

Session: Creating a Safety Zone

| Learning Objectives | Evaluation Criteria |
|--------------------------------------------------------------------------------------------------------------|-------------------------|
| Explain the different types of signage, warnings, danger boards and symbols used in electrical installations | Interactive Questioning |



Duration 30 Minutes



Resources PowerPoint Presentation, Whiteboard, Markers, Screen and Projector



Facilitator’s Notes In this session, you will take the participants through an interactive presentation with video snippets on the different types of signage, warnings, danger boards and symbols used in electrical installations.

End of Note



1. Tell:
Welcome to the video presentation on ‘Creating a Safety Zone’.



Facilitator’s Notes:

- Display the slide
- Read out the objective and ask learners to note the same
- Inform them that they will be asked questions in during the session

End of Notes



2. Tell:
By the end of this session, you will be able to explain how to create a safety zone.



3. Tell:
We are aware of the hazards that occur due to contact with live electric wires or parts. As workers of power systems, we need to follow certain safety measures to avoid such risks. There are many hazards while working on power systems.

Some of the hazards are high voltage, overloaded circuits, wet conditions, exposed electrical parts and so on.

High voltage line is a potential hazard. It can cause flashovers, fires and so on. These can occur when procedures for safe isolation and grounding are not followed. They may also occur when safe distance is not maintained.

One must note that ‘life is precious’. Therefore, you must never take risks.



4. Facilitator’s Notes:

- Display the slide
- Show the pictures one after the other
- Ask the following question

Ask:

What can you infer from these pictures?

Possible Responses:

- Risk of electric shocks
- Carelessness

Tell:

Well! You see in these pictures that the technical staff members are not bothered about their safety.

In this video presentation, we will look at the different types of signage, warnings, danger boards and symbols used in electrical installations.



5. Ask:

Suppose you see some exposed live electric wires somewhere. What would you do?

Possible Responses:

- Inform others about the same
- Switch off the power
- Cover it with some wooden piece

Tell:

That's great.

Ask:

However, is it possible to do these things every time?

Responses:

- Yes
- No

Ask:

What can be done in such cases?

Possible Responses:

- We can put a danger board
- We can install sign boards

Tell:

That's really nice. To avoid mishaps, we can use signboards. You must have come across various signs and symbols placed on electrical installations and equipment. Let us look at a few of them and understand what they mean.



6. Facilitator's Notes:

- Display the image first
- Ask the learners what this sign indicates
- Appreciate the responses
- Display the second image
- Ask what the sign indicates

- Appreciate the correct responses
- Click to play the video
- Debrief as follows

Tell:

The signs displayed here indicate the Danger of falling from height and Assembly area.



7. Facilitator's Notes:

- Display the image first
- Ask the learners what this sign indicates
- Appreciate the responses
- Display the second image
- Ask what the sign indicates
- Appreciate the correct responses
- Continue to play the video
- Debrief as follows

Tell:

The signs displayed here indicate an Escalator and Emergency exit.



8. Facilitator's Notes:

- Display the image first
- Ask the learners what this sign indicates
- Appreciate the response
- Display the second image
- Ask what the sign indicates
- Appreciate the correct responses
- Continue to play the video
- Debrief as follows

Tell:

The signs displayed here indicate Danger of high voltage and Fatal.



9. Facilitator's Notes:

- Display the image first
- Ask the learners what this sign indicates
- Appreciate the response
- Display the second image
- Ask what the sign indicates
- Appreciate the correct responses
- Continue to play the video

- Debrief as follows

Tell:

The signs displayed here indicate Caution and Fire extinguisher.



10. Tell:

It is the responsibility of Technical Helper to prepare a safety zone by placing signage, a cordon and traffic diversion boards. This is to:

- Avoid unauthorised entry into the work area
- Make the public aware that men are at work on live lines
- Ensure the smooth completion of job with safety



11. Facilitator's Notes:

Continue to play the video.

Tell:

Here, you can see a DP structure surrounded by MS fencing. This is to prevent unauthorised entry near the structure.



12. Facilitator's Notes:

Continue to play the video.

Tell:

The area is duly locked and a danger sign is placed.



13. Facilitator's Notes:

Continue to play the video.

Tell:

Danger boards are placed on poles at a height of 3 metres as per the Central Electricity Authority of India (CEA) regulation.



14. Facilitator's Notes:

Continue to play the video.

Tell:

As per Clause 58 of CEA regulation, no conductor of an overhead line, including service line erected across a street at any part should be at a height of not less than 5.8 metres for LT and 6.1 metres for HT up to 33 KV. Similarly, overhead and service lines erected along the street shall be 5.5 metres for LT and 5.8 metres up to 33 KV. Thus, it is mandatory requirement that HT 11/33 KV line must have clear distance between the ground and lines at road crossings and along the road.



15. Tell:

Let us now learn about 'Do not operate' and 'Caution' tags. When we start work and

shut down electricity, we put these tags so that no one switches on the LAN.

Facilitator's Notes:

Click to play the video.



16. Tell:

The 'lockout and tag out' tag is used by placing it on the equipment after the equipment is switched off.

Facilitator's Notes:

Click to play the video.



17. Tell:

No lineman or officer will touch the equipment when the tag is placed. The tag indicates that work is going on.

Facilitator's Notes:

Continue to play the video.



18. Tell:

Let us now learn how to cordon off the work area. This will restrict entry and permit only authorised persons to enter work area. The work area is cordoned off using caution tape. This creates a safety zone to carry out any electrical work. All the pathways should be secure and free from obstruction.

Facilitator's Notes:

Click to play the video.



19. Tell:

The caution tape should be of good quality and 'Caution' or 'Danger' must be written on it in bright red colour in English and regional languages.

Proper and adequate number of cones, pegs or poles are to be used for cordoning the area.

The area around it has to be cordoned off for safety of the public as well as the safety of the persons digging the pit.

Facilitator's Notes:

Click to play the video.



20. Tell:

A safety zone is prepared by placing a barricade using caution tape and cones. We have to work only in safety zone and only authorised persons must carry out the work. Here, caution tape and cones are placed to divert the traffic by creating a safety zone at the planned shutdown.

Facilitator's Notes:

Continue to play the video.



21. Tell:

The lines are disconnected from electric supply source and are made dead. Apart from this, roads have been blocked with the help of caution tape on both sides to

cordoned off the area. This will not allow vehicles to pass by the working zone. Thus, a safe working zone is created for the crew.

Facilitator's Notes:

Continue to play the video.



Tell:

In this video presentation, you have seen the different types of signage, warnings, danger boards and symbols used in electrical installation.

Key Learning Outcomes



22. Tell:

Let us quickly recollect the key points of this session.

- Caution tapes are used for cordoning off the area
- Caution tape should be of good quality
- 'Caution' or 'Danger' plates must be written in bright red colour in English and regional language
- Proper and adequate number of cones, pegs or poles must be used to cordon off the area
- Different types of signs and symbols are used to indicate the danger and caution in the electrical system