E & TC Engineering Success Stories

Full Name of the Candidate	:	Ravindra Rajaram Dharbale
Qualification	:	B.E in E & TC
Batch	:	2004

Back ground –

Mr. Ravindra Rajaram Dharbale belonged to middle class farmer family. He posts a meritorious academic career with throughout distinction record & holds a Bachelor of Engineering in Electronics & Telecommunication from University of Pune. Which he completed form KBT collage of engineering, Nashik in 2008.

Challenges –

Mr. Ravindra started in 2008 immediately after passing out from the collage. Initial difficulties included no industrial back ground & thus he had to start from scratch. Also, it was an era where Automation just made its way in Indian Industry. Thus, with no automation background, Mr. Ravindra started his journey from a small-scale industry. He worked with his own hands to gain initial knowledge & experience of Industrial automation. This hands-on experience helped him to achieve mastery working with different PLCs, HMIs, SAP Tools & other automation requirements.

Opportunities –

During this period, Indian industry was going through a transaction period. Human & equipment safety coupled with Quality & Productivity was on a rise. This opened new opportunities for Industrial Automation projects. Frugal mindset with hands on experience & ability of Mr. Ravindra to experiment & innovate fueled his endeavor to excel in this field.

His rich experience varies from field of Programming to maintenance of large systems. He mastered Excellence in fields of Electronics, PLCs, Drives, HMIs, DCSs, SAP tools, Software programming, embedded applications & development of Visual basic applications.

His career moved from a small-scale industry to a dedicated system integrator & finally moved to the Large-scale OEM in the form of Mahindra & Mahindra ltd, Nashik Plant.

Mr. Ravindra Dharbale, Assistant Manager - (Project Implementation & Project Management), has joined Mahindra & Mahindra Ltd in the year 2012. From September-2012 to August-2016, he worked for Low Cost Automation, Mistake proofing system & Improvement project Implementation.

Mr. Ravindra Dharbale, Deputy Manager - (Process, Project & Maintenance, Scorpio PU, Verito PU), has chosen new field & joined maintenance department in Scorpio PU in the same organization in the year 2017, he is working for 2 major projects Coordination with project team, plant engineering team, central manufacturing engineering team for facility planning, equipment installation and first time right delivery.

His outstanding achievements include - four patent filings with one more in process, over 150 mistaking proofing & Low-cost automation projects in Nashik Plant.

Outstanding Achievements in Career:

ACHIEVEMENTS

1. **Patents:**
   1. Patent filed at Mumbai office for- Wireless communication system for Battery operated tools.
      (Patent filing No - 4925 / MUM / 2015)
      Special appreciation "Spot Award" received from M/S Mahindra & Mahindra Ltd., Nashik Plant-1
   2. Patent filed at Mumbai office for- System for scheduling TIP replacement of spot welding gun on body assembly of automotive.
      (Patent filing No – 1514 / MUM / 2014)
      Special appreciation "Spot Award" received from M/S Mahindra & Mahindra Ltd., Nashik Plant-1
   3. Patent filed at Mumbai office for- System for vehicle air conditioner performance checking.
      (Patent filing No – 248 / MUM /2012)
      Special appreciation "Spot Award" received from M/S Mahindra & Mahindra Ltd., Nashik Plant-1
   4. Patent filed at Mumbai office for- System to monitor critical parameters of remotely implemented boiler (GSM Based).
      Special appreciation "Award" received from M/S Cotmac Electronics Pvt Ltd., Pune

2. **Mahindra Yellow Belt award** for acquiring proficiency in systematic Problem solving through successful completion of **QC story Project**.

3. **Received 5 Spot award for** for elimination of chronic concern, quality concern & low cost innovative project implementation.

4. **IMCR award** for outstanding contribution in Value analysis/value engineering for Verito Model

5. Received **Mahindra Yellow Belt Award** for elimination of chronic concern.

6. Designed 6 breakthrough automation systems for remotely implemented "Steam Boiler".
   Special appreciation received from M/S Forbes Marshall & M/s Spirax Marshall Pvt Ltd.

7. **For Organization development – Designed 5 special purpose products (Microcontroller & Microprocessor based) i.e.**
   - Vehicle Tracking System
   - Water level controller
   - Wireless Remote Door Locking System
   - Timer & Counter modules
   - Auto Room Temperature Controller

8. **For Organization development – Designed 4 special purpose machines (Electro pneumatic) i.e.**
   - Riveting Machine
   - Corrugated Box Printing Machine
   - Oil lubrication Machine
   - Centrifugal Machine

Describe your overall duties/responsibilities as a Deputy Manager (Automation Engineer):

As an automation Engineer & Project Implementation & Project Management engineer, it is my responsibility to communicate with Project Leads, Group Leaders, OEMs, Suppliers and other Engineers to design the highest quality facilities, combining innovation and PQCDSM approach to deliver the best possible solution for application.

Career Details:

ORGANISATION	DESIGNATION	PERIOD	WORK DONE
Mahindra & Mahindra Ltd, Nashik Plant 1	Deputy Manager	Sept-2016 to Till Date	1. Coordination with project team, plant engineering team for facility planning, equipment installation and first time right delivery. Till date working on **2 major projects.** 2. Benchmarking for process improvements, quick troubleshooting (Fault finding & machine restoring) Benchmark from Innovative ideas. 3. **Localization** done for tooling & machine spares to save cost & local support (**Cumulative cost saving RS 7,04,653**) 4. Design & establishment of new process for the assembly shop to meet the safety, productivity & quality requirements. 5. **Engineering changes implementation** with zero defect & zero losses. Till date total **122 engineering changes implemented** for cost & quality benefits **with zero defect & zero losses.** 6. Planning and implementation of **Continuous improvement & Poka yokes for PQCDSM benefits**. **Till date 12 no's safety & more than 150 no's quality Poka yokes are done.** 7. Quality concern analysis, **Chronic quality concern resolution** like Roof stud breakage (Defect 34 R/1000 reduced to zero R/1000) 8. Various **ergonomic improvements done to reduce operator fatigue** and improve productivity & employee morale. Eg. Spare skid modification (eliminated lifting of assemblies), Door handling system (**eliminated 12 kg weight lifting after every 5 mins**) etc. 9. **Operators are trained for computer**, Daily Work Management (DWM) methodology, Quality Control (QC) story, Equipment Handling, PLC Programming, Electrical Safety, HMI Programming, safety, and Quality systems. 10. Administration for Production function. **People motivation & Development.** 11. Assembly line balancing & **Production set up implementation** for 111/135/160 Vehicles/shift 12. **Active participation in events** like Mahindra Innovation awards 13. Active Participation in **Blood & platelets donation** 14. **Adopted a Girl child** for primary education through **"**Nahi kali" charitable trust. 15. Participating since **last 6 years for Tree plantation** at Borgad, Trambak, Nashik area 16. **Trained as a first aider** to provide first aid inside factory. 17. Capital procurement, Installation & Commissioning.
Mahindra & Mahindra Ltd, Nashik Plant 1	Assistant Manager	Sept-2012 to Aug-2016	1. In-house development & execution of innovative, path breaking solutions. Till date **4 innovative** projects implemented & filed for **patent registration.**

			2. Low cost Automation projects - design, implementation & execution. Till date total 31 LCA projects implemented for quality benefits **with zero defect & zero losses**. 3. Mistake proofing systems- design, implementation & execution. Till date 58 Pokayoke projects implemented for quality benefits **with zero defect.** 4. **Localization of imported (CKD) parts** through integrated material cost reduction (IMCR) (Cumulative **cost saving Rs 14,99,016)** 5. Planning and implementation of Continuous improvement & Poka yokes for PQCDSM benefits. Till date **17 safety & 78 quality Poka yokes** are done. 6. Various **ergonomic improvements done to reduce operator fatigue** and improve productivity & employee morale. 7. **Operators are trained** for electronics system, Pokayoke, LCA & computer. 8. Administration for Production function. **People motivation & Development.** 9. Active Participation in **Blood donation, Swatch Bharat Abhiyan, AIDS Awareness.** 10. **Adopted a Girl child** for primary education through Nahi kali charitable trust.
Cotmac Electronics Pvt Ltd. (Siemens System House)	Team Leader (Industrial Automation Department)	Sept-2010 To Sept-2012	1. Commissioning of Large Scale Steam boilers – 11 Projects Completed. 2. Commissioning & trouble shooting of Distributed Control System – 2 Projects 3. Development & programming of Programmable logic controller & Human Machine interface based applications. – 47 Projects 4. Commissioning of Process Plants using Programmable logic controller & Motor Drives. – More than 50 large projects
Eastro Control Systems Pvt Ltd. (Omron System House)	Junior Engineer (Industrial Automation Department)	July-2008 To Sept-2010	1. For Organization development – Designed 5 special purpose products (Microcontroller & Microprocessor based) 2. For Organization development – Designed 4 special purpose machines (Electro pneumatic) 3. Hands-on experience of design & execution of embedded systems.

Explain the skills/abilities that are required for being successful in your role:

Hard work, dedication & integrity are integral requirement to success.

Other skills and abilities required to become successful in this field are knowing the basics of Electronics, Automation, Pneumatics, Mechatronics, Project Management & Relationship Management. Also, the ability to innovate systems individually as well as with team. Updating the knowledge is a key to remain competitive in this field.

I believe, that having strong technical knowledge & skill in any above one of field, it is most valuable in any organization.

Specialized Training Courses:

COURSE NAME	DURATION	PLACE	TRAINING AGENCY	SKILL ACHEIVED
1.Automation using PLC (Programmable Logic Controller), HMI (Human Machine Interface) & Motor Drive	6 months	Bangalore	ABB Ltd	Certified Course – Learnt ▪ Basics of PLCs, HMI's & Motor drives ▪ PLC Programming Languages ▪ Automation System Designing
2.Electronics Embedded System Designing	3 months	Nashik	ECS Pvt Ltd	Certified Course – Learnt ▪ Basics of electronic systems ▪ Microprocessors & Microcontrollers ▪ Embedded C & Assembly programming ▪ PCB (Printed Circuit Board) Designing
3.Project Management	3 Days	Nashik	Mahindra Business Excellence team	Basic Learning of project execution ▪ Team Work ▪ Time Management ▪ Risk Management
4.Relationship Management	3 Days	Nashik	Mahindra Institute of Quality	Self-capability development ▪ Initiative at work ▪ Work life Balance ▪ Respect within team ▪ Good communication & contribution within team
5.Mahindra Yellow Belt	2 Days	Nashik	Mahindra Institute of Quality	Vehicle Chronic Concern – Development Skill ▪ Learnt different problem-solving technique & approach
6.Theory of Inventive Problem-Solving Techniques	4 Days	Nashik	Mahindra Institute of Quality	Innovative problem-solving techniques

What advice would you give to students who are considering majoring in E &TC Engineering?

Follow your passion….do what you enjoy doing most……. don’t fear the failures!

Above words explain my journey. Don’t be afraid to study new things on your own! It will NEVER hurt you to learn a little more, whether it be for fun, before a class begins, or in preparation for a new job.

When I first began working in this field, I was scared because I had little to no experience, may be due to lack of exposure in the automation industry. If I had spent a little more time learning on my own, I believe I would have been much more prepared.

Also, do not expect everything you learn in school to be the same in the real world! There will always be a few subjects that you won't like or seem to be too difficult for you; don't let that stop you! When I implemented my first idea in to organization, I thought it was amazing but awfully difficult. Therefore, I limited myself to not pursuing that concentration and it took me two years to realize I was being called to that specific field!

Never limit yourself to anything, especially if you feel you have a passion for it.

So... Follow your passion……. All the best!!!