<b>CLICKS</b>	<b>6</b>
<b>6.</b>	<b>CERTIFICATE</b>	<b>7</b>

## **COMPANY PROFILE :**

**Ashok Leyland** is an Indian automobile company headquartered in Chennai, India. It is owned by the Hinduja Group. Founded in 1948, it is the 2nd largest commercial vehicle manufacturer in India, 4th largest manufacturer of buses in the world and 12th largest manufacturer of trucks globally. Operating nine plants, Ashok Leyland also makes spare parts and engines for industrial and marine applications. It sold around 1,40,000 vehicles (M&HCV + LCV) in FY 2016. It is the second largest commercial vehicle company in India in the medium and heavy commercial vehicle (M&HCV) segment, with a market share of 32.1% (FY 2016). With passenger transportation options ranging from 10 seaters to 74 seaters (M&HCV = LCV), Ashok Leyland is a market leader in the bus segment. In the trucks segment Ashok Leyland primarily concentrates on the 16 to 25-ton range. However, Ashok Leyland has a presence in the entire truck range, from 7.5 to 49 tons.

## **HISTORY OF ASHOK LEYLAND :**

**Ashok Motors** was founded in 1948 by Raghunandan Saran, He is an Indian freedom fighter from Punjab. After Independence, he was persuaded by India's first Prime Minister Nehru to invest in a modern industrial venture. Ashok Motors was incorporated in 1948 as a company to assemble and manufacture Austin cars from England, and the company was named after the founder's only son, Ashok Saran. The company had its headquarters in Rajaji Saalai, Chennai (then Madras) with the plant in Ennore, a small fishing hamlet in the North of Chennai. The company was engaged in the assembly and distribution of Austin A40 passenger cars in India.

In 2007, the Hinduja Group also bought out IVECO's indirect stake in Ashok Leyland. The promoter shareholding now stands at 51%. Today the company is the flagship of the Hinduja Group

During the early 80s Ashok Leyland entered into a collaboration with Japanese company Hino Motors from whom technology for the H-series engines was sourced. Many indigenous versions of the H-series engine were developed with 4 and 6 cylinders, and also conforming to BS2, BS3 & BS4 emission standards in India.

## **PLANT DETAILS :**

**ASHOK LEYLAND, UNIT 1 175,  
SIPCOT INDUSTRIAL AREA  
HOSUR – 635 126 (TN)**

Established in 1980 and spread over 103 acres of which 40 acres are built-up, the Hosur Plant 1 is engine manufacturing centre. Apart from a variety of diesel and CNG engines, the plant also manufactures and assembles heavy duty and special vehicles, axles, gearboxes and marine gearboxes. Key facilities include a state-of-the-art conveyor engine assembly, an advanced testing set-up that can accommodate all types of wheelbases and well-drivers. Over 2500 people are employed at this plant. Engine Plant at Hosur produces 3 different Engine platforms using contemporary manufacturing technologies with production lines ( Machine and Assembly shops ) and has a skill development center.

## **OBSERVATIONS :**

This plant is for machining there is another plant at hosur, as Plant\_2, that is Assembly section.

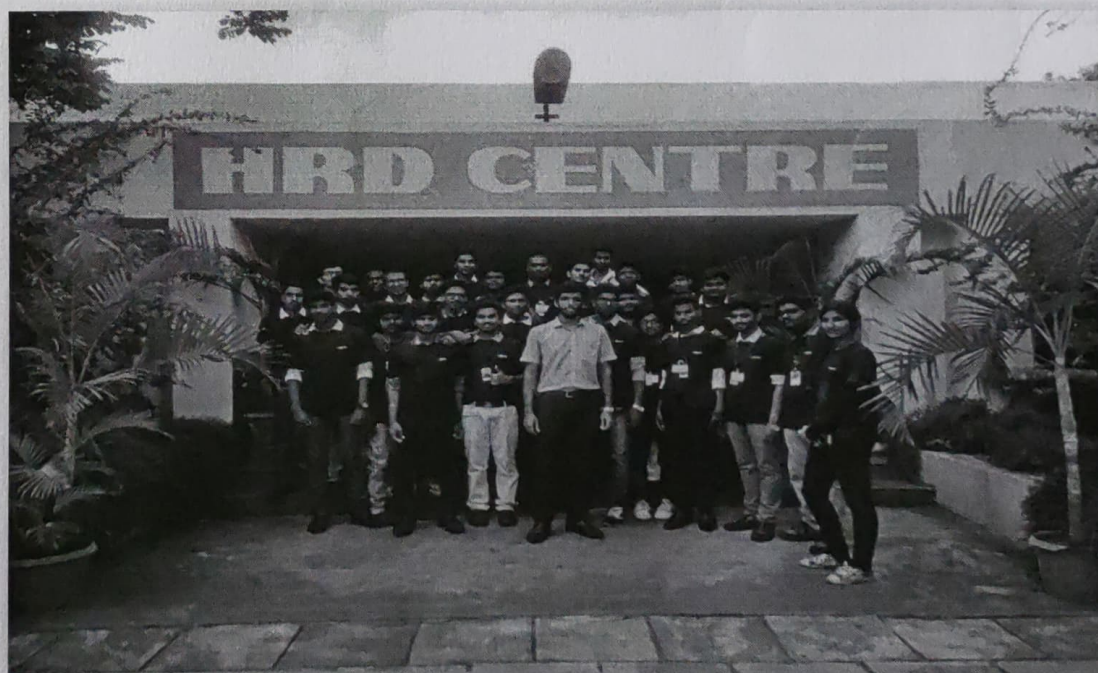
We got a permission to visit Machining section. It's a good experience.

From this visit, we learned lot about industrial interaction. We interacted with industrial experts and got new informations. We got some basic knowledge about the industrial robots from this visit. We know about the placement opportunities offered by company.

It is nice experience, We directly view the machining operations, what we studied and we directly interact with safety engineers.

Thing that we observed is time management is most important.

## CLICKS :



Dr. T.PUSHPARAJ M.E ,Ph.D  
PROFESSOR & HEAD  
MECHANICAL DEPARTMENT

08.10.2020

To

The General Manager,  
Larsen & Toubro Ltd,  
Coimbatore.

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	Aravindasamy. R	821117114007
2	Arjun kumar. R	821117114008
3	Hariharan. R	821117114018
4	Infant raja. S	821117114021
5	Keerthivasan. K	821117114033
6	Balamurugan. M	821117114013

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you

T. Pushparaj  
8/10/20



## DEPARTMENT OF MECHANICAL ENGINEERING

### IN- HOUSE TRAINING 2020-2021

ACCEPTANCE: Larson & Toubro Ltd, Coimbatore THROUGH TELEPONIC CONV ERSATION.

SUB: Deputation of **IHT Trainees to shop floor.**

The following in plant Trainees are directed to undergo training in your shop to study and collect the data necessary assistance may be provided to at your end.

DATE: **Oct' 20 to Nov' 20 (Weekend)**

SL.No	Register number	Name of the student
1	821117114007	Aravindasamy R
2	821117114008	Arjun Kumar R
3	821117114018	Hariharan R
4	821117114021	Infant Raja S
5	821117114033	Keerthivasan K
6	821117114013	Balamurugan M

**HOD/MECH**



## LARSEN & TOUBRO, LTD

Srinivasa Nagar, Malumichampatti, Tamil Nadu 64105

Tel: +91 22 67525656

Fax: +91 22 67525893

Email id : [igro@larsentoubro.com](mailto:igro@larsentoubro.com)

20/11/2020

### TO WHOM IT MAY CONCERN

This is to certify that **R.ARAVINDASAMY, R.ARJUN KUMAR, R.HARIHARAN, S.INFANT RAJA, K.KEERTHIVASAN, M.BALAMURUGAN** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

  
MANAGER

**Dr. T.PUSHPARAJ M.E ,Ph.D**  
**PROFESSOR & HEAD**  
**MECHANICAL DEPARTMENT**

---

To

The Manager,  
LARSEN & TOUBRO Ltd  
COIBATORE

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	821117114066	SHRIRAM SUNDAR K
2	821117114069	SUBANESHWARAN M
3	821117114075	VENKATESH M
4	821117114076	VENKATESWARAN M
5	821117114303	DINESH E
6	821117114067	SIVA S

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you

T. Pushparaj  
HOD / Mech



## DEPARTMENT OF MECHANICAL ENGINEERING

### IN- HOUSE TRAINING 2020-2021

ACCEPTANCE: Larson & Toubro Ltd, Coimbatore THROUGH TELEPONIC CONV ERSATION.

SUB: Deputation of **IHT Trainees to shop floor.**

The following in plant Trainees are directed to undergo training in your shop to study and collect the data necessary assistance may be provided to at your end.

DATE: **Oct' 20 to Nov' 20 (Weekend)**

SL.No	Register number	Name of the student
1	821117114066	SHIRAM SUNDAR K
2	821117114067	SIVA S
3	821117114069	SUBANESHWAREN M
4	821117114075	VENKATESH M
5	821117114076	VENKATESHWAREN M
6	821117114303	DINESH E

**HOD/MECH**



## LARSEN & TOUBRO, LTD

Srinivasa Nagar, Malumichampatti, Tamil Nadu 64105

Tel: +91 22 67525656

Fax: +91 22 67525893

Email id : igrc@larsentoubro.com

---

20/11/2020

### TO WHOM IT MAY CONCERN

This is to certify that **SHRIRAM SUNDAR K, SUBANESHWARAN M, VENKATESH M, VENKATESWARAN M, DINESH E, SIVA S**, the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

  
MANAGER



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**INHOUSE TRAINING REPORT**



821117114007	ARAVINDASAMY R
821117114008	ARJUN KUMAR R
821117114018	HARIHARAN R
821117114021	INFANT RAJA S
821117114033	KEERTHIVASAN K
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821117114066	SHRIRAM SUNDAR K
821117114069	SUBANESHWARAN M
821117114075	VENKATESH M
821117114076	VENKATESHWARAN E
821117114303	DINESH E
821117114067	SIVA S

**Training Details**

Training Date	: Sep'20 to Nov'20 (Weekend)
Time	: 09.30 am to 05.00 pm
Units Visited	: Hi-tech Manufacturing systems
Knowledge Gained	: Various Assembly processes, Safety Measures and Principles followed by industry.

## Company Profile :Larsen & Toubro

Larsen & Toubro is an Indian multinational engaged in EPC Projects, Hi-Tech Manufacturing and Services. It operates in over 50 countries worldwide. A strong, customer-focused approach and the constant quest for top-class quality have enabled L&T to attain and sustain leadership in its major lines of business for over eight decades.

We are engaged in core, high impact sectors of the economy and our integrated capabilities span the entire spectrum of 'design to delivery'.

Every aspect of L&T's businesses is characterised by professionalism and high standards of corporate governance. Sustainability is embedded into our long-term strategy for growth.

The Company's manufacturing footprint extends across eight countries in addition to India. L&T has several international offices and a supply chain that extends around the globe.

L&T's Construction's Headquarters at Manapakkam in Chennai is acknowledged as an 'Outstanding Corporate Green Campus'. It is spread over 27 acres, amidst scenic eco-friendly surroundings with ample greenery. Almost every concrete structure in the campus has won prestigious awards for excellence in construction and has green features which add to its aesthetic value. Today, the campus accommodates 1.4 lakh sq.m of built up area and has a significant tree carbon sequestering capacity.

Besides businesses of the Construction Group, the campus houses offices of L&T Technology Services and the iconic Henning Holck-Larsen Centre.

The Chennai campus offset its entire GHG (Green House Gases) emissions in 2016-17, thus becoming Carbon Neutral. Part of our Sustainability Roadmap 2021, carbon offsetting and energy efficiency of L&T campuses is a key objective and one that we continuously work towards.



## **Observation**

Larsen & Toubro is a major technology engineering construction manufacturing and financial services conglomerate with global operations. The company is one of the largest and most respected companies in India's private sector. The business involves the construction of Buildings & Factories, Heavy Civil Infrastructure, Transportation Infrastructure, Power transmission & Distribution Infrastructure, Water & Effluent Treatment plants, Metallurgical & Material Handling Infrastructure and Smart World & Communication Infrastructure.

L&T's workshop at Kancheepuram near Chennai spread over 75 acres is ISO 9001-2008 certified and undertakes fabrication and supply of plant & equipment for industries like steel, power, refinery etc. The workshop is equipped with fabrication facilities in covered shops (12000 sq. m) and has 24000 sq. m of open fabrication / assembly yards with EOT and gantry cranes.

L&T's Transmission Line Testing & Research Station (TLTRS) - one of the largest tower testing stations in the country and the first private testing station to be accredited by National Accreditation Board for Testing & Calibration Laboratories (NABL) is also established at the Kancheepuram Works.

A state-of-the-art 24,000 MTPA Transmission Line Tower Works with latest CNC lines for fabrication of towers and microprocessor-based, temperature-controlled eco-friendly systems for galvanizing tower member is set up within the works. It is certified with ISO 9001, OHSAS 18001 and accredited with the energy management certification - ISO 50001.

At L&T, Sustainability is embedded in the vision, culture, strategy and business processes. Our vision is to pursue eco-friendly growth, promoting a culture of sustainability and innovation, and thereby contribute towards a better world. L&T is also committed to seek sustainable growth by integrating Environment, Social and Governance (ESG) principles with its businesses while conducting our business. We strive to conserve natural resources, enhance social equity for sustainable growth, and foster a culture of trust, caring and continuous learning while meeting the expectations of all stakeholders. We believe in inclusive growth by protecting our environment, empowering our communities and accelerating development.

Over the years L&T has been focusing on ESG parameters such as climate stewardship, circular economy, green portfolio, green supply chain, employee and social welfare, workforce health & safety. In addition, L&T leverages its inherent strength and capabilities to implement sustainable CSR programmes towards 'Building India's Social Infrastructure'.



**IHT Coordinator**

**HoD/Mech**



**Dr. T.PUSHPARAJ M.E, Ph.D**  
**PROFESSOR & HEAD**  
**MECHANICAL DEPARTMENT**

To

**26.08.2020**

The Manager,  
 Ram Industries,  
 Thanjavur.

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo In-house Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

S. No	Register number	Name of the student	S. No	Register number	Name of the student
1	821117114016	Dhivakaran K	8	821117114046	Muthu S
2	821117114019	Hariharan V	9	821117114048	Pragatheesh R
3	821117114038	Manimaran G	10	821117114032	Kaviyarasan N
4	821117114037	Maheswaran C	11	821117114034	Krishna S
5	821117114027	Kannan K	12	821117114036	Mohamed Yasin Sharif R
6	821117114025	Kabilan S	13	821117114011	Augustine Albert J
7	821117114003	Abishek S			

We would be thankful, if you could kindly permit them to carry out their training at your esteemed organization.

Thanking you.

# Ram Industries

ENGINEERS & FABRICATORS

Factory : 19, Sanjeevi Nagar, Pudukottai Road, Thanajvur - 613 005.

Cell : 9994887909

Specialist in:

Aluminium doors & Windows Fabrications ♦ Interior decorations ♦ Steel roof trusses ♦ Steel Glazed Windows ♦ Steel Doors ♦ Department Steel Aluminium Contract works ♦ River Shutters (T.W. & Steels)

28.08.2020

To

Dr. T. Pushparaj

HoD/Mechanical

Kings College of Engineering

Respected Sir,

It is to inform you that, based on your request, the final year Mechanical Engineering students has been permitted to undergo in-house training from September 2020 to November 2020 (Weekend only). The certificate will be provided after successful completion of training.

For RAM INDUSTRIES

  
Proprietor

# Ram Industries

**ENGINEERS & FABRICATORS**

Factory : 19, Sanjeevi Nagar, Pudukottai Road, Thanjavur - 613 005.

Cell : 9994887909

Specialist in:

Aluminium doors &amp; Windows Fabrications ♦ Interior decorations ♦ Steel roof trusses ♦ Steel Glazed Windows ♦ Steel Doors ♦ Department Steel Aluminium Contract works ♦ River Shutters (T.W. &amp; Steels)

29.11.2020

## Certificate

This is to certify that the following final year students of Mechanical Engineering has attended the in-house training from Sep'20 to Nov'20 - Weekend at Ram Industries, Thanjavur. During the training period, fabrication work includes ducts, columns and I Beams were taught.

1. Dhivakaran K
2. Hariharan V
3. Manimaran G
4. Maheswaran C
5. Kannan K
6. Kabilan S
7. Abishek S
8. Muthu S
9. Pragatheesh R
10. Kaviyaran N
11. Krishna S
12. Mohamed Yasin Sharif R
13. Augustine Albert J

For RAM INDUSTRIES

  
Proprietor



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**INHOUSE TRAINING REPORT**

# RAM Industries

## Thanjavur

821117114016 Dhivakaran K 8  
821117114046 Muthu S  
821117114019 Hariharan V 9  
821117114048 Pragatheesh R  
821117114038 Manimaran G  
821117114032 Kaviyarasan N  
821117114037 Maheswaran C  
821117114034 Krishna S  
821117114027 Kannan K  
821117114036 Mohamed Yasin Sharif R  
821117114025 Kabilan S  
821117114011 Augustine Albert J  
821117114003 Abishek S

### Training Details

Training Date : Sep'20 to Nov'20 (Weekend)  
Time : 09.30 am to 05.00 pm  
Units Visited : General Purpose Machinery  
Knowledge Gained : Various Machinery Equipments in Manufacturing.

**Company Profile:** RAM Industries, Thanjavur.

Ram Industries, Registered in 2014 at Thanjavur in Tamil Nadu, is leading Manufacturer, Supplier of Doors/Windows Accessories & Fittings in India. Ram Industries is one of Trade India's verified and trusted sellers of listed products. With their extensive experience of supplying and trading Steel Door, Ram Industries has made a reputed name for themselves in the market with high quality Steel Door, Durable Steel Door, Designer Steel Window etc.

Focusing on a customer centric approach, Ram Industries has a pan-India presence and caters to a huge consumer base throughout the country. Buy Doors/Windows Accessories & Fittings in bulk from Ram Industries at Trade India quality-assured products.



Steel Window  
Steel Window  
Designer Steel Window  
Heavy Duty Steel Window



Stainless Steel Main Gate  
Designer Steel Main Gate  
Stainless Steel Main Gate



Steel Doors  
Steel Door  
Durable Steel Door

**Observation**

- Steel Door Production Line
- Cut to length line
- Steel door embossing machine
- Hot press
- Press brake
- Shearing machine
- Door frame embossing machine
- Door frame forming machine
- Powder spraying and painting line

**Processing Flow:**

Steel Coils → Decoiling → Leveling → Pressing → Cutting → Stacking →

Punching → Bending → Assembling and Welding Door Panels → Hot Pressing → Cutting and Welding Door Framess → Transfer Printing → Spraying → Assembling Door and Door Frame

### **Steel Doors products**

Steel Entrance Doors, Fire Rated Doors and Industrial Doors: with the WEMO sheet metal processing lines you can produce Steel Doors your own way. We offer you the option of Steel Doors with or without embossing. The perfect bending tolerance enables the production lines to process steel and stainless steel effortlessly.



**IHT Coordinator**

**HoD/Mech**

08.10.2020

To  
The Manager,  
WHEELS INDIA LIMITED  
TVS INDUSTRIES  
PADI CHENNAI

Sub: Permission to do In-house Training – requested-reg.

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	ALAGESAN K	821117114005
2	BHARATH M	821117114014
3	KARAN K	821117114028
4	PRAKASH K	821117114049

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you

*T. Pushparaj*  
8/10/20



## DEPARTMENT OF MECHANICAL ENGINEERING

### IN- HOUSE TRAINING 2020-2021

ACCEPTANCE: Wheels India Ltd, Chennai THROUGH TELEPONIC CONVERSATION.

SUB: Deputation of **IHT Trainees to shop floor.**

The following in plant Trainees are directed to undergo training in your shop to study and collect the data necessary assistance may be provided to at your end.

DATE: **Oct' 20 to Nov' 20 (Weekend)**

SL.No	Register number	Name of the student
1	821117114005	Alagesan K
2	821117114014	Bharath M
3	821117114028	Karan K
4	821117114049	Prakash B



**HOD/MECH**



# WHEELS INDIA LIMITED

Madras Thiruvalluvar Madras Thiruvallur High Rd, TVS Industries, Padi, Chennai, Tamil Nadu

Tele: 044 2623 4300

20/11/2020

## TO WHOM IT MAY CONCERN

This is to certify that **K.ALAGESAN, M.BHARATH, K.KARAN, B.PRAKASH** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

HR Manager

Dr. T.PUSHPARAJ M.E ,Ph.D  
PROFESSOR & HEAD  
MECHANICAL DEPARTMENT

08.10.2020

To  
The Manager,  
WHEELS INDIA LIMITED  
TVS INDUSTRIES  
PADI CHENNAI

Sub: Permission to do In-house Training – requested-reg.

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	RAGUL DEVAN P	821117114053
2	RAHUL T	821117114054
3	RENGARAJAN N	821117114056
4	RUBAN S	821117114057
5	VIGNESH KUMAR J	821117114502

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you

T. Pushparaj  
8/10/20



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**IN- HOUSE TRAINING 2020-2021**

ACCEPTANCE: Wheels India Ltd, Chennai THROUGH TELEPONIC CONVERSATION.

SUB: Deputation of **IHT Trainees to shop floor.**

The following in plant Trainees are directed to undergo training in your shop to study and collect the data necessary assistance may be provided to at your end.

DATE: **Sep' 20 to Nov' 20 (Weekend)**

SL.No	Register number	Name of the student
1	821117114053	RAGHU DEVAN P
2	821117114054	RAGHUL T
3	821117114056	RENGARAJAN N
4	821117114057	RUBAN S
5	821117114502	VIGNESHKUMAR J

*T. Purushotham*

**HOD/MECH**



# WHEELS INDIA LIMITED

Madras Thiruvalluvar Madras Thiruvallur High Rd, TVS Industries, Padi, Chennai, Tamil Nadu

Tele: 044 2623 4300

20/11/2020

## TO WHOM IT MAY CONCERN

This is to certify that **P.RAGHUDEVAN, T.RAGHUL, N.RENGARAJAN, S.RUBAN, J.VIGNESHKUMAR** a students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

HR Manager



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**INHOUSE TRAINING REPORT**



821117114005	ALAGESAN K
821117114014	BHARATH M
821117114028	KARAN K
821117114049	PRAKASH K
821117114033	KEERTHIVASAN K
821117114053	RAGHU DEVAN P
821117114054	RAGHUL T
821117114056	RENGARAJAN N
821117114057	RUBAN S
821117114502	VIGNESH KUMAR J

**Training Details**

Training Date	: Sep'20 to Nov'20 (Weekend)
Time	: 09.30 am to 05.00 pm
Units Visited	: Modern Manufacturing systems
Knowledge Gained	: Various Manufacturing processes, Safety Measures and Principles followed by industry.

## **Company Profile : Wheels India**

Wheels India Limited is company promoted by the TVS Group, India's largest auto component manufacturers. Starting with a bus service in 1911, the TVS Group has grown to become one of India's largest business houses with businesses in two wheelers, vehicle dealerships & logistics and auto components which had a turnover of over USD 7 Billion (FY 2012-13).

Wheels India (established in 1962) is one of the largest steel wheel manufacturers in the world. The company had turnover of USD 375 Million (FY 2012-13) coming from the segments of Cars/ UVs, Commercial vehicles, Tractors, Single Piece wheels and Construction & Earth Mover wheels. The company also manufactures air suspension kits for trucks and buses. With over 15 % of its turnover coming from exports, particularly from the Construction & Earth Mover equipment segment, it is truly a global player in the auto components industry.

Wheels India started production of wheels for commercial vehicles in 1962 at our plant in Padi, Chennai. The company started the production of car and tractor wheels in Padi in 1965. In 1972, the company made a foray into the construction equipment sector with Hindustan Motors (now CAT India). In 1982, the company opened its second facility in Rampur for tractor wheels. Wheels India entered the wire wheel business in 1988 and also entered the air suspension market under the brand "WILRIDE". In 1998, the company opened a facility in Pune to cater to this growing automotive hub. This facility manufactures wheels for car, trucks and busses.

The 2000s represented a decade of growth for the company and 2000 marked its entry to the earth mover market with 35" and 49" wheels. In 2005 the company started manufacturing forged aluminium wheels to cater to the growing after market for truck and trailer manufacturers. 2007 marked the setup of 2 new facilities in Sriperumbudur for Big EM wheels and Bawal for car wheels. In 2009 the company setup a new facility in Pantnagar to cater to the growing truck and light commercial vehicle business.

Wheels India is a partner to various Global OEMs like Ford, Hyundai, Tata, Caterpillar, John Deere, Komatsu, Hyundai Heavy Industries, Case New Holland, Leyland, TAFE and Suzuki. The company has won various awards which stand as a testament to its "Quality First" policy, to name a few – CAT SQEP Silver Certification 2010, TPM Award & Certification, Toyota Supplier Award for Quality & Cost '09 and Regional Contribution Award from Toyota in 2013 Global Suppliers Convention.

The company believes that its future lies in partnering OEMs in their growth and providing service to match. Wheels India has Launched aftermarket brand "TVS WILGO" for catering aftermarket needs in 2012.

### **Observation**

FAB DIVISION

WHEELS INDIA LIMITED

The Fab division has been started on June 2012 to cater to the fabrication needs of construction and mining equipment sector. Starting out with Dump Truck Body fabrication, the Fab division

will soon target customers for chassis frames, buckets and boom fabrication in the short run and fabrication requirement of machine tool sector and oil and gas sector in the long run.

Located in Thirumudivakkam SIDCO (Chennai), the factory is spread over 40000 sft and is well connected by Road, Rail and Air to all major cities in India.

The Fab division has a well developed network of vendors to address its cutting, bending and machining needs. We have a team with rich and varied experience in welding & fabrication. Our strength is rapid development and scale up of new product manufacturing.

### HEAVY VEHICLE WHEEL

#### Feature of Heavy Vehicle Wheel

Wheels for Heavy Vehicles (Trucks, Buses, Light Commercial Vehicles, Trailers, Tippers etc.)

#### **Capability to manufacture:**

Tube and tubeless type applications.

Single, two and three piece wheels available.

Disc wheels and De mountable wheels.

Hub and stud piloted.

Patented rim design fully optimized for severe operating conditions



**IHT Coordinator**

**HoD/Mech**



**Dr. T.PUSHPARAJ M.E, Ph.D**  
**PROFESSOR & HEAD**  
**MECHANICAL DEPARTMENT**

To

**26.08.2020**

The Manager,  
 VEE & Sons,  
 Thuvakudy, Industrial Estate- Thiruverambur.

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo In-House Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

S. No	Register number	Name of the student
1	821117114701	AJITHKUMAR K
2	821117114051	PRASANTH M
3	821117114052	PREMKUMAR K
4	821117114070	SURIYA A
5	821117114304	MURUGAESEN A
6	821117114702	KAVIYARASU P

We would be thankful, if you could kindly permit them to carry out their training at your esteemed organization.

Thanking you.

**Address:**

C14/2,INDUSTRIAL ESTATE,  
THUVAKUDI,TRICHIRAPALLI  
620015

To

Dr. T.Pushparaj M.E, Ph.D

Professor & Head

Mechanical department

Kings College of Engineering, Punalkulam.

Respected Sir,

I am hereby writing this letter for providing consent for in-house training for the students requested through Head/Mechanical, Kings College of Engineering. The duration of the training will be from October 2020 to November 2020 (Weekend Only).

Thank You,



Manager,  
(K. Balasubramanian)

**Address:**

C14/2,INDUSTRIAL ESTATE,  
THUVAKUDI,TRICHIRAPALLI  
620015

**29.11.2020**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that, in-house training (Oct'20 to Nov'20 - Weekend) at our organization in Boiler Accessories and Duct profiles by IV Year students were completed. During the course of training, the students conduct and character were found to be good. The in-house training completed students were,

1. M Prasanth
2. K Prem Kumar
3. A Murugesan
4. P Kaviyarasu
5. K Ajith Kumar
6. A Suriya



Manager,  
(K. Balasubramanian)



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**INHOUSE TRAINING REPORT**

# **VEE Sons**

## **Thuvakudy**

- 1. M Prasanth**
- 2. K Prem Kumar**
- 3. A Murugesan**
- 4. P Kaviyarasu**
- 5. K Ajith Kumar**
- 6. A Suriya**

### **Training Details**

Training Date : Sep'20 to Nov'20 (Weekend)  
Time : 09.30 am to 05.00 pm  
Units Visited : General Purpose Machinery  
Knowledge Gained : Various Machinery Equipments in Manufacturing.

**Company Profile:** VEE Sons Thuvakudy.

Vee sons Energy Systems Private Limited is a Private incorporated on 04 October 1996. It is classified as Non-govt company and is registered at Registrar of Companies, Chennai. Its authorized share capital is Rs. 140,000,000 and its paid up capital is Rs. 137,972,000. It is involved in Manufacture of general purpose machinery

Vee sons Energy Systems Private Limited's Annual General Meeting (AGM) was last held on 28 September 2017 and as per records from Ministry of Corporate Affairs (MCA), its balance sheet was last filed on 31 March 2017.

Directors of Vee sons Energy Systems Private Limited are Venkatachalam Shankar, Venkatachalam Ramakrishnan and Ramakrishnan Malliga.

Vee sons Energy Systems Private Limited's Corporate Identification Number is (CIN) U29113TN1996PTC036693 and its registration number is 36693. Its Email address is dsk@veesons.com and its registered address is C14/2, INDUSTRIAL ESTATE, THUVAKUDI TRICHIRAPALLI-620015 THUVAKUDI TRICHIRAPALLI-620015 THUVAKUDI, TRICHIRAPALLI-620015 TN 620015.

**Observation**

Boiler accessories are devices and plants that are installed with boilers to improve the operating condition and overall efficiency of the boiler plant. Boiler accessories are devices that are installed along the boiler and the surrounding area to increase the efficiency of the boiler.

**Feed Pump**

The pressure of steam inside the boiler is high, and so the feed water pressure must be raised before its entry into the boiler for consistent operation. Feed pump is a device which raises the pressure of water and forces it into the boiler. Feed water pressure must overcome the steam pressure for a steady flow of water to the boiler.

**Injector**

The function of the injector is same as the feed pump; it is used where space is not available for feed pump installation. In an injector, the Kinetic energy of steam is used to increase the pressure and velocity of feed water in a convergent-divergent nozzle.

Advantages: Simplicity, Compactness, High thermal efficiency, Absence of dynamic part.

Disadvantages: Low pumping efficiency, Difficulty in operation under extreme variation in steam pressure.

- When large quantities of feed water involved feed pump is preferred over the injector because they are more reliable and need less attention.

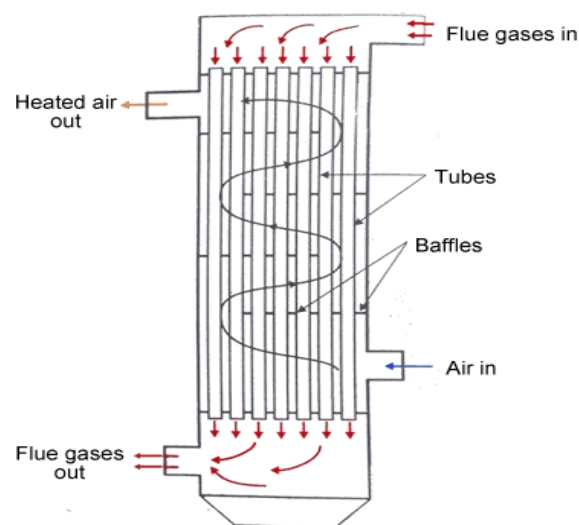
**Economizer**

Economizer is a heat exchange device which recover some of the heat from exhaust or flue gas and utilize it for heating feed water. Generally, economizer units are placed between boiler and chimney.

Advantages:

- Stress due to uneven expansion is reduced because the temperature range between boiler parts is reduced.
- Saving in the Fuel consumption.
- Overall efficiency increases.
- Evaporative capacity of the boiler is increased.
- Protection from chilling of boiler metal.

### Air preheater



Tubular type air preheater

Air preheater is a device which extract heat from exhaust gas to increase the air temperature before entering the furnace. It accelerates the combustion, enhance the burning of fuel and thus increase thermal efficiency. It is generally placed after the economizer. The degree of preheating depends on the type of fuel and rate at which boiler operates. Another advantage of air preheater is that it Reduce flue gas temperature that allows to simplify the design of ducting for flue gas.

### Super heater

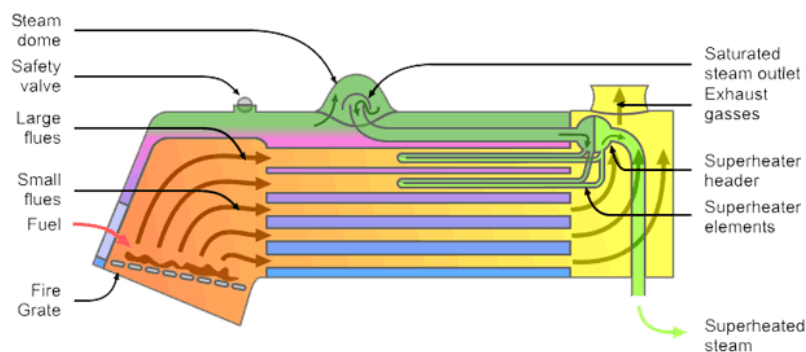


Diagram of a locomotive type fire-tube boiler with superheater. - credit: wikimedia

The steam generated by a boiler is generally wet or at most dry saturated. Super heater is used to increase the temperature of steam above its saturation point, since superheating result in the increase in efficiency and economy of the steam plant.

There are two types of super heater, convective and radiant. Convective type uses heat from flue gases whereas radiant type (placed on combustion chamber) receives heat from burning fuel through the radiant process.

Advantages:

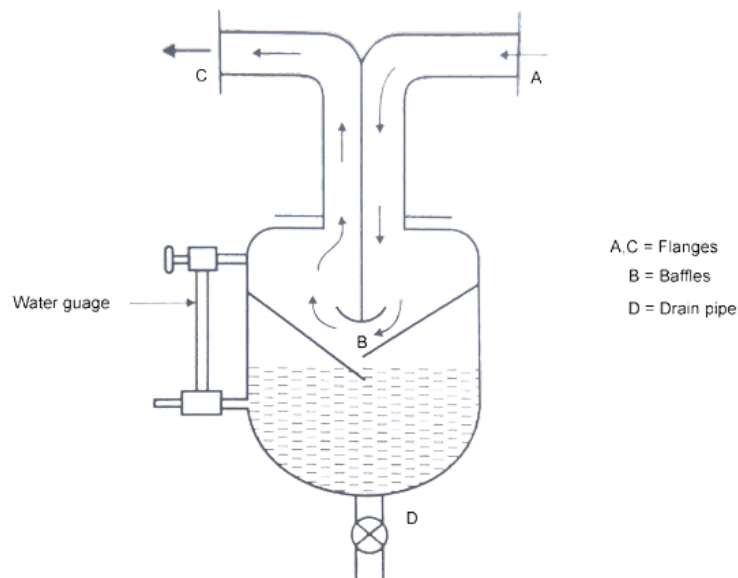
Steam consumption is reduced.

Protection from erosion of turbine.

Losses due to condensation of steam in the cylinders and pipes are reduced.

Plant efficiency increases.

Steam separator



*Mahse*

**IHT Coordinator**

*T. Puthumy*

**HoD/Mech**



**Dr. T.PUSHPARAJ M.E, Ph.D**  
**PROFESSOR & HEAD**  
**MECHANICAL DEPARTMENT**

To

**26.08.2020**

The Manager,  
 Arignar Anna Sugar Mills  
 Kurungulam.

Sub: Permission to do In-house Training – requested-reg.

\*\*\*\*\*

Sir,

The following Final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo In House Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

S. No	Name of the student	Register number
1	821117114301	AJITHKUMAR K
2	821117114305	RAJA RAJEASHWERAN B
3	821117114307	VIJAYCHANDRU J
4	821117114059	SANTHOSH KUMAR N
5	821117114063	SENTHAMIL PRIYAN BD
6	821117114061	SARATHKUMAR M
7	821117114062	SATHIYAMOORTHY M
8	821117114064	SENTHAMILSUDAR K
9	821117114065	SENTHIL R
10	821117114068	SHIRHARAN R
11	821117114050	PRAKASH M
12	821117114501	SASIKUMAR K

We would be thankful, if you could kindly permit them to carry out their training at your esteemed organization, Thanking you.

# ARIGNAR ANNA SUGAR MILLS

AN ISO 9001:2008 CERTIFIED INDUSTRY  
(UNIT OF TAMIL NADU SUGAR CORPORATION LIMITED)  
(A Govt. of Tamil Nadu Undertaking)  
KURUNGULAM - 613 303. THANJAVUR.

29.08.2020

## TO WHOMSOEVER IT MAY CONCERN

I am pleased to confirm the acceptance of an in-house training at our organization in Assembly & Detailing of Condenser, Evaporator, and Power generation for your IV Year students. The name lists of the students were listed below. The permitted students were asked to come on the approved dates and should follow the organization norms, certificate will be provided after successful of completion of training program. The training duration will be from September 2020 to November 2020 (Weekend Only).

1. Raja Rajeshwaran
2. Ajith Kumar K
3. Vijay Chandru J
4. Santhosh Kumar N
5. Senthamil Priyan B D
6. Sarath Kumar M
7. Sathyamoorthi M
8. Senthamizh Sudar K
9. Senthil R
10. Sriharan R
11. Prakash M
12. Sasikumar K



Manager

(R. Venkatesh)

# ARIGNAR ANNA SUGAR MILLS

AN ISO 9001:2008 CERTIFIED INDUSTRY  
(UNIT OF TAMIL NADU SUGAR CORPORATION LIMITED)  
(A Govt. of Tamil Nadu Undertaking)  
KURUNGULAM - 613 303. THANJAVUR.

29.11.2020

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that, in-house training (Sep'20 to Nov'20 - Weekend) at our organization in Assembly & Detailing of Condenser, Evaporator, and Power generation by IV Year students were completed. During the course of training, the students conduct and character were found to be good. The in-house training completed students were,

1. AJITHKUMAR K
2. RAJA RAJEASHWERAN B
3. VIJAYCHANDRU J
4. SANTHOSH KUMAR N
5. SENTHAMIL PRIYAN BD
6. SARATHKUMAR M
7. SATHIYAMOORTHY M
8. SENTHAMILSUDAR K
9. SENTHIL R
10. SHIRHARAN R
11. PRAKASH M
12. SASIKUMAR K



Manager

(R. Venkatesh)



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**INHOUSE TRAINING REPORT**

# **ARIGNAR ANNA SUGAR MILLS**

## **Kurungulam**

- 1. AJITHKUMAR K**
- 2. RAJA RAJEASHWERAN B**
- 3. VIJAYCHANDRU J**
- 4. SANTHOSH KUMAR N**
- 5. SENTHAMIL PRIYAN BD**
- 6. SARATHKUMAR M**
- 7. SATHIYAMOORTHY M**
- 8. SENTHAMILSUDAR K**
- 9. SENTHIL R**
- 10. SHIRHARAN R**
- 11. PRAKASH M**
- 12. SASIKUMAR K**

### **Training Details**

Training Date : Sep'20 to Nov'20 (Weekend)  
Time : 09.30 am to 05.00 pm  
Units Visited : Modern Manufacturing systems  
Knowledge Gained : Various Manufacturing processes, Safety Measures and Principles followed by industry.

**Company                      Profile                      :                      Arignar                      Anna                      Sugar                      Mills**

Arignar Anna Sugar Mills, belonging to Tamilnadu Sugar Corporation Limited, is situated in Kurungulam Melpathy Village, Thanjavur Taluk, about 16 Kilometres away from Thanjavur on the Thanjavur —Pudukkottai Highways.

The Factory had its maiden crushing during 1976-77 with an installed capacity 1250 Metric Tonnes of Cane per day. The crushing capacity of the Mills was expanded during 1989-90 from 1250 Metric Tonnes to 2500 Metric Tonnes and crushing at the expanded capacity was started on 26.1.1990 under Expansion and Modernization Scheme.

**Processing**

The mill house of a cane sugar mill

There are a number of steps in producing raw sugar from cane:

Cane receiving and unloading (receive the cane at the factory and unload it from the transport vehicles)

Cane preparation (cutting and shredding cane to prepare it for juice extraction)

Juice extraction (two technologies are in common use; milling or diffusion)

Juice clarification (remove suspended solids from the juice, typically mud, waxes, fibres)

Juice evaporation (to concentrate the juice to a thick syrup of about 65°brix)

Syrup clarification (remove suspended solids from the syrup, typically colloid size of mud, waxes, fibres, etc.)

Crystallisation

Centrifugation (Separation of the sugar crystals from the mother liquor, done by centrifugal machines)

Sugar drying

Packaging and delivery

**Observation**

These processing steps will produce a brown or raw sugar. Mill white sugar also known as plantation white sugar can be produced by introducing some form of colour removal process (often sulphitation) between the juice clarification and the juice evaporation stages mentioned above. The raw sugar produced is often refined to produce white sugar. This sugar refining can be done either at a completely separate factory or at a back-end refinery which is attached to the raw sugar factory.

Juice extraction

There are two processes for extracting juice from cane:

Milling, and Diffusion.

**Milling**

Juice extraction by milling is the process of squeezing the juice from the cane under a set mills using high pressure between heavy iron rollers. Those mills can have from 3 up to 6 rolls; every set of mills is called a tandem mill or mill train. To improve the milling extraction efficiency,

imbibition water is added at each mill. Hot water is poured over the cane just before it enters the last mill in the milling train and is recirculated up to reach the first mill. The juice squeezed from this cane is low in sugar concentration and is pumped to the preceding mill and poured onto the cane just before it enters the rollers, the juice from this mill is the same way pumped back up the milling train. Mixed juice (that is to say cane juice mixed with the water introduced at the last mill) is withdrawn from the first and second mills and is sent for further processing. Milling trains typically have four, five or six mills in the tandem. To improve the milling extraction performance before the cane reaches the first mill, knife and shredder preparation equipment is normally used.

### **Diffusion**

Sugarcane diffusion is the process of extracting the sucrose from the cane with the use of imbibition but without the squeezing by mills. Shredded cane is introduced into the diffuser at the feed end, Hot water is poured over the shredded cane just before the discharge end of the diffuser. The hot water percolates through the bed of cane and removes sucrose from the cane. This dilute juice is then collected in a compartment under the bed of cane and is pumped to a point a little closer to the feed end of the diffuser and this dilute juice is allowed to percolate through the bed of cane. At this point the concentration of sucrose in the cane is higher than the concentration of sucrose in the dilute juice just mentioned and so sucrose diffuses from the cane to the juice, this now slightly richer juice is pumped back up the diffuser and the process is repeated, typically, 12 to 15 times (compared with the four to six times for the milling process)

### **Juice clarification**

Sugar cane juice has a pH of about 4.0 to 4.5 which is quite acidic. Calcium hydroxide, also known as milk of lime or limewater, is added to the cane juice to adjust its pH to 7. The lime helps to prevent sucrose's decay into glucose and fructose. The limed juice is then heated to a temperature above its boiling point. The superheated limed juice is then allowed to flash to its saturation temperature: this process precipitates impurities which get held up in the calcium carbonate crystals. The flashed juice is then transferred to a clarification tank which allows the suspended solids to settle. The supernatant, known as clear juice is drawn off of the clarifier and sent to the evaporators.

### **Juice evaporating**

The clarified juice is concentrated in a multiple-effect evaporator to make a syrup of about 50 percent sucrose by weight.

### **Crystallisation and centrifuging**

This syrup is further concentrated under vacuum in a vacuum boiling pan[a] until it becomes supersaturated, finely ground sugar crystals suspended in alcohol are introduced into the vacuum pan as seed crystals around which sucrose is deposited and these crystals then grow in size until they are ready to be discharged (typically about 1 millimetre (0.039 in))

A number of boiling schemes are possible, the most commonly used boiling scheme is the three-boiling scheme. This method boils the sugar liquors in three stages, called A-, B- and C-.

A batch type sugar centrifuge separates the sugar crystals from the mother liquor. These centrifuges have a capacity of up to 2,200 kilograms (4,900 lb) per cycle. The sugar from the centrifuges is dried and cooled and then stored in a silo or directly packed into bags for shipment. The mother liquor from the first crystallization step (A-product) is again crystallized in vacuum pans and then passed through continuous sugar centrifuges. The mother-liquor is again crystallized in vacuum pans. Due to the low purity the evapo-crystallization alone is not sufficient to exhaust molasses, and so the so-called massecuite (French for “boiled mass”) is passed through cooling crystallizers until a temperature of approx. 45 °C (113 °F) is reached. Then the massecuite is re-heated in order to reduce its viscosity and then purged in the C-produced centrifugals. The run-off from the C-centrifugals is called molasses.

The spun-off sugar from the B-product and C-product centrifuges is re-melted, filtered, and added to the syrup coming from the evaporator station.

Continuous sugar centrifuge for recovery products

### **Back-end refineries**

Some cane sugar mills have so-called back-end refineries. In back-end refineries, raw sugar produced in the mill is converted to refined sugar with a higher purity for local consumption, export, or bottling companies. Wastage is used for heat generation in the sugar mills.

Energy in the sugar mill

The remaining fibrous solids, called bagasse, are burned for fuel in the mill's steam boilers. These boilers produce high-pressure steam, which is passed through a turbine to generate electrical energy (cogeneration). The exhaust steam from the turbine is passed through the multiple effect evaporator station and used to heat vacuum pans in the crystallization stage as well as for other heating purposes in the sugar mill.



**IHT Coordinator**

**HoD/Mech**