

# TAMILNADU SAFETY PROFESSIONALS WELFARE ASSOCIATION



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## **PATRON'S DESK**

**Dear TNSPWA members,**



At the outset, I wish you & your family members a very happy, healthy, safe & prosperous New year 2023. Past 3 years due to killer Covid 19 pandemic across globe, life of all were shattered, losing millions of human lives. Now pandemic has receded, and normalcy is slowly coming back. We pray for full restoration of normalcy and industrial activities to be back in full vigor.

But apart from Covid 19, millions of workers are still losing their lives due to industrial accidents & occupational diseases. We as Safety Professionals have a moral duty to protect the workmen from getting injured at workplace, for which sound knowledge and experience on Safety is required. Towards this, our great TNSPWA Association is doing a commendable job in organizing various programs, webinars to disseminate Safety knowledge to our members and other Safety Professionals.

In this quarterly magazine, the following safety articles are being published:

1. Safety Guidelines on Electric Vehicles (EV) charging – written by Shri. Balaji Rajasekaran, one of our active Life members (Regional Corporate HSE Manager/FL Smidh, Chennai). He has brought out very nicely about the basic safety requirements of EV Charging, which is very much need of the day as globally more & more thrust is given for Electric vehicles, as part of Climate change & sustainable development. The recently concluded COP 27 at Egypt also emphasized on the same. This article will immensely be very useful to all our members. Special thanks to the Author for bringing out such a timely & wonderful article.
2. Mind Mapping - written by Shri. Yuvaraj one of our Member (Head Safety/Lucas TVS, Chennai) is an unique article which explains about Mind Mapping in General & EHS activity in particular. It is a visual representation of a Map wherein a Central theme forms the main part and related ideas/sub themes are generated outwards. It is very much useful in designing a robust HSE roles & responsibilities of various departments in any organization. It can be further innovatively used for even Hazard identification & Risk Assessment techniques for finding out best/safe solution, making the workplace safer.

Special thanks to the Author for such a novel & wonderful article.

I personally advise all young members including student members to actively participate in such activities, so that our Association will be more vibrant & visible across the country. My personal idea/thought process is that TNSPWA can actively discuss, design simple process, procedures for Safety by thinking out of the box and if implemented successfully at Companies/Projects, we can even go for Patent Registration on TNSPWA name, which will pave way for a new paradigm shift in which such associations can function.

For strengthening our Association, the foundation shall be strong enough, for which we have to further strengthen our Member base, so that it will be easy for achieving anything meaningful for the Safety Professionals.

I congratulate all the Core Team Members who worked tirelessly to bring 300 + members on board in a shortest possible time.

I once again wish you all the very best in the Year 2023, with safer workplace, saving the lives of workers.

Thanking you.

**With Best Wishes,**

**R. Mohan, Patron / TNSPWA**

## **PRESIDENT'S DESK**



Dear Safety Professionals

My Sincere thanks to Our Patron, Secretary, Vice-President, Treasurer, Core Committee, and members of our TNSPWA for elected me as President.

To promote safety culture and awareness among our members of development and challenges of growing technology, our association consistently releasing E-Magazine every quarter.

This edition is comprising of two topics giving eye opening on Safety guidelines of charging electric vehicle with broad thinking over standards of electric vehicle charging in India, tips to maximize EV vehicle safety etc. by our Core Committee member Shri. Balaji Rajasekaran and article by Shri.M.Yuvaraj , Active member of our Association, on EHS Mind Mapping which divides the duties of EHS activities into sub activities, thereby reducing stress and have immense mind strength which is need of the hour.

I request all our members to utilize the knowledge shared in this E-magazine and try to implement in our day-to-day professional activities to make workplace environment healthy and safe.

I wish all our members “Happy New year 2023” and let us have one mantra

“Unity is strength “

**With Best Wishes,  
J. Veeraraghavan  
President / TNSPWA**

## SECRETARY MESSAGE



Dear TNSPWA members,

### Greetings:

1. Electric vehicle charging safety guidelines – Topic is need of the hour.

This E book clearly explains about Safe operating to be followed while doing Electrical vehicle charging and Various proactive measures to be followed during Electric vehicle charging at home also. Strictly follow the guidelines & tips and maximize the utility and performance of our electric vehicle – Helpful to achieving Sustainable Development Goals (SDGs)

2. Mind map in research

Mind map is creating a diagram of visualized ideas or concepts, which offers a logical way to develop and organize information

Mr. Yuvaraj created a graphic that divides the duties of Safety, Environment, and Health into main branches and sub-branches.

Our Core Committee member Mr. Balaji Rajasekaran. Regional Corporate HSE Manager – FLSmidth Private Limited - Chennai. Mr. M. Yuvaraj, Head – Safety Lucas TVS Ltd, Chennai, release this Quarterly E magazine which includes two key topics:

1. “Electric vehicle charging safety guidelines”
2. “Mind map in research”

The first topic will be helpful in increasing the battery life in Electrical Vehicles and safe handling. The second topic will be helpful in getting improved HSE performance through systematic way of approach.

Everyone shall read this E magazine and spread “**Safety, Environment & Health**” awareness to colleagues, friends, and family members so that we can save the society.

With Best Wishes,

K. Palani

Secretary / TNSPWA

**Balaji Rajasekaran**  
**Regional Corporate HSE Manager**  
**FLSmidth Private Limited - Chennai.**



## **ARTICLE - I: ELECTRIC VEHICLE CHARGING SAFETY GUIDELINES**

### **Introduction:**

The adoption of Electrical vehicles (EVs) across the globe has revolutionized the automotive market. Not only are they good for the environment but they are pocket-friendly too, helping you save significantly in the long run. The EV industry is growing by the day, with several top automobile players launching new and affordable models in the market.

The availability of safe, affordable, and accessible charging infrastructure is the greatest enabler to mass EV adoption. However, even with the growing awareness of the benefits of owning an electric vehicle, EV safety remains a major concern.

**How do you safely use a charging station and ensure electric car crash safety? What are the protocols to follow to ensure electric vehicle safety?**

**Ministry of Power issues EV charging safety guidelines** to accelerate the adoption of EVs in the country by ensuring a safe and reliable charging ecosystem.

Here are the **electric vehicle charging safety guidelines** that we need to know about.



- When using a public charging station, make sure all the components are in good working order and there are no signs of misuse or disrepair to ensure charging station safety.
- Never use an EV charger if it is damaged or off its base.

- Always follow the EV charging safety guidelines and car safety guidelines laid down by the manufacturer when charging your vehicle. Check with your dealer for more information.
- While installing home charging equipment, make sure to use only certified devices for maximum electric vehicle safety.
- If you're charging your EV at home, plug the charger directly into an accurate outlet instead of using a multiplug adapter or extension cord.
- Properly maintain the charging station components as per the manufacturer's guidelines to avoid a potential shock hazard and ensure electric car crash safety.
- Avoid charging the EV battery immediately after using the vehicle. It is best to let the batteries cool down before you charge them to ensure electric vehicle safety.

Make sure that as per vehicle safety guidelines, you are using a DC charging station as vehicle batteries are always charged by DC power. The DC charging station will convert AC into DC to charge the EV.

Moreover, when it comes to EV safety, vehicle safety guidelines suggest that ground fault protection is essential at both the DC output side and the AC grid side. These ground-fault relays for DC voltage detect electrical issues and minimize shock hazards to EV drivers for maximum safety.

### **Public EV charging safety standards in India**

As per the vehicle safety guidelines, you can charge your EV at home or offices using their current electricity connections. To ensure that your EV is charged safely, it is important to invest in the right charging equipment as per the car safety guidelines. For electric car charging safety, public charging infrastructure is standardized to ensure interoperability between EVs and charging equipment offered by different automakers.

In line with vehicle safety guidelines, for low voltage EVs (<120 V) **Bureau of Indian Standards recognizes following DHI approved Bharat Charger Specifications-**

- For AC charging- Bharat EV Charger AC001
- For DC charging- Bharat EV Charger DC001

### **Home charging and electric vehicle safety**

Home charging is the most widely used charging infrastructure by EV owners, which uses a 230V charger that delivers up to 2.5kW of output power.

Although there is no standard defined for EV charging at home, car safety guidelines recommend installing the **Residual Current Circuit Breaker** and using an **IEC 60309 industrial connector** to ensure EV safety while charging.

## **Tips to maximize electric vehicle safety: (Ensuring the overall safety and long life of your electric vehicle)**

### **1. Don't keep the vehicle battery completely full or empty**

Whenever possible, try to maintain the vehicle battery's charging status between 20% to 80%. Charging the battery repeatedly and till 100% might cause it to degrade more quickly.

### **2. Check the vehicle batteries regularly**

As opposed to fuel cars, the battery level of an EV might drain even if the vehicle is parked and has not been used for a long time. So, make sure to keep a track of when you charged it last and the overall performance of the battery to ensure electric vehicle safety.

### **3. Use your vehicle for regular, short trips**

Don't keep the vehicle idle for too long. Like fuel cars, the overall health of the vehicle might get affected if it is not used for a drive now and then.

### **4. Avoid fast charging**

If you drive the vehicle a lot and need to charge it frequently, then fast charging is undoubtedly a great convenience. However, it transfers too much current into the batteries in a short time, which can weaken the health of your batteries. You might not notice the difference, but on average, 8 years of standard charging will give you 10% more battery life than 8 years of fast charging.

### **Conclusion:**

As part of achieving Sustainable Development Goals (SDGs), let us strictly follow the above guidelines & tips and maximize the utility and performance of our electric vehicle. Let us make the safe and hassle-free transition to an EV, it's time now to move forward and become the part of green movement!



M Yuvaraj,  
Head Safety,  
Lucas TVS Ltd- Chennai.  
9600812362.



## ARTICLE – II: EHS ACTIVITY MIND MAPPING

### Background:

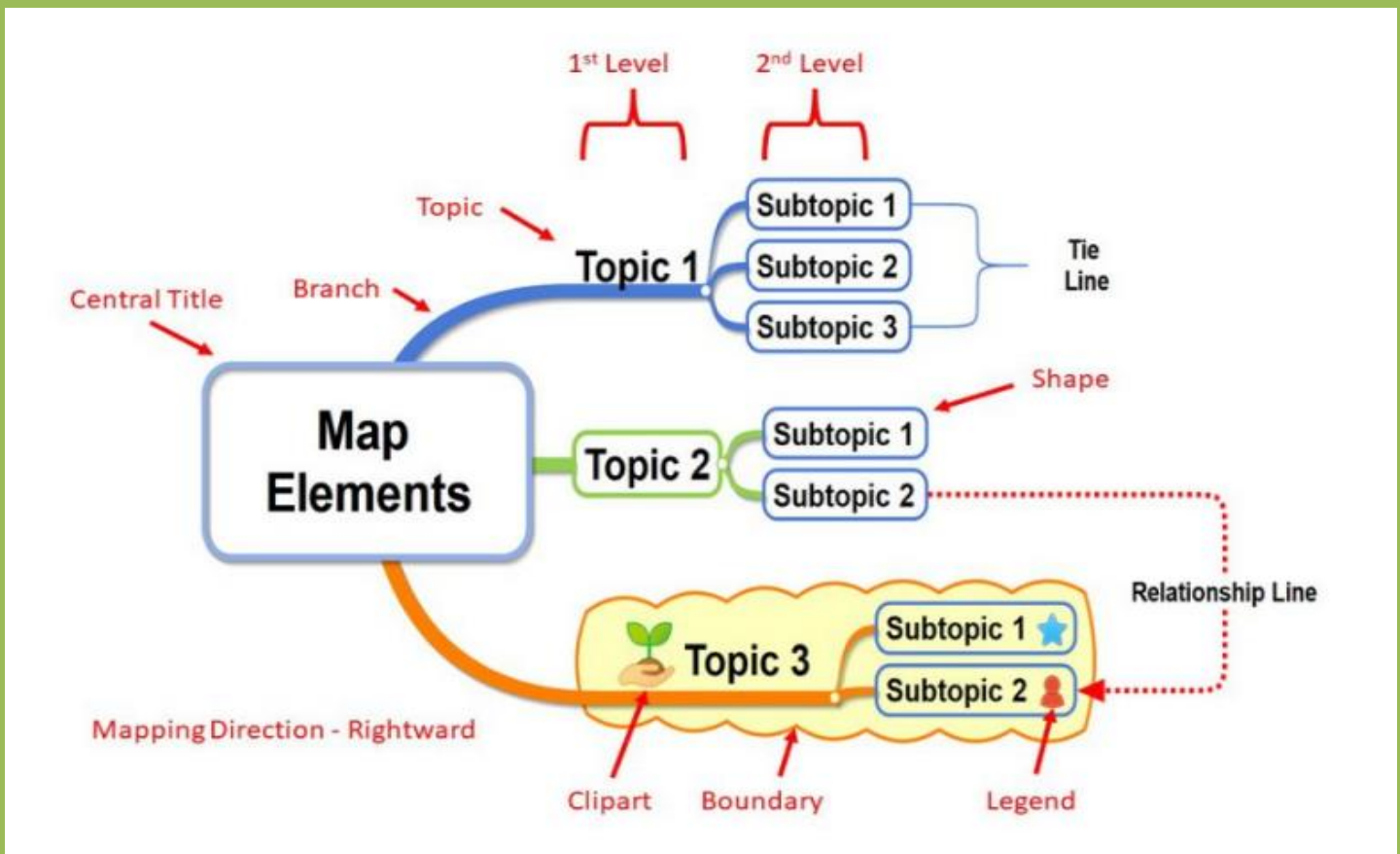
We may face the difficulty of finding ideas, organizing relevant data, choosing supported sources, etc. A mind map in research can assist you in solving this problem. The radial diagram visualizes the themed concept with sub-concepts logically and coherently, allowing you to easily remember and recall the necessary information. It brings you fun during the research process with effective results.

### Scope of Mind Map:

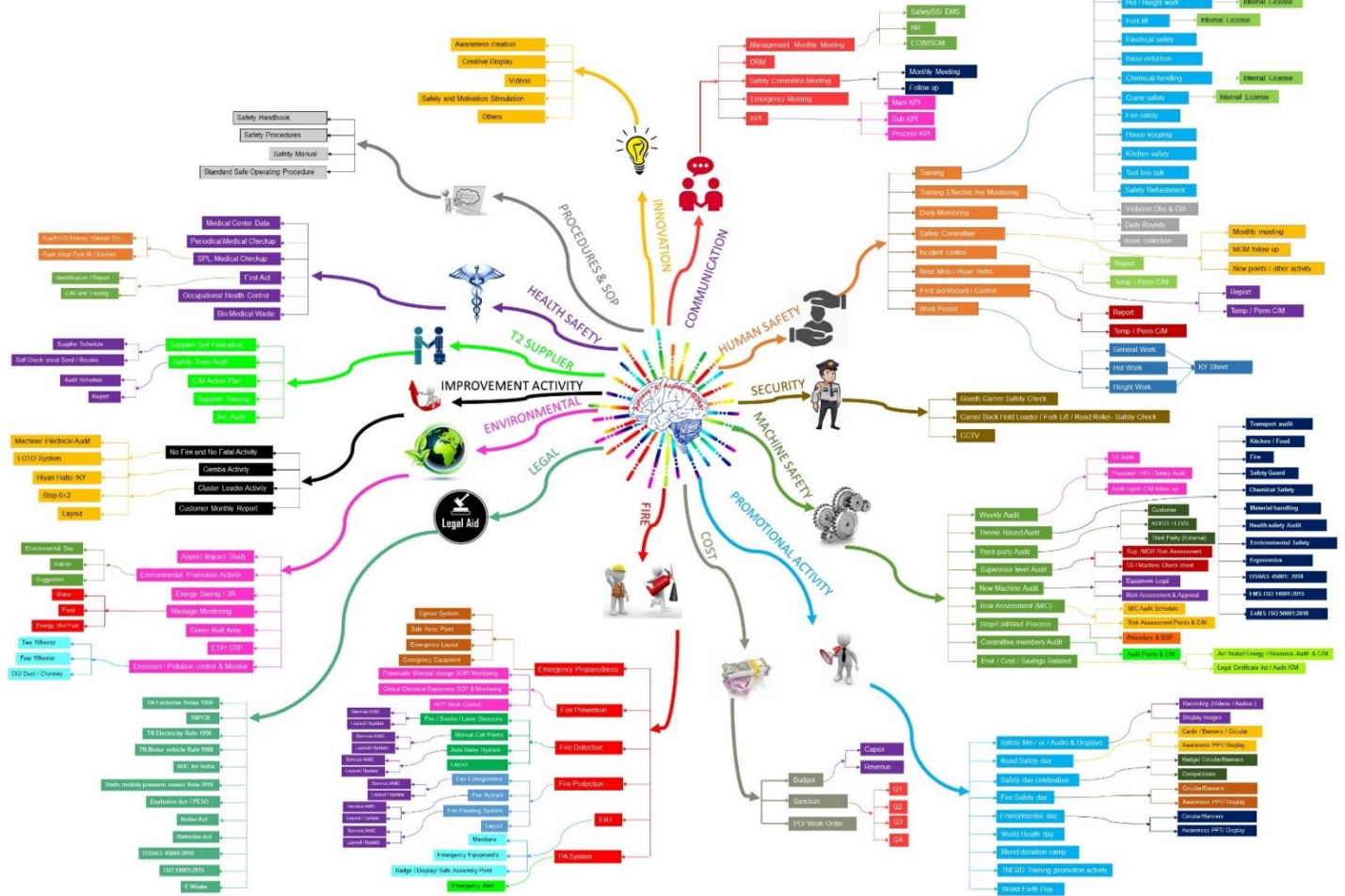
Mind mapping is creating a diagram of visualized ideas or concepts, which offers a logical way to develop and organize information. The visualized map starts with a central theme and generates related ideas outward. Shapes, keywords, phrases, figures, etc., are among main elements of this diagram.

It is one of the study techniques for doing assignments and writing essays, providing an approach for students, especially at the beginning of the research. You can use it as a critical thinking strategy to brainstorm, note-taking, organize, solve problems, or make decisions. By looking at the map, you can easily focus and understand the target ideas.

### EHS Activity mind Map creation



# EHS ACTIVITY MIND MAPPING



**Note:** For better readability, kindly refer to this link -> [EHS MAP in A3 pdf.](#)

**EHS mind map** is relatively simple to use and has several advantages. It's also a process that centralizes all the tasks you complete as part of your typical work responsibilities. Every activity that we may do in a year has been classified into several categories, along with those categories' branch tasks, sub-branch tasks, and your tasks, which are painstakingly monitored. Where greater effort, time, and speed are required in this, and we can predict with relative ease. I've created a graphic that divides the duties of Safety, Environment, and Health into main branches and sub-branches. Although anyone can draw this easily. Then, on A2 or A3 paper, sketch it in pencil. The final form should only be presented after thoroughly verifying that all the main branches and sub-branches are located where they should be. Finally, you should highlight and offer a different hue to the areas of your work that require more time or effort. You will be able to prioritize your duties by doing this. With the help of this mind map, you can do any assignment without skipping a beat and with the right amount of attention. The significance of this, the priority chores, and the significance of stressful activities won't be in their minds unless they physically create the EHS Mind map.

# QUARTERLY HIGHLIGHTS

TNSPWA - Annual General Body Meeting for 2022 was held on 17<sup>th</sup> Sep 2022 at Chennai. And best HSE performance awards were distributed to winners. The event was sponsored by Danfoss Industries Pvt. Ltd.



**Tamilnadu Safety Professionals Welfare Association - TNSPWA**

SPONSORED BY **Danfoss**  
ENGINEERING TOMORROW

**Upskilling Certification Programme for Safety Professionals on Effective Behaviour Based Safety Implementation**

**TNSPWA Safety Awards 2022 & AGM**

Date: 17<sup>th</sup> September 2022      Venue: JP Hotel, Opp CMBT  
Time: 09.00AM - 05.30 PM

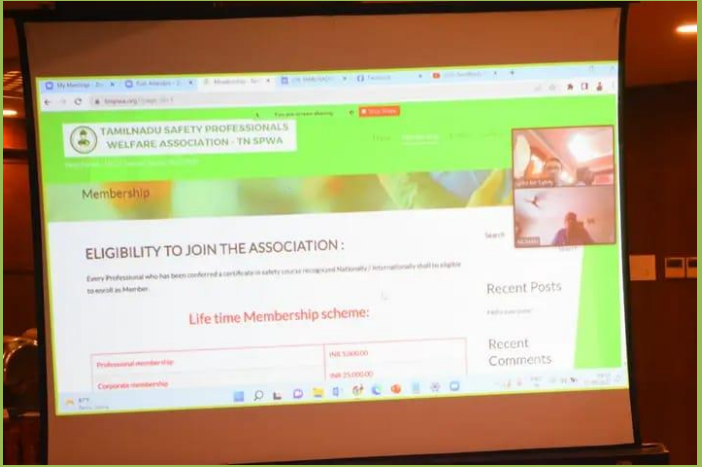
*Welcome*  
*To the participants & awardees*

*Knowledge SERIES*

The banner features several images: a worker in a hard hat, an industrial factory, a wind turbine, and two workers in hard hats reviewing documents.



Launch of TNSPWA website -> <http://tnspwa.org/>



AGM moments: All the relevant snapshots are shared via [TNSPWA FaceBook page](#), [Linkedin](#) and websites.



## HSE Award Programme



Followed by press meeting, and core committee members assembly.



Certification programmes on following HSE topics were conducted after AGM on 17<sup>th</sup> Sep 2022.

- Human Error Prevention & reduction techniques for incident control
- Emotional Intelligence – pathway for successful Safety leadership
- Practical Techniques to achieve a just & fair safety culture

HSE professionals were actively participated and certificates were distributed to the participants.

## TAMILNADU SAFETY PROFESSIONALS WELFARE ASSOCIATION - TN SPWA

RTGD: SRG/CHENNAI/SOUTH/362/2020



### UPSKILLING CERTIFICATION PROGRAMME FOR SAFETY PROFESSIONALS ON EFFECTIVE BEHAVIOUR BASED SAFETY IMPLEMENTATION

**VENUE: JP HOTEL, OPP CMBT**  
**DATE : 17TH SEPT 2022 (SAT)**  
**TIME : 9:00 AM ONWARDS FOLLOWED BY AGM**

#### Brief Profile of the Speakers

**Participation fees**

*Members - ₹ 250/-*  
*Non-Members - ₹ 1500/-*



**Human error prevention & reduction techniques for  
incident control**

by

**Dr. K. Sathyanarayanan**  
EdTech Professional

- More than 10 years of experience in Education and Industry on HSE & Quality
- Mechanical Engineer with Masters in Manufacturing Systems & Management (CEG)

**Emotional Intelligence - A Pathway for  
Successful Safety Leadership**

by

**J. Veeraraghavan**  
Vice President TN SPWA

- More than 23 years of experience with Railways in Engineering & Safety
- Electronics & Communication Engineer, MBA and Diploma in Industrial Safety





**Practical techniques to achieve a  
Just & Fair safety culture**

by

**Dr. Balaji Rajasekaran**  
HSE Professional

- More than 12 years of experience in various industries on HSE
- Electronics & Instrumentation Engineer with Masters in Safety and Doctorate in Human Factors Engineering

Please click on the link to register

<https://forms.gle/vtSp9AsaheEUD6uy5>

[www.tnspwa.org](http://www.tnspwa.org)

[YouTube](https://www.youtube.com) [LinkedIn](https://www.linkedin.com) [Facebook](https://www.facebook.com)

[spwassociation@gmail.com](mailto:spwassociation@gmail.com)

For any queries

Murali TR 99520 99044  
Balaji R 99401 31327



Online webinar on "Safety in Electric Vehicles" was conducted on 11<sup>th</sup> Dec 2022, through MSTeams.

# TAMILNADU SAFETY PROFESSIONALS WELFARE ASSOCIATION - TN SPWA



RTGD: SRG/CHENNAI/SOUTH/362/2020

## WEBINAR



### Brief Profile of the Speaker



#### Mr. S.Sundareswaran

MS ( BITS) . MBA ( Fin ) PGSCCL ( XLRI), CMA

Head - EV - Operations in M/s Switch Mobility

Mr. S. Sundareswaran is a senior member in automobile industry with 25+ years of experience in the field of

1. Plant operations
2. Production Engg
3. Pricing & Product costing
4. Strategic sourcing / Supply chain mgt
5. Project planning
6. Finance

He has served in different automobile companies viz.,

- Ashok Leyland
- Nissan
- Tafe
- Sab wabco

in various capacities and currently heading the Operations in M/s Switch Mobility as Head EV Operations

## SAFETY IN ELECTRIC VEHICLES

DATE : 11TH DEC 2022 (SUN)

TIME : 11:00 AM TO 12:30 PM

MODE OF TRAINING: TAMIL / ENGLISH

Free Session for Members  
and Non-members

To watch the session LiVE please scan the FB page QR code or visit

<https://www.facebook.com/profile.php?id=100064592688833>

Please visit our Facebook page by scanning the QR code below

For any queries

Murali TR 99520 99044  
Balaji R 99401 31327





**Training / seminar on “EHS integration with ESG” was conducted to TNSPWA members and followed by industrial visit at Danfoss Industries Pvt. Ltd on 20<sup>th</sup> Dec 2022.**

The session gave insights & practical knowledge towards HSE culture enhancement & digitilization, and environmental performance improvement through waste reduction initiatives, water reduction initiatives, emission reduction initiatives and renewable energy transition.



## UPDATES ON STATUTORY REQUIREMENTS

On 6<sup>th</sup> Dec 2022, the following amendments were made to the Tamil Nadu Factories Rules, 1950.

### 63-B First-aid

Persons who are in charge of first-aid box shall be persons who possess the certificate granted by the Saint John's Ambulance Association for rendering first-aid.

After the expression "St, John's Ambulance Association", the expression "or Tamil Nadu Apex Skill Development Centre for Health Care" shall be inserted.

### SCHEDULE XXVII MANUFACTURE, HANDLING AND USE OF BENZENE, in paragraph 4

Persons who are in charge of first-aid box shall be persons who possess the certificate granted by the Saint John's Ambulance Association for rendering first-aid.

After the expression "St, John's Ambulance Association", the expression "or Tamil Nadu Apex Skill Development Centre for Health Care" shall be inserted.

### SCHEDULE XXIV FIRE WORKS MANUFACTORIES AND MATCH FACTORIES, in paragraph 12c

Persons who are in charge of first-aid box shall be persons who possess the certificate granted by the Saint John's Ambulance Association for rendering first-aid.

After the expression "St, John's Ambulance Association", the expression "or Tamil Nadu Apex Skill Development Centre for Health Care" shall be inserted.

## INCIDENT ALERT AND LEARNINGS

### 1. Nov 2022: Fatal incident - Man dies from fall into pot of molten metal at foundry in U.S.A.

In vehicles and automobile equipment manufacturing industry, 39-year-old melting specialist was taking / removing a molten metal sample from the furnace of 11 feet (3.4m) deep pot of molten iron heated to more than 2,000 F (1093 C). Accidentally he fell into the pot and immediately incinerated / died.

Source: [OSHA news release](#)

IP (Injured person) was new employee to the compay, just completed 9 days.

Unprotected fall hazards were the reasons for the incident, as melting workers has to work close to deep containers of molten iron.

#### What precautions could avoid similar incident:

- Eliminate the unprotected fall hazards around the furnace pot.
- Floor should be free from debris, slip, trip & fall hazards.
- Go for automation instead of manual feeding and sample collection to avoid closely working at molten metal pot.
- Implement safety guards and barriers against the fall hazards, as per the requirement.
- Furnace – deep container should have the lid, to be covered during melting.

## 2. Nov 2022: Fatal incident - Safety Manager became a victim, in Madhya Pradesh, India

In Cement Industry, Safety Manager/ in-charge went for inspecting the silo and fell down from the platform at a height of 60 feet (18m).

Since platform condition was not good, it just got broken while he stepped on it. IP fell down and died on the spot.

Source: [News](#)



What precautions could avoid similar incident:

- Personal fall protection when working on the unstable platform
- Replace the poor condition platform in time / defined interval.
- Maintain the platform good conditions with corrosion protection
- Conduct the risk assessment or Job safety analysis for routine / non routine activity and take the safety measures.

## 3. Dec 2022: Cricketer Rishabh Pant 'suffers serious injuries' in car accident

IP Rishabh Pant met with an car accident between Manglaur and Narsan in Haridwar district, and sustained with serious injury.

Source: [News](#)

He has slept while driving alone in the car, early morning. He has worn the seat belt, and so saved.

Same year Tata Sons ex-chairman Cyrus Mistry was killed in an car accident, due to the narrowing road conditions. But he did not worn the seat belt !!



What precautions could avoid similar incident:

- Proper sleep and rest before driving
- “No” to driving if you are sleepy
- Follow traffic rules and signals
- Assess the road conditions
- Check vehicle conditions daily
- Road Safety awareness among all travellers.

அறங்கூறான் அல்ல செயினும் ஒருவன்  
புறங்கூறான் என்றல் இனிது



Total Association members as on Dec 2022	306
Professional members	235
Corporate/Vendor Members	18
Student members	53

#### SLOGAN OF THIS ISSUE

கைப்பேசில பேசிட்டு வாகன பயணம்  
கவனம் சிதறினா நொடியில் மரணம்.



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