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#### Criteria 1.3: Curriculum Enrichment

1.3.3 Percentage of students undertaking project work/ field work/ internships (Data for the latest completed academic year) -2020-21

#### **Department of Instrumentation**

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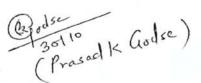
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A 1-Sample List of Student Internships 2020-21



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	Instrumentation	Interns	hips 2020-21	
S.No	ame of the studer	Class	Name of the Company	Internship Dates ( From and To)
1	SHREYAS PORT	TE	The Brandiverse	19/06/2020 to 24/09/2020
	SHREYAS PORI	TE	eArth Samvarta Foundation	05/07/2020 to 11/10/2020
2	Kartiki Pande	TE	RK Control Instruments Pvt Ltd	19/1/2021 to 6/2/2021
3	Aditya Kadam	TE	Supertech Instrumentation Services Pvt Ltd	28/1/21 to 11/2/21
4	Atharva Gadkari	TE	RK Control Instruments pvt Ltd	19/1/2021 to 6/2/2021
	Atharva Patil	TE	Supertech Instrumentation Services Pvt Ltd	28/1/21 to 11/2/21
6	Manali Ganachar	TE	HPCL	5/4/2021- On-going
7	Prathamesh Pawa	TE	Josh Talks	25/11/2020 - 12/01/2021
8	Saurav Bhosale	TE	Expertshub	17/02/2021-16/03/2021
9	Dhaval Mistry	TE	Expertshub	17/02/2021-16/03/2021
10	Shubhangi B	TE	Icapotech - Living Things	28/09/2020 - On going
11	Jasmeet Dhanota	BE	Global soft (Reliance industries jio)	21/05/2020 -30/08/2020
12	Tanmay Pandit	BE	Smartbridge	5/5/2020-6/4/2020
13	Aditya Ganesh	BE	Icapotech - Living Things	1/12/2020- On going
16	Prithvi Shetty	BE	Nevon Solutions	31/10/20- 15/2/21
17	Swaraj Patil	BE	XpertUp Technologies	05-06-20 - 05-10-20
18	Sahil Kedari	BE	Pidilite Industries Ltd	27/01/2021 - 21/02/2021
19	Jasmit Singh Han	BE	VESIT	18/05/2020 - 17/06/2020
20	Pranav Purushan	BE	VESIT	18/05/2020 - 17/06/2020









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21	onkar Raut	BE	VESIT	18/05/2020 - 17/06/2020
22	Asif Mohammad	BE	VESIT	18/05/2020 - 17/06/2020
23	Jasmit Singh Han	BE	VCET	08/06/2020 - 19/06/2020
24	Rohan Bhor	TE	Endress+Hauser	18/6/21-10/7/21
25	Hrutika Pakhale	SE	Galaxy IEC India Pvt Ltd	15/6/2021-10/07/2021
26	Shikha Negi	SE	Galaxy IEC India Pvt Ltd	15/6/2021-10/07/2021
27	Viraj Avhad	SE	Galaxy IEC India Pvt Ltd	15/6/2021-10/07/2021
28	Abhijeet Gaonka	TE	RK Control Instruments pvt Ltd	16/6/2021-10/07/2021
29	Adarsh Raut	TE	Rashtriya Chemicals & Fertilizers	20/06/2021-20/07/2021
30	Aditya Kirplani	TE	Nice Consultancy	15/06/2021-10/07/2021
31	Ajay Yadav	TE	AGV Systems Pvt Ltd	16/06/2021-11/07/2021
32	Amogh Mopkar	TE	Nice Consultancy	15/06/2021-10/07/2021
33	Amogh Sadhu	TE	Nice Consultancy	15/06/2021-10/07/2021
34	Ashish Adhikari	TE	AGV Systems Pvt Ltd	16/06/2021-11/07/2021
35	Ashutosh Manore	TE	Sadhana Nitro Chem Ltd.,Roha, Raigad	18/06/2021-11/07/2021
36	Atish Yadav	TE	Powertron India Pvt.	16/06/2021-16/07/2021
37	Bhavit Shetty	TE	Nice Consultancy	15/06/2021-10/07/2021
38	Chandrasai Rayu	TE	Nice Consultancy	15/06/2021-10/07/2021
39	Vinit Deshpande	SE	R.K.Dutt Concerns	16/06/2021-03/07/2021
40	Devanshi Shah	SE	Innovatiove Instruments & Controls LLP	15/06/2021-10/07/2021
41	Durvesh Padekar	TE	Nice Consultancy	15/06/2021-10/07/2021



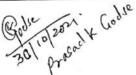






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42	Kunal Bhoir	ге	Sadhana Nitro Chem Ltd.,Roha, Raigad	18/06/2021-11/07/2021
_	Runui Buon	TE	Nice Consultancy	15/06/2021-10/07/2021
	iviting dir ivitime	TE	Nice Consultancy	15/06/2021-10/07/2021
		TE	Nice Consultancy	15/06/2021-10/07/2021
	Trem Guj	TE	RK Control Instruments pvt Ltd	16/06/2021-10/07/2021
47	Pooja Gupta	TE	Nice Consultancy	15/06/2021-10/07/2021
		TE	Nice Consultancy	15/06/2021-10/07/2021
		TE	Nice Consultancy	15/06/2021-10/07/2021
50	Priyanshu Dubey		R.K.Dutt Concerns	16/06/2021-03/07/2021
	Raghav Kapdeo	TE	Nice Consultancy	15/06/2021-10/07/2021
52	Rakshita Krishna	TE	Nice Consultancy	15/06/2021-10/07/2021
107.170	Rohan Panchal	TE	BARC, Department of Atomic Energy	24/06/2021-10/07/2021
54	Rohit Mhatre	TE	Nice Consultancy	15/06/2021-10/07/2021
55	Rutwik Pendse	TE	Nice Consultancy	15/06/2021-10/07/2021
56	Sachi Malusare	TE	Nice Consultancy	15/06/2021-10/07/2021
- 57	Sanket Thikade	TE	Nice Consultancy	15/06/2021-10/07/2021
58	Sanskruti Jadhav	TE	Nice Consultancy	15/06/2021-10/07/2021
59	Saurav Bhosale	TE	Nice Consultancy	15/06/2021-10/07/2021
60	Sayyed Usman	TE	Nice Consultancy	15/06/2021-10/07/2021
61	T 100 TO 7200	TE	Nice Consultancy	
62		TE	Nice Consultancy	15/06/2021-10/07/2021
63		TE	Nice Consultancy	15/06/2021-10/07/2021
	4 Vaishnavi Talnik	a TE	Padsons Industries Pvt.Ltd	15/06/2021-11/07/2021
6	5 Aditya Kadam	TE	Perfect Instrumentation Controls	16/06/2021-11/07/2021
6	6 Sejal Attarde	TE	RK Control Instruments pvt Ltd	16/06/2021-10/07/2021









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67	Shreesh Rao	SE	R.K.Dutt Concerns	16/06/2021-03/07/2021
68	Shweta Gadhave	TE	Nice Consultancy	15/06/2021-10/07/2021

Prasad K Godse)







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A 2- List of Student Field Projects 2020-21



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#### **Instrumentation Field Projects 2020-21**

	INST Field Proje	cts 2020-21		
Group No.	Name of the Stude	Mentor Name	Title of the Project	No. of Students
	Neha Sutar Sheetal Patil Vinit Bamugade Jasmit Hanspal	Jayshree Ramkrishnan	AQUACULTURE AUTOMATION	
	Swaraj Patil Nirajdatta Jadhav Shripad Joshi 2 Amit Kanase	Kadambari S.	PLC Based Object Sorting System	4
	Sarang Kulkarni Shubham Gaikwad Abhishek Kumar	Mrs.Kanchan Chavan, Mr.P.P. vaidya	Digitization & Processing of Linearized Temperature signal	3
2	Pratima Belel Aparna Singh Shivam Yadav 4 Sonal Singh	Kader Shaikh	Face Recognition System	4
	Aditya Ganesh Diksha Mishra Samir Ghorpade	Amudha Senthikumar	Accurate prediction of GPS using Kalman filter	3
	Kiran Patil Anushka Gadgil Aditya Dhurandha Mishant Patil	Mrs. Mugdha Jogalekar	Smart Farmland	4
,	Akash Patel Prasad Yerawar Sandip Wayal	Jayashree Ramakrishnan	Auto Irrigation Using Soil Moisture Sensor	3
8	Trupti Salunke Pranav Phale Kirtiraj Khape	Kader Shaikh	PLC Based Metal Detection System	3
S	Harsh Chavan Mayuresh Cholkar Atharv Sawant Aditya Das	Mrs. Kanchan Chavan	Implementation of Nuclear Timing Spectroscopy Components using FPGA	4
* 10	Suhas Kamat Harsh Survarna Varad Rane Pranav Purushan	Ms. Deepti Khimani	Automatic Insulin Pump	4







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1	Shreyas Kulkarni Sahil Kedari Chandraprakash V I Jayesh Korgaonka	Mrs. Nilima Warke	Bottle Filling Plant with Industry 4.0	
t:	Onkar Raut Suraj Pal Asif Qureshi Vinay Datir	Prof Prasad Godse	Pressure Control Loop	
13	Reshma Sawant Ivan Phillip Pooja Kulkarni Bhavesh Sharma	M D Patil	Health diary	
14	Shivshankar Bhaga Shivshankar Popat Soham Satish Saw Priyank Rajesh Sev		Milk Pasteurisation Simulation using PLC and HMI.	4
15	Tanmay Shravge Advait Shirvaikar Advait Mandlik Anjali Kothawade	Mrs. Sangeetha PrasannaRam	Heart Disease Classification using Machine learning Algorithms	- 4
16	Sangram Ghagde Arfat Lamboo Mehtab Alam Shai Prateek Tripathi	Mr. N Gopalkrishnan	1.multi unit temperature control using	A mar
17	Shubhangi B Jagruti Sawalkar Pranita Jadhav	N. Gopalakrishnan	Smart Chair	play 3
18	PRITHVI SHETT JASMEET DHAN SRINIVAS TAK	M D PATIL	Sensor Fusion and IMU to predict Orientation	3
19	Tanmay Pandit Uday Tare Prajakta Dhopat	Amudha Senthilkumar	Multi-channel configurable digital PID controller	3
20	Tejashree Bhitale Priya Jadhav Pallavi Patil Sharddhesh Pawar	Namrata Bonde	Programmable Computer controlled Active Analog Filter	4

Project Co-ordinator (Mr. N.Gopalkrishnan)







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A 3. List of Students Mini Projects 2020-21



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Group No.	Name of the Studen	Mentor Name	Title of the Project	No. of Students
	l Omkar Pawar			
	Ajay Yadav			
	Rashmi. C. Singh			
	Shivashakti. R. Pillai	Prof. Jayashree R.	Supercapacitor based UPS	
	2 Kapdeo Raghav			
	Bhor Rohan	]		
	Mopkar Amogh	Prof. Kadambari	Evaporator control using	
	Panchal Rohan	Sharma	Lab VIEW	
	3 Chandrasai			
	Mayur Mane	1		
	Durvesh Padekar	Prof. Kanchan	Verilog HDL Model based	
	Shreyas Pore	Chavan	Thermometer-to-Binary Encoder	
	Atharva Dhobe		Linevaci	
	Sahil Shewale			
	Nihar Wankhade	1		
1.5	Atish Yadav	Prof. Kader Shaikh	Gas leak and Fire Preventio	
:	Rutwik Anant Pendse	1.0	A 2	
	Aditi Zhankar			
	Sandesh Mandhare			desired to the
	Manish Patil	Prof. Prasad Godse	Gas detector alert	
(	Gaurav Patil			4
	Suyash Koshti			
	Ashish Adhikari	-	Design and construction of electronic system for	
	Usman Sayyed	Prof. Nilima Warke	ratiometric measurement	
7	Bhavit Bhaskar Shetty	ы э		4
	Rohit Mhatre			
9	Vineet Bhaskar Shetty		PID controller study and tuning using MATLAB	
	Sanket Thikade	Prof. Prasad Godse	and LabVIEW	
8	Prachay Kadam			4
	Ashutosh Manore			
	Kunal Bhoir	Prof. N.	Study and darion of a	
	Vaibhavi Bagul	Gopalkrishnan	Study and design of a potentiostat	
9	Irfan Mulla		Farmouni	4
	Amisha Poyrekar			-
	Tanvi Deokar	Prof. Madhumati	Arduino Image Processing – Based Electronic Lock	





Or. M.D. Paril



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	Abrar Khan	Khuspe	System	1
10	Gayatri rane			4
	Rashmi A Singh			
	Sanskruti Jadhav	Prof. Madhumati	Image denoising using	
	Pratibha Yadav	Khuspe	filters.	
- 11	Atharva Patil			4
	Kartiki pande	]		
	Aditya Kadam	Prof. Madhumati		
	Rakshitha Krishnan	Khuspe	Virtual Air Drum set	
12	Yugandhara Kadam			4
	Atharva Gadkari	1		
	Tanuja Upadhyay	1	Arduino Based Bluetooth	
	Jaladi Omkar Rao	Prof. Sangeetha P.	controlled Robotic Arm	
13	Dhaval Mistry	9	- same near to bottle / mm	1
	Shatanshu Choudhary			
	Abhishek Joshi	1	Machine Learning for	
	Adarsh Raut	Prof. Sangeetha P.	prediction analysis in engineering applications	
14	Neha Gupta		anguitaring approactions	3
	Pooja Gupta	Dr. Machhindranath	Control Design 6	
	Sourjo Sen	Patil	Control Design of AUTOPILOT	
15	Fravash Mohta		1101011201	4
	Prathamesh Pawar		100	- 4
	Kartik Wankhede	Prof. Amudha	Coniditation	
	Shweta Gadhave	Senthilkumar	Covid detection using x- ray	
16	Sejal Attarde	5	- iay	
	Poorva Vichare			4
	Amogh Sadhu	Prof. Deepti		
	Rizwan Shaikh	Khimani	Solar Tracing	
17	Saurav Bhosale		Solar Hacing	
	Abhijeet Gaonkar		1.5	4
	Manali Ganacharya	Prof. Deepti	Human Temperature	
	Prabhat Jaiswar	Khimani	Detection with IR Camera using Machine learning	
18	Vaishnavi Talnikar		using Machine learning	
	Sachi Malusare	DC 1/4		3
	Pranav Jadhav	Prof. Mugdha Joglekar		
		Jogickai	Wisalasa walta a L	
19	Sunny Kadam	Prof. Namrata	Wireless voltage detector using Nimultisim software	
	Aditya Kirpalani	Bonde	Bartisiiii soitware	2







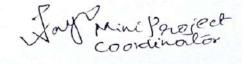


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	INSTRUMENTATIO	ON S.E-Mini Projects 2020	0-21	
Group No.	Name of the Student	Mentor Name	Title of the Project	No. of Students
1	Aaditya Gurav	Mrs. Nilima Warke- nilima. warke@ves.ac.in	Measurement and signal conditioning of biomedical sensor	2
	Yash Tadkar			
	Parag Coimbatore			
	Pranav Patil			
2	Ishaan Sharma	Mrs.Kadambari Sharma- kadambari.sharma@ves.ac. in	Light detection in fiber optics	4
	Chinmayi Nigudkar			
	Ayush Prabhu			
	Samyak Pardhe			
3	Prajakta ukarande	Mrs. Nilima Warke- nilima. warke@ves.ac.in	Temperature monitoring system	4
	Anjali More		Tomperature montang system	
	Vaidyanathan			
	Sameer Vispute			
4	Rahul Patil	Mrs.Jayassre R-jayashree, ramakrishnan@vcs.ac.in	Principle of RC measurement using charging / discharging method (C ultracapacitor)	4
- 1	Kamlesh Patil			
	Spandan Barsagade			
	Shikha Negi	-		
5	Shivangi Anand	Mr. N.Gopalkrishnan-n. gopalkrishnan@ves.ac.in	Electronic Load	4
	Nidhi Nair			
	Sohan Shetty			
	Shoaib Ahmed			
6	Hrutika Pakhale	Dr.(Mrs.)J.M.Nair	BCD Counter	4
	Omkar Hirugade	Contact person-Mr. N. Gopalkrishnan-n. gopalkrishnan@ves.ac.in		
	Harsh Falak			
	Vinit Deshpande			
7	Gaurav Govilkar	Mr.Kader Shaikh-kader. shaikh@ves.ac.in	Environmental Sound Logger	4
	Madhura Padge		for the second s	







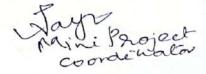


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	Anuj Raina			
	Suraj Hage			
	Pratik Waghmode	Mr. N.Gopalkrishnan-n. gopalkrishnan@ves.ac.in	H Bridge	
_	Ishan Udgirkar			
_	Vedant Hatte			
$\dashv$	Sanskar halpati			
9	Saniya Mahajani	Dr. P. P. Vaidya	Measurement of Charge in Detector due to Radiation	
	Rahul Maurya	Mrs. Kanchan Chavan- kanchan.chavan@ves.ac.in		
	Ritiksha Mhatre			
_	Srushti Gharat			
10	Viraj Avhad	Mrs.Mugdha Joglekar- mugdha.joglekar@ves.ac.in	Integrator and Differentiator Using RC	4
	Aakanksha Kadam			
	Sushant Upade			
	Rutvik Vedak			
11	Reshma Dhende	Mrs.Jayassre R-jayashree. ramakrishnan@ves.ac.in	Battery Charger circuit	4
	kinjal Dutta			
	Ajay Lingoji			
	Siddhesh Jadhav			
12	Shreesh Rao	Mrs.Mugdha Joglekar- mugdha.joglekar@ves.ac.in	Performance and Measurement of Resistance	4
	Mohit Bhoir			
	Nitish Sutar			
	Aditya Mohite			
13	Anushka Daware	Mr. N.Gopalkrishnan-n. gopalkrishnan@ves.ac.in	Automatic Fluid Level Control using PLC	4
	Shreya Gharat	A CONTRACTOR OF THE CONTRACTOR		
	Kiran Sutar		2 2 2	
	Krishna Shelar			
		Mr.Kader Shaikh-kader.		
14	Priyanshu Dubey	shaikh@ves.ac.in	Water level controller	4
	Siddhesh Kakade			









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	Saloni mane			
	Devanshi Shah			
	-			
15	Vikas Pandey	Amudha senthilkumar	Touch switch for electrical appliance	
	Gaurang Meher			
	Santosh Mallik			
	Devang Panchal			
16	Simran jadhav	Mrs. Kanchan Chavan- kanchan.chavan@ves.ac.in	Design of home automation system	
	Aniruddha mestry	_	La TELASTA I	1 417
	Kaustubh khavnekar			
	Anuj Singh			
		Mrs.Kadambari Sharma- kadambari.sharma@ves.ac.	Automatic Waste Segregation using	
17	Ajinkya Waghmare	in	8051	
	Mohammed Fadhil			Sail East
	Gaurav bhogte			
			Jayassre Ramakrishnan	
			Mini Project Coordinator	77.7







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Instrumenta	tion First Year Mini Pr	rojects 2020-21		
Group No.	Name of students	Mentor Name	Title of Project	No. of students
	Prathamesh Andhale			5
	Harshali Gawade	Manisha Tiwary / Shaswati Roy		
	Ishaan Jukar			
	Anvita Koyande		Spectrometer and	
Group 1/D3	Kshitij Pawar		Spectroscopy	
	C S Lakshmi	Manisha Tiwary / Shaswati Roy		4
	Nikhil Chabbria			
	Sarthak Deshmukh			
Group 2	Nandita Jadia		Dual nature of light	
	Tanvi Desai			5
	Gaurav Kulkarni	Manisha Tiwary / Shaswati Roy		
	Shriya Naik			
	Niladri Samadder			
Group 3	Pradnya Sawant		Mini Tesla Coil	
	Shruti Patil	Manisha Tiwary / Shaswati Roy		3
	Nidhi Gharat			
Group 4	Bhakti Sawashe		Hall Effect Sensor	



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I	Aditi Chaturvedi			5
	Shreya Kamble	Manisha Tiwary / Shaswati Roy	Portable Mobile	
	Jagruti Dhamal			
	Tanaya Gaikar			
Group 5	Rajnandini Verma		Charger	
	Vedang Chvan			
I	Nikhil Gore	Manisha Tiwary / Shaswati Roy	Semicnductor and its Application	
	Prathmesh Komte			5
	Viraj Pawar			
Group 6	Mihir Suhanda		(Metal Detector)	
	Raunik kumbhare			
	Sanchit Mhadgut	Manisha Tiwary / Shaswati Roy	IR proximity sensor	4
	Chinmay Tare			
Group 7	Suresh Rajpurohit		using LM358 Opamp	
	Aman Rajbhar			
Group 8	Kunal patil			4
	Siddhesh Kangane	Manisha Tiwary / Shaswati Roy		
	Anish Gawde		Electric Motor	
				35



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# **B** 1. Sample Internship Completion Certificates



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16<sup>th</sup> July 2021

#### To Whom So Ever It May Concern

This is to certify that **Ms. Poorva Vichare** has undergone internship at with us from 16<sup>th</sup> June 2021 to 16<sup>th</sup> July 2021. During her internship we found her to be sincere, hardworking and loyal.

We wish her all the best in her future endeavors.

Thanking you,

Yours Faithfully,

For IMA-PG India Private Limited

**GM-HR & Admin** 

Madan G Padva

IMA-PG India Private Limited

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Unit II:-Plot No. R-696, T.T.C. Indl. Area, M.I.D.C., Rabale, Navi Mumbai - 400 701, India. Tel.: +91-22-67179000 Fax:+91-22-20870889 Indore Works:-Plot No. 386 / 1 & 396 / 2, Village Limbodagari, Tehsil Hatod, Sanwer Road, Dist. Indore, M. P. Pin - 453111 (IROLA) Tel: +91-731 - 6622200 /01 /02 /03





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National Service Centre, Mumbai

Endress+Hauser (India) Pvt. Ltd.

7B, 7th Floor, Godrej One, Pirojshanagar, Vikhroli (East), Mumbai - 400 079 Board: +91 22 6850 3100 Fax: +91 22 6850 3219 E-mail: info@in.endress.com • url: www.in.endress.com CIN - U24110MH1999PTC121643

July 10, 2021

#### To whomsoever this may concern:

This is to certify that Mr. Rohan Sunil Bhor has done his internship at Endress+Hauser (I) Pvt. Ltd., National Service Center, Bhiwandi from June 18, 2021 to July 10, 2021 and attended sessions related to E+H Products. He was given training under the guidance of Mr. Amol Bhongade, Manager- Service.

He was methodical and diligent in his approach and met the expectations of the internship program.

We wish him best of luck for his future.

For Endress+Hauser (I) Pvt. Ltd

Vivian Alfred Vice President- Human Resources

Noida

#### REGIONAL OFFICES

Workshop: +91 252 2678 906/903 Tech support:+91 22 6850 3177 +91 22 6850 3181 +91 22 6850 3182 :(040) 68307500 Hyderabad Fax:[0130] 6869888 Fax.:(080) 2545 8360 :(040) 68307599



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#### TO WHOM IT MAY CONCERN

We, GALAXY IEC INDIA PRIVATE LIMTED, are pleased to place on record our appreciation of "HRUTIKA MAHESH PAKHALE" student of Instrumentation Engineering who has put in dedicated efforts and shown keen interest to complete the "Internship Training" in reference to request from VIVEKANAD EDUCATION SOCIETY'S INSTIUTE OF TECHNOLOGY The training tenure was from June 15, 2021 to July 10, 2021.

During this period, she visited project sites of M/s. GRASIM INDUSTRIES LIMTED - VISCOSE FIBER DIVISION-VILAYAT-GUJARAT, M/s. GACL-NALCO ALKALIES & CHEMICALS PRIVATE LIMITED, [GNAL] & M/s. DEEPAK FERTILIZERS & PETROCHEMICAL CORORATION LIMITED-DAHEJ-GUJARAT. she saw and participated in activities for Erection, Calibration, Testing & Installation of various equipment's, Instrumentation and Control Systems (DCS & PLC) related to Process Control Instrumentation & Electrical Work.

She witnessed and studied various Electrical & Instrumentation Engineering documents like Single Line Diagrams, Cable Tray Erection Layout, Instrument Location Layout, JB Schedule, Cable Schedule, Instrument Hook Up Diagram, Instrument Index, IO List, etc.

She is a good listener, inquisitive and has potential to learn. We wish her all the best for future endeavours.

For GALAXY IEC DOOLA PRIVATE LIMITED,

DOMBIVE

Vijay Avhad \*\*\*
(Managing Director).

Place: Dombivli-Maharashtra.

Date: July 10, 2021.



### **Institute of Technology**





### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



DATE: - 22Nd February 2021

#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Sahil Arun Kedari, student of BE Instrumentation from Vivekanand Education Society's Institute of Technology, Chembur, Mumbai has successfully completed Internship program in our organisation under the Engineering Department from 27th January 2021 to 21st February 2021.

During this period of internship program, he has found punctual, hardworking and inquisitive in all activities.

We wish him all the best in his future endeavour.

For Pidilite Industries Ltd.

Factory Manager

Pidilite Industries Limited Plot No. B-35 & 36, MIDC Taloia, Dist. Raigad.

> T 2741 2742 2741 2608

F 2740 1033



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



#### TO WHOM IT MAY CONCERN

We, GALAXY IEC INDIA PRIVATE LIMTED, are pleased to place on record our appreciation of "SHIKHA RAKESH NEGI" student of Instrumentation Engineering who has put in dedicated efforts and shown keen interest to complete the "Internship Training" in reference to request from VIVEKANAD EDUCATION SOCIETY'S INSTIUTE OF TECHNOLOGY. The training tenure was from June 15, 2021 to July 10, 2021.

During this period, she visited project sites of M/s. GRASIM INDUSTRIES LIMITED - VISCOSE FIBER DIVISION-VILAYAT-GUJARAT, M/s. GACL-NALCO ALKALIES & CHEMICALS PRIVATE LIMITED [GNAL] & M/s. DEEPAK FERTILIZERS & PETROCHEMICAL CORPORATION LIMITED-DAHEJ-GUJARAT. She saw and participated in activities for Erection, Calibration, Testing & Installation of various equipment's, Instrumentation and Control Systems (DCS & PLC) related to Process Control Instrumentation & Electrical Work.

She witnessed and studied various Electrical & Instrumentation Engineering documents like Single Line Diagrams, Cable Tray Erection Layout, Instrument Location Layout, JB Schedule, Cable Schedule, Instrument Hook Up Diagram, Instrument Index, IO List, etc.

She is a good listener, inquisitive and has potential to learn. We wish her all the best for future endeavours.

FOR GALAXY XECUMBIA PRIVATE LIMITED,

Vijay Avhad (Managing Director).

Place: Dombivli-Maharashtra.

DOMBIVL

Date: July 10, 2021.



### **Institute of Technology**





#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### SUPERTECH INSTRUMENTATION SERVICES (I) PVT. LTD.

13, Vardhaman Industrial Complex, Old Mumbai-Agra Road, Nr. Hotel United - 21, THANE - 400 601, (Maharashtra), India.

• Tel.: +91-22-4155 0100 • Fax: +91-22-4155 0178 / 79 • Website: www.supertech.co.in

• (CIN): U99999MH1994PTC082116 • E-mail: automation@supertech.co.in / eni@supertech.co.in

Our Ref. : SIS/DC/058/2021 Date : 11<sup>th</sup> February, 2021

#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Aditya Kadam of VES Institute of Technology, Chembur have completed 15 days Internship.

The topics of his Internship Programme were PLC- Programmable Logic Controller, SCADA – Supervisory Control and Data Acquisition and Control Panel Testing.

He has worked in our Company from 28th January, 2021 to 11th February, 2021.

We found him sincere and hard working. We wish him grand success in his future career.

For **SUPERTECH**INSTRUMENTATION SERVICES (I) PVT. LTD.

YOGESH LIMAYE

**GM - AUTOMATION PROJECTS** 

Warehouse: 3, Pratik Corner Bldg., Giriraj CHS. LTD., Plot No. 49, Sector 8A. Airoli, Navi Mumbai - 400 708.

• Tel.: +91-22-27601380

SUPERTECH



### **Institute of Technology**





#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



#### TO WHOM IT MAY CONCERN

We, GALAXY IEC INDIA PRIVATE LIMTED, are pleased to place on record our appreciation of "VIRAJ VIJAY AVHAD" student of Instrumentation Engineering who has put in dedicated efforts and shown keen interest to complete the "Internship Training" in reference to request from VIVEKANAD EDUCATION SOCIETY'S INSTIUTE OF TECHNOLOGY. The training tenure was from June 15, 2021 to July 10, 2021.

During this period, he visited project sites of M/s. GRASIM INDUSTRIES LIMTED - VISCOSE FIBER DIVISION-VILAYAT-GUJARAT, M/s. GACL-NALCO ALKALIES & CHEMICALS PRIVATE LIMITED, [GNAL] & M/s. DEEPAK FERTILIZERS & PETROCHEMICAL CORPORATION LIMITED-DAHEJ-GUJARAT. He saw and participated in activities for Erection, Calibration, Testing & Installation of various equipment's, Instrumentation and Control Systems (DCS & PLC) related to Process Control Instrumentation & Electrical Work.

He witnessed and studied various Electrical & Instrumentation Engineering documents like Single Line Diagrams, Cable Tray Erection Layout, Instrument Location Layout, JB Schedule, Cable Schedule, Instrument Hook Up Diagram, Instrument Index, IO List, etc.

He is a good listener, inquisitive and has potential to learn. We wish him all the best for future endeavours.

For GALAXY IEC INDIA PRIVATE LIMITED,

Vijay Avhad \*\*\*
(Managing Director).

Place: Dombivli-Maharashtra.

Date: July 10, 2021.



### **Institute of Technology**





#### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Aditya Kirpalani** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
- Instrument & JB Location Layout
- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- Instrument Cable Schedule
- Interlock Logic Diagrams
- Vendor offer review
- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.



WASULT OF THAME

Rajesh V Shah

{Mob.: 9820703695}



#### **Institute of Technology**

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#### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Amogh Sadhu** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
- Instrument & JB Location Layout
- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- Instrument Cable Schedule
- Interlock Logic Diagrams
- Vendor offer review
- · Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob.: 9820703695}



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)





11-June-2021

#### CERTIFICATE

#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Ashish Gopal Adhikari was working as an Intern with AGV Systems Pvt. Ltd. from 16th June 2021 to 11th July 2021. Within his defined scope of Operations, Ashish contributed efficiently to the organization's existing processes.

Mr. Ashish Adhikari has been a good addition to our organization, though for a very small period. His dedication and ability to learn & grasp works pertinent to his profile has been the primary cause to appreciate him whole heartedly. During internship, the tasks defined to him were executed meticulously and diligently. He has patiently understood the system of our work and has put in his analytical mind to solve some of our issues related to operations.

Mr. Ashish's specific works include the following:

- Coordinating & documenting Smart Charger project.
- We have received the SRS for our Smart Charger project with the help of Mr. Ashish's diligent effort, which can be further considered in this project.
- ♦ He has done a case study for a Battery low voltage protection module, which can also be taken into account in future.
- ♦ He has also tested one of our on-going BMS (Battery Monitoring System) project and coordinated with our project engineer to resolve the errors occurring while testing and finalizing the fully functional card for ISTRAC
- ♦ In addition to the above, Mr. Ashish has done the voltage calibration for the BMS slave cards.

I can firmly say, Mr. Ashish Adhikari will be an asset to any organization when entrusted with responsibility to his full capacity.

I wish Mr. Ashish all the success in all his committed responsibilities of his professional life.

For agy systems pvt. ltd.

Godulker Mrs. Sakshi Hedulkar Production Head



agv systems p. ltd -2, F wing, Udyog Bhavan 2, Plot No. K-1, Additional MIDC, (illage Jambivali, Ambernath (East), Thane - 421506, INDIA

+91-845-494-5852 +91-845-494-5874

GST No. : 27AAHCA3727G1ZR CIN No : U74900MH2008PTC188135



#### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



#### SADHANA NITRO CHEM LIMIT

CIN: L24110MH1973PLC

Factory: 47, MIDC, Roha - 402 116, Dist. Raigad. Mat Tel.: Dhatav - 02194-263801/02/03, 263525 Fax: (91) 02194

JULY 20, 2019.

#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that, Mr. Ashutosh Arvind Manore was engaged with us for training in Instrumentation Department.

His duration of Training period from 18th June, 2021 to 11th July, 2021.

He was directed by Vivekanand Education Society's Institute of Technology, Hashu Advani Memorial Complex, Collector's Colony, Chembur, Mumbai – 400 074, India.

During the tenure of Training his behavior found to be good.

For SADHANA NITRO CHEM LTD.,

V.N.BEDEKAR

MANAGER (PER. & ADMN.)



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)











SMPS LDC DC CONVERTER LBATTERY CHARGER LDC POWER SUPPLYING AC CONVERTER PLATING RECTIFIER LAC DC ADAPTER I STABILIZER

Factory Add.: Plot No.: A-426 | Road No.: 28 | M.I.D.C. Wagle Estate | Thane(W) - 400604 | Maharashtra | India MOB.: +9172085 60460 I +9180977 07496 I E-MAIL: info@powertronindia.com I sales.powertronindia@gmail.com WWW.POWERTRONINDIA.COM WWW.POWERTRON.IN WWW.POWERTROMSMPS.CO.IN

Date: 16.07.2021

#### INTERNSHIP COMPLETION CERTIFICATE

This Is certify that Mr. Atish Yadav, a student of Vivekanand Education Society's Institute Of Technology located at, Hashu Advani Memorial Complex, Collector's Colony, Chembur, Mumbai - 400074. He has completed his 1 month of internship From the date of 16th June 2021 to 16th July 2021 in Powertron India Private Limited located at Wagle Estate, Thane.

During the period of his Internship Programme he worked on Assembling / Components Stuffing / Various Types Of Product Testing such as AC DC Power supply, DC AC Converter, DC DC Converter, SMPS, During this Internship Programme with us he was found Punctual, Hardworking And Inquisitive.

We wish him a very success in life.

For,

Powertron India Pvt Ltd.

Vivek Panchal.

(Director)



#### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Bhavit Shetty** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
- Instrument & JB Location Layout
- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- · Instrument Cable Schedule
- · Interlock Logic Diagrams
- · Vendor offer review
- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah

{Mob.: 9820703695}



### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Chandrasai Rayudu** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

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- Instrument Cable Schedule
- Interlock Logic Diagrams
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- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah

{Mob.: 9820703695}



## Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



### Innovative Instruments & Controls LLP

413, New Sonal Link Service Industrial Premises Co-op Society Ltd Building No.2, Link Road, Malad (West), Mumbai-400064 Tel: 66939916/17 | Email: sales@innovativeinstruments.co.in

Date: 12-07-2021

#### TO WHOMEVER IT MAY CONCERN

This is to certify that Ms. **Devanshi Kapli Shah** a student of Second year degree of V.E. S.I.T Chembur, Mumbai has successfully completed Internship of 4 week (From 15 June 2021 to 10<sup>th</sup> July 2021) internship program at our organization.

During the period of her internship with us she was found punctual, hardworking.

We wish her all the best in career ahead.

Sincerely,

Director

Innovative Instruments & Controls LLP

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### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Durvesh Padekar** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
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- Input / Output List
- Instrument Datasheets
- · Instrument Hook Up diagram
- · Instrument & JB Location Layout
- · Instrument Cable Routing Layout
- . Instrument Junction Box Termination Details
- · Instrument Cable Schedule
- Interlock Logic Diagrams
- Vendor offer review
- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob. : 9820703695}



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



## SADHANA NITRO CHEM LIMITED

CIN - 1.24110MH1973PLC016698

Factory : 47, MIDC, Roha - 402 116, Dist. Raigad. Maharashtra. Tel. : Dhatav - 02194-263801/02/03, 263525 Fax : (91) 02194-263522

JULY 20, 2019.

#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that, Mr. Kunal Govind Bhoir was engaged with us for training in Instrumentation Department.

His duration of Training period from 18th June, 2021 to 11th July, 2021.

He was directed by Vivekanand Education Society's Institute of Technology, Hashu Advani Memorial Complex, Collector's Colony, Chembur, Mumbai – 400 074, India.

During the tenure of Training his behavior found to be good.

For SADHANA NITRO CHEM LTD.,

V.N.BEDEKAR

MANAGER (PER. & ADMN.)

Head Office: 10, Bruse Street, Homi Modi Street, Fort, Mumbai - 400 001, INDIA Tel.: 022 - 68663300

Registered Office: Hira Baug, 1st Floor, Kasturba Chowk (C.P. Tank), Mumbai - 400 004, INDIA

Tel.: 022-23865629 / 23875630 • E-mail: sadhananitro@sncl.com • Web: www.sncl.com



### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Mayur Mane** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- · P&IDs, Legend and Symbols.
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- Input / Output List
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- · Instrument Cable Schedule
- · Interlock Logic Diagrams
- · Vendor offer review
- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.

For NICE CONSULTANCY

Proprietor



Rajesh V Shah {Mob. : 9820703695}



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Sunny Kadam** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

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- Instrument Cable Schedule
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- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.

For NICE CONSULTANCY
Proprietor



Rajesh V Shah {Mob.: 9820703695}



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#### NICE CONSULTANCY

(Design & Detail Engineering – Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602 Phone: 0091-9820703695

Date: 10th-July-2021

email id : nicecon@gmail.com

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that Miss Neha Gupta participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during her summer vacation. She is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared her Third year examinations.

In the internship program, she has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
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- Instrument Cable Routing Layout
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We hope that this internship would have given her an insight in Instrumentation and that she would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob.: 9820703695}



# **Institute of Technology**

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### Institute of Technology

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(Design & Detail Engineering - Instrumentation)

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Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Miss Pooja Gupta** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during her summer vacation. She is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared her Third year examinations.

In the internship program, she has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
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- Instrument Hook Up diagram
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- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- Instrument Cable Schedule
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- Vendor drawing review

We hope that this internship would have given her an insight in Instrumentation and that she would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob.: 9820703695}



### Institute of Technology

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### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Prabhat Jaiswar** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
- Instrument & JB Location Layout
- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- Instrument Cable Schedule
- Interlock Logic Diagrams
- Vendor offer review
- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob. : 9820703695}



### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Miss Pratibha Yadav** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during her summer vacation. She is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared her Third year examinations.

In the internship program, she has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
- Instrument & JB Location Layout
- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- Instrument Cable Schedule
- Interlock Logic Diagrams
- Vendor offer review
- Vendor drawing review

We hope that this internship would have given her an insight in Instrumentation and that she would have understood the importance of Instrumentation in process industry.





Rajesh V Shah

{Mob.: 9820703695}



### Institute of Technology

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### R. K. DUTT CONCERNS

**EXCELLENCE THROUGH ENGINEERING** 

LEVEL INDICATION, MEASUREMENT, CONTROL & TRANSMISSION



Date: 04-07-2021

#### INTERNSHIP CERTIFICATE

This is to certify that Mr <u>Dubey Priyanshu Rajesh</u> has successfully completed Internship for the period of <u>16 days</u> from <u>16<sup>th</sup> June 2021</u> to <u>3<sup>rd</sup> July 2021</u>. During the Internship he had: -

- General exposures to basic technical information like Principle of Working of Liquid Level Gauges, Magnetic Indicators, Level Switches and Transmitters, Manometers, Sight Flow Indicators, PT, DPT, Ultrasonic/Radar LT, Mag Flow meters etc
- Shop Floor exposure to Manufacturing process, inspection & testing of Liquid Level Gauges, Magnetic Indicators, Level Switches and Transmitters, Manometers, Sight Flow Indicators.

We wish him all the very best.



Channel Partner for SIEMENS Process Instruments

HO & Works: A-88, Road No. 18, Wagle Estate, Thane – 400 604, India Tel: ++91-22-6724 8787, ++91-22-2582 2541, Fax: ++91-22-6724 8777, E-mail: marketing@rkdutt.com, pisales@rkdutt.com Website: www.rkdutt.com





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#### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Raghav Kapdeo** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- · Instrument Hook Up diagram
- · Instrument & JB Location Layout
- · Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- · Instrument Cable Schedule
- Interlock Logic Diagrams
- · Vendor offer review
- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.

For NICE CONSULTANCY

Repaired

Proprietor



Rajesh V Shah {Mob. : 9820703695}



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### NICE CONSULTANCY

(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Miss Rakshitha Krishnan** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during her summer vacation. She is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared her Third year examinations.

In the internship program, she has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
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- Vendor drawing review

We hope that this internship would have given her an insight in Instrumentation and that she would have understood the importance of Instrumentation in process industry.





Rajesh V Shah

{Mob.: 9820703695}



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304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone : 0091-9820703695 email id : <u>nicecon@gmail.com</u>

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Rohit Mhatre** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
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- · Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob.: 9820703695}



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(Design & Detail Engineering - Instrumentation)

304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Rutwik Pendse** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
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- Instrument Cable Routing Layout
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- · Instrument Cable Schedule
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- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah

{Mob.: 9820703695}



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(Design & Detail Engineering - Instrumentation)

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Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Sanket Thikade** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
- Instrument & JB Location Layout
- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- Instrument Cable Schedule
- · Interlock Logic Diagrams
- Vendor offer review
- Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.

For NICE CONSULTANCY

Proprietor



Rajesh V Shah {Mob. : 9820703695}



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304, Shah's Capital, Ghantalidevi Mandir Road, Ghantali, Thane (West). 400 602

Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Miss Sachi Malusare** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during her summer vacation. She is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared her Third year examinations.

In the internship program, she has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
- Instrument Datasheets
- Instrument Hook Up diagram
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- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- Instrument Cable Schedule
- Interlock Logic Diagrams
- Vendor offer review
- · Vendor drawing review

We hope that this internship would have given her an insight in Instrumentation and that she would have understood the importance of Instrumentation in process industry.





Rajesh V Shah

{Mob.: 9820703695}



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Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Miss Sanskruti Jadhav** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during her summer vacation. She is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared her Third year examinations.

In the internship program, she has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
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We hope that this internship would have given her an insight in Instrumentation and that she would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob.: 9820703695}



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Phone: 0091-9820703695 email id: nicecon@gmail.com

Date: 10th-July-2021

#### TO WHOM SO EVER CONCERNED

We are Detailed Engineering Consultant specialised in Instrumentation Engineering for various process industries. This is to certify that **Mr. Saurav Bhosale** participated and completed the on-line internship program with our enterprise from 15th-June-2021 to 10th-July-2021, during his summer vacation. He is studying Instrumentation Engineering in Vivekanand Education Society's Institute of Technology, Chembur, Mumbai and has appeared his Third year examinations.

In the internship program, he has been exposed and made to understand to the following activities (activities done during detailed engineering of Instrumentation for the process industry):

- P&IDs, Legend and Symbols.
- Instrument List
- Input / Output List
   Input / Details and
- Instrument Datasheets
- Instrument Hook Up diagram
- Instrument & JB Location Layout
- Instrument Cable Routing Layout
- Instrument Junction Box Termination Details
- · Instrument Cable Schedule
- Interlock Logic Diagrams
- Vendor offer review
- · Vendor drawing review

We hope that this internship would have given him an insight in Instrumentation and that he would have understood the importance of Instrumentation in process industry.





Rajesh V Shah {Mob.: 9820703695}



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R. K. DUTT CONCERNS

EXCELLENCE THROUGH ENGINEERING

LEVEL INDICATION, MEASUREMENT, CONTROL & TRANSMISSION



Date: 04-07-2021

#### INTERNSHIP CERTIFICATE

This is to certify that Mr Rao Shreesh Nilesh has successfully completed Internship for the period of 16 days from 16<sup>th</sup> June 2021 to 3<sup>rd</sup> July 2021. During the Internship he had: -

- General exposures to basic technical information like Principle of Working of Liquid Level Gauges, Magnetic Indicators, Level Switches and Transmitters, Manometers, Sight Flow Indicators, PT, DPT, Ultrasonic/Radar LT, Mag Flow meters etc
- Shop Floor exposure to Manufacturing process, inspection & testing of Liquid Level Gauges, Magnetic Indicators, Level Switches and Transmitters, Manometers, Sight Flow Indicators.

We wish him all the very best.



Channel Partner for SIEMENS Process Instruments

HO & Works: A-88, Road No. 18, Wagle Estate, Thane – 400 604, India Tel: ++91-22-6724 8787, ++91-22-2582 2541, Fax: ++91-22-6724 8777, E-mail: marketing@rkdutt.com, pisales@rkdutt.com Website: www.rkdutt.com





# **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)



#### PERFECT INSTRUMENTATION CONTROLS

64, New Modella Industrial Premises, Padwal Nagar, Wagle Industrial estate, Thane (W) 400604 Tel. 022 25830496, Telefax -022 67982839, picontrols99@gmail.com, www.perfectinstrument.com

Date: 20-Jul-21

#### TO WHOMSO EVER IT MAY CONCERN

This is to certify that Mr. Koshti Suyash Narendra of Vivekanand Education

Society Institute of Technology has completed Internship from 16.06.2021 to

11.07.2021 at our Organization. He studied & worked on Calibration of Process

Instruments & Automation work.

For Perfect Instrumentation Controls

S. M. Katdare



### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)





# **Institute of Technology**

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#### PERFECT INSTRUMENTATION CONTROLS

64, New Modella Industrial Premises, Padwal Nagar, Wagle Industrial estate, Thane (W) 400604 Tel. 022 25830496, Telefax -022 67982839, picontrols99@gmail.com, www.perfectinstrument.com

Date: 20-Jul-21

#### TO WHOMSO EVER IT MAY CONCERN

This is to certify that Mr. Kadam Aditya Sanjay of Vivekanand Education Society Institute of Technology has completed Internship from 16.06.2021 to 11.07.2021 at our Organization. He studied & worked on Calibration of Process Instruments & Automation work.

For Perfect Instrumentation Controls

S. M. Katdare



## **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

Since 1962





## **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# **B 2-Sample Field Project Completion Certificates**



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### Certificate

This is to certify that the project entitled "Bottle Filling Plant with Industry 4.0" is a bonafide work of "Shreyas Kulkarni (38), Sahil Kedari (34), Jayesh Korgaonkar (35), Chandraprakash Vishwakarma (70)" submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of "Bachelor of Engineering" in "Instrumentation Engineering".

Mrs. Nilima Warke Supervisor/Guide



Dr. PP Vaidya Head of Department



Dr. JM Nair

Principal

PRINCIPAL,

VIVEKANAND EDUCATION SOCIETY'S

INSTITUTE OF TECHNOLOGY

HASHU ADVANI MEMORIAL COMPLEX,

COLLECTOR'S COLONY, CHEMBUR,

MUMBAI-400 074, INDIA.



# **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### **Bottle Filling Plant with Industry 4.0**

Submitted in partial fulfillment of the requirements of the

degree of

Bachelor of Engineering

By

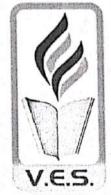
Shreyas Kulkarni (38)

Sahil Kedari (34)

Jayesh Korgaonkar (35)

Chandraprakash Vishwakarma (70)

Supervisor: Mrs. Nilima Warke



Since 1962 Instrumentation Department

V.E.S. Institute Of Technology

2020-2021

Mrs. Nilma Warla



## **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

# **B 3-Sample Mini Project Completion Certificates**



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### **Evaporator Control Using Labview**

(https://sites.google.com/ves.ac.in/miniproject/home)
Submitted in partial fulfilment of the requirements

Of the degree of Bachelor of Engineering

By

- 1. Amogh Mopkar(IN5A025)
- 2. Rohan Bhor (IN5A047)
- 3. Rohan Panchal(IN5A028)
- 4. Raghav Kapdeo(IN5A016)

Under the guidance of Mrs.Kadambari Sharma



Instrumentation Department
V.E.S. Institute of Technology
2020-2021





# **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### Certificate

This is to certify that the project entitled "Evaporator Control Using Labview" is a bonafide work of "Amogh Mopkar, Rohan Panchal, Rohan Bhor, Raghav Kapdeo" submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of "Bachelor of Engineering" in "Instrumentation Engineering".

Mrs .Kadambari Sharma

Supervisor/Guide

Dr PP Vaidya

Head of Department

Japalet Dr M Nair

Principal
PRINCIPAL,
VIVEKANAND EDUCATION SOCIETY'S
INSTITUTE OF TECHNOLOGY
HASHU ADVANI MEMORIAL COMPLEX,
COLLECTOR'S COLONY, CHEMBUR,
MUMBAI-400 074, INDIA.



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

#### University of Mumbai

Vivekanand education society's institute of technology

Department of Instrumentation Engineering



#### CERTIFICATE

This is to certify that Ms. Shreya Gharat, Ms. Anushka Daware, Mr. Krishna Shelar, Mr. Kiran Sutar students of second year in Instrumentation Engineering has satisfactorily completed we project report on Automatic Fluid Level Control using Programmable Logic Controller. Project report is submitted to the University of Mumbai in partial fulfilment of the requirement for the award of Mini Project 1-a (REV- 2019 'C' Scheme) of Second Year, (SE Sem-III) in Instrumentation Engineering as laid down by University of Mumbai during academicyear 2020-21. There work has found satisfactory and here by approved for the final submission.

Prof. N. Gopalkrishnan

Guide

OTTECHNOLOGY OT

Prof Javashree Ramakrishnan

Project co-ordinator

Dr. P. P. Vaidya

Head of department

THE PROPERTY OF THE PROPERTY O

Dr. J. M. Nair

Principal PRINCIPAL.

VIVER ANAND EDUCATION SOCIETY'S

STITUTE OF ETHNOLOGY
HASHU ADVANI MEMORIAL COMPLEX,
COLLECTOR'S COLONY, CHEMBUR,
MUMBAI-400 074, INDIA.



### **Institute of Technology**

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

A project report

on

# Automatic fluid level control using programmable logic controller

For

Mini project 1-a (REV - 2019 'C' scheme) of second year, (SE Sem-III)

In

Instrumentation engineering

Ву

Shreya Gharat

Anushka Daware

Krishna Shelar

Kiran Sutar

Under the guidance of

Prof. N. Gopalkrishnan



#### UNIVERSITY OF MUMBAI

Academic Year 2020-21



#### Vivekanand Education Society's Institute of Technology

Hashu Advani Memorial Complex, Collector's Colony, Chembur, Mumbai - 400 074. India.

1|Page



### Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

### **Project Report Approval**

This project report entitled (Automatic Fluid Level Control using Programmable Logic Controller) by

Ms. Shreya Gharat,

Ms. Anushka Daware,

Mr. Krishna Shelar,

Mr. Kiran Sutar

is approved for the degree of S.E (Instrumentation Engineering)

Examiners

Good Mys - Interna

Online Examin

Prof. Jagdish

BUCOE

LAdilliller

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# **Institute of Technology**

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# C 1-Sample Communications & Reports —Internships



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# **Vivekanand Education Society's**

# Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognised by Govt. of Maharashtra)

Ref. No.: VESIT/JMN/INT-DS/34/2020-21 Date: 12-06-2021

To, HRDD R. K. Dutt Concerns Wagle Indsl. Estate, Thane 400 604.

Sub.:- Permission for "Summer Internship".

This is to certify that Mr. **DESHPANDE VINIT VINOD**, Mr. **RAO SHREESH NILESH** and Mr. **DUBEY PRIYANSHU RAJESH** are bonafide students of this institute and presently studying in IV<sup>th</sup> semester of Bachelor of Engineering (B.E.) in Instrumentation Engineering. They wish to undergo an internship in R. K. Dutt Concerns after completion of IV<sup>th</sup> semester examination in June, 2021 (i.e. 16<sup>th</sup> June, 2021 to 11<sup>th</sup> July, 2021). This will enhance their practical knowledge.

This letter is issued based on their request to get permission for a summer internship.

Jayalekshmi Digitally signed by Jayalekshmi Madhu Nair Date: 2021.06.12 12:15:30 +05:30\*

(Signature of Principal)



Hashu Advani Memorial Complex, Collector's Colony, Chembur, Mumbai – 400 074. INDIA.

Phone: +91 22 6153 2532 • Fax: +91 22 6153 2555 • Email: vesit@ves.ac.in / principal.vesit@ves.ac.in • Website: www.ves.ac.in/vesit



### Institute of Technology

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# **Vivekanand Education Society's**

## Institute of Technology

( Affiliated to University of Mumbai, Approved by AICTE & Recognised by Govt. of Maharashtra )

Ref. No.: VESIT/JMN/INT-DS/25/2020-21 Date: 08-06-2021

To,
HRDD
AGV Systems Pvt. Ltd.
Ambernath, MAH.

Sub.:- Permission for "Summer Internship".

This is to certify that Mr. YADAV AJAY UMASHANKAR and Mr. ADHIKARI ASHISH GOPAL are bonafide students of this institute and presently studying in VI<sup>th</sup> semester of Bachelor of Engineering (B.E.) in Instrumentation Engineering. They wish to undergo an internship in AGV Systems Pvt. Ltd. after completion of VI<sup>th</sup> semester examination in June, 2021 (i.e. 16<sup>th</sup> June, 2021 to 11<sup>th</sup> July, 2021). This will enhance their practical knowledge.

This letter is issued based on their request to get permission for a summer internship.

Jayalekshmi Olgžally signed by Jayalekshmi Madhu Nair Dale: 2021.08.0817.50:13 40530

(Signature of Principal)



Hashu Advani Memorial Complex, Collector's Colony, Chembur, Mumbai – 400 074. INDIA.

Phone: +91 22 6153 2532 • Fax: +91 22 6153 2555 • Email: vesit@ves.ac.in / principal.vesit@ves.ac.in • Website: www.ves.ac.in/vesit



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# Vivekanand Education Society's

Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognised by Govt. of Maharashtra)

Ref. No.: VESIT/JMN/INT-DS/24/2020-21 Date: 08-06-2021

To,
HRDD
IMA - PG Indi To ea Pvt. Ltd.
TTC Indsl Area, Thane Belapur Rd,
Rabale Navi Mumbai 400 701.

Sub.:- Permission for "Summer Internship".

This is to certify that Ms. KADAM YUGANDHARA, Ms. UPADHYAY TANUJA VENKATRAMAN, Mr. ATHARVA SACHIN DHOBE and Ms. VICHARE POORVA SACHIN are bonafide students of this institute and presently studying in VI<sup>th</sup> semester of Bachelor of Engineering (B.E.) in Instrumentation Engineering. They wish to undergo internship in IMA - PG India Pvt. Ltd after completion of VI<sup>th</sup> semester examination in June, 2021 (i.e. 16<sup>th</sup> June, 2021 to 11<sup>th</sup> July, 2021). This will enhance their practical knowledge.

This letter is issued based on their request to get permission for a summer internship.

Jayalekshmi Madhu Nair Digitally signed by Jayalekshmi Madhu Nair Date: 2021.06,08 17:23:22 +05'30'

(Signature of Principal)



Hashu Advani Memorial Complex, Collector's Colony, Chembur, Mumbai – 400 074. INDIA.

Phone: +91 22 6153 2532 • Fax: +91 22 6153 2555 • Email: vesit@ves.ac.in / principal.vesit@ves.ac.in • Website: www.ves.ac.in/vesit



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### INTERNSHIP REPORT

16/06/2021 - 16/07/2021

#### SUBMITTED BY

1. Poorva Vichare

BE Instrumentation, Vivekanand Education Society's Institute of Technology.

2. Yugandhara Kadam

BE Instrumentation, Vivekanand Education Society's Institute of Technology.

3. Tanuja Upadhyay

BE Instrumentation, Vivekanand Education Society's Institute of Technology.

4. Atharva Dhobe

BE Instrumentation, Vivekanand Education Society's Institute of Technology.



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### **OBJECTIVES**

We expected to observe real-world applications of topics included in our syllabus. Due to the pandemic situation, we were unable to attend practical sessions in college. We expected to be able to interact with various components and technologies that we have studied about over the course of 3 years. We also hoped to explore the field of Automation in an industrial environment. We hoped to get an idea of what "Automation" exactly meant in the context of industries and to get a clearer picture of how human operators and automated machines and processes work in tandem. Finally, we hoped to get an opportunity to use theoretical concepts to complete a project. We hoped to be able to complete a small project so that we could develop the thinking process required to realise theoretical concepts into a tangible system that can work as desired.



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#### BASIC COMPONENTS OF PLC

We looked at all the basic connections made to the PLC, with the supply given by the SMPS and an HMI connected via ethernet cable for communication. A terminal which provides high and low logic states to the PLC is also connected.







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### SKILLS LEARNT

- We have completed several programs over a period of 2 weeks, as described above, to understand the basics of programming Siemens Simatic S7-1200 PLCs using TIA Portal (Ladder Logic).
- By the end of our internship, we were able to realise a given problem statement in ladder logic by initially drawing a rough ladder logic and then making changes, if required. Finally, we proceed with programming the logic in TIA Portal thereby "translating" a given problem statement to ladder logic.
- We have also learned about various connections and wiring to and from PLC. Just as a generic desktop computer needs peripherals interfaced with the CPU to be of use, a PLC also needs I/O devices in order to execute the instructions stored in it. To this end, we learned how and where to connect different I/O devices to the PLC.
- We have also learned about programming the HMI (Human Machine Interface) which acts as the medium of communication between the operator and the machine. It needs to have screen(s) designed with buttons, text and indicators to create a convenient and easy-to-understand interface.
- Like a physical button a button on the HMI Screen also needs to be "connected" which we learned to do using tags and addresses in the PLC to assign each button to a specific output.
- A servo motor cannot be directly connected to the PLC output as the PLC output signal is too low to run a motor. Hence a Servo Drive is used. We learned to connect the PLC (which controls the motor's movement) and mains supply (to power the motor) to the drive.
- We can identify several electrical and electronic components thanks to the Machine Orientation. We were guided by Atul Sir and Rakesh Sir through the shop floor who pointed out the important mechanical as well as electrical components used in the blister and packaging machines.



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- As we were not familiar with mechanical components, we were given a
  quick introduction by Bhushan Sir before our project as well as by Atul Sir
  during the Machine Orientation.
- We have also improved upon our presentation skills having given weekly
  presentations and can put forth ideas in a concise and comprehensive
  manner.
- We have also become aware of the value of teamwork as dividing tasks such as making a presentation or researching a given topic and then discussing and learning from our peers helped us to complete said tasks more efficiently.

### CONCLUSION

In the present world of competition and owing to the current covid situation, it was difficult to get practical knowledge. This internship acted as a bridge between theoretical and practical working for us. We got to learn a few new things like PLC and HMI which improved our technical knowledge. We were actually able to put our theoretical knowledge into practice whilst working on the project. This project helped us to not only upskill our understanding in automation, but also in mechanical and electrical domains. Never before this internship we knew exactly how things work in an industry. There were times which made us realise the amount of effort people put into running even basic logics, testing the systems, checking accuracies, rectifying errors and overcoming challenges. The success and final outcome of the project required a lot of guidance and assistance from many people and we are extremely fortunate to have got that all throughout our project work. Immense thank you to IMA-PG India Pvt Ltd. for making this internship informative, insightful yet enjoyable for us.



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C 2-Sample Reports –Field Project



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#### SYNOPSIS

### BOTTLE FILLING PLANT WITH INDUSTRY 4.0

#### **GROUP MEMBERS:**

- 1. SAHIL KEDARI (34)
- 2. SHREYAS KULKARNI (38)
- 3. CHANDRAPRAKASH VISHWAKARMA (70)
- 4. JAYESH KORGAONKAR (35)

MENTOR: MRS. NILIMA WARKE

#### INTRODUCTION:

Industry 4.0 is nothing but automation with digitalization which is a need in every industry to compete globally. Modern industrial development has lasted for several hundred years and now the era of Industry 4.0 has arrived. The concept of Industry 4.0 was initially proposed for developing German economy in 2011. This project is about exploring Industry 4.0 from bottom to top (Field devices to cloud). Here, a simple bottle filling process will be developed using industrial control schemes. Then followed by simulation of the bottle filling process. Csv file of that process will be generated and then data will be extracted from the csv file. This data will be pushed to a database which will be processed and used for Predictive maintenance of equipment used in the process.

#### MOTIVATION:

In any type of process industry, the continuous production process requires a high degree of availability and the elimination of unexpected breakdown could cause a prolonged stoppage in production. When dealing with



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equipment of every kind, there are failures sooner or later during its lifetime. These failures typically happen due to internal wear or by outside conditions not suitable for the equipment. There are several ways to deal with or prevent failures. So the main motive of this project is to increase productivity while being economical.

#### **OBJECTIVES:**

- Creating a structured text program of bottle filling process using B&R Automation Studio.
- Transferring the data through OPC-UA communication protocol.
- Using the data for predictive maintenance of process equipment.
- Creating a simulation of bottle filling process using Tecnomatix Plant Simulation software by Siemens.
- Providing a better and reliable solution for process equipment maintenance by using predictive maintenance over the less economic and less reliable methods of reactive and preventive maintenance.

#### CURRENT SCOPE:

Predictive maintenance enables just-in-time workflows, where servicing can be executed only when it is needed. It exponentially reduces downtime compared to reactive maintenance and hence reduces maintenance costs that would occur when adopting preventive maintenance. Predictive maintenance involves collecting and evaluating data from your machines to increase efficiency and optimize maintenance processes. Not only can you gauge the condition of your equipment, but also more accurately predict when maintenance work is needed. Predictive maintenance can contribute to improving plant availability, safety, quality, reduction of maintenance costs, etc.







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C 3-Sample Reports – Mini Projects



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#### ENVIRONMENTAL SOUND LOGGER

Submitted in partial fulfillment of the requirements of the degree of (B.E.)

by

Gauray Govilkar (07)

Madhura Padge (20)

Anuj Raina (27)

Suraj Hage (41)

Mentor:

Mr. Kader Shaikh



Department of Instrumentation

Vivekanand Education Society's Institute of Technology-Chembur, Mumbai.



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#### 2. OBJECTIVES

#### 1. Understanding representation of audio signals.

Understanding how a single audio signal can be represented in various domains based on time, its frequency and various other parameters.

#### 2. Studying of components for processing of audio signals.

Studying various types of microphones, amplifiers, speakers and knowing their parameters and for what range they could be .

#### 3. Representation of audio signal in time domain using time domain features.

Time domain features like ZCR, Amplitude based, Energy Based, AutoCorrelation based, Rhythm based features will be discussed in detail.

#### 4. Classification of audio signal using time domain feature

Various audio signals will be classified based on the specified time domain features.

#### 5. Learning basics of Python Programming.

Python programming will help in simulation of circuits as well as for analysing ML algorithms that will come in use in the next semester.

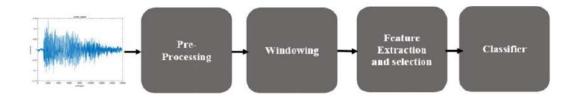


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#### 3. USE OF MACHINE LEARNING.

A basic flowchart of use of machine learning in analysing the audio signals



We want machines to be able to classify between various sounds as humans can do effortlessly. This problem is also called machine hearing. This leads to the research area of acoustic scene classification (ASC) where a machine is trained to classify between various sounds that are present in an acoustic scene. Regardless of any particular aim, a ML system requires robust and discriminatory features that helps a machine to learn accurately and quickly. The intelligence of a machine is defined by the amount of training given to it. Normally the whole dataset is not fed into the computer or machine during its training to learn its properties, rather a reduced in size representation of the signals is used to train the machine.

The basic structure of any typical audio ML system is defined here.

#### Pre Processing

In the first stage, the preprocessing is done on the audio signal. The pre-processing may involve noise cancellation, silence reduction, normalization etc.

a) Noise Cancellation: Active noise control (ANC), also known as noise cancellation, or active noise reduction (ANR), is a method for reducing unwanted sound by the addition of a second sound specifically designed to cancel the first.



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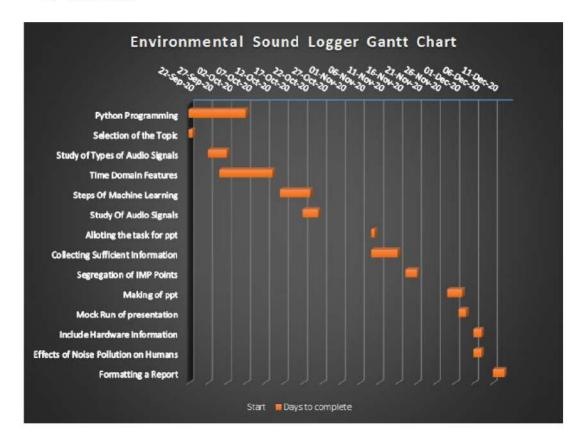
- b) Silence Reduction: Silence compression or Silence Reduction provides a way to squeeze redundancy out of sound files. The silence compression scheme is essential for efficient voice communication systems. It allows significant reduction of transmission bandwidth during a period of silence.
- c) Normalization: Audio normalization is the application of a constant amount of gain to an audio recording to bring the amplitude to a target level (the norm). Because the same amount of gain is applied across the entire recording, the signal-to-noise ratio and relative dynamics are unchanged. Normalization is one of the functions commonly provided by a digital audio workstation.



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#### B) Gantt Chart





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#### 11. CONCLUSION

- Growing effects of Noise Pollution was the motivation behind choosing this project.
- Study of the following was done:
  - o Types of Audio Signals
  - Types of Audio Components
- Basic Process of Machine Learning was learnt.
- Time Domain Features for Audio Signals were studied in detail.
- Various Hardware components required for the project were glanced through.
- Effects of Noise Pollution, Permissible values of Noise were studied in detail.
- The tasks to be completed in Sem IV were fixed.