



# RRRT Kouvolaa

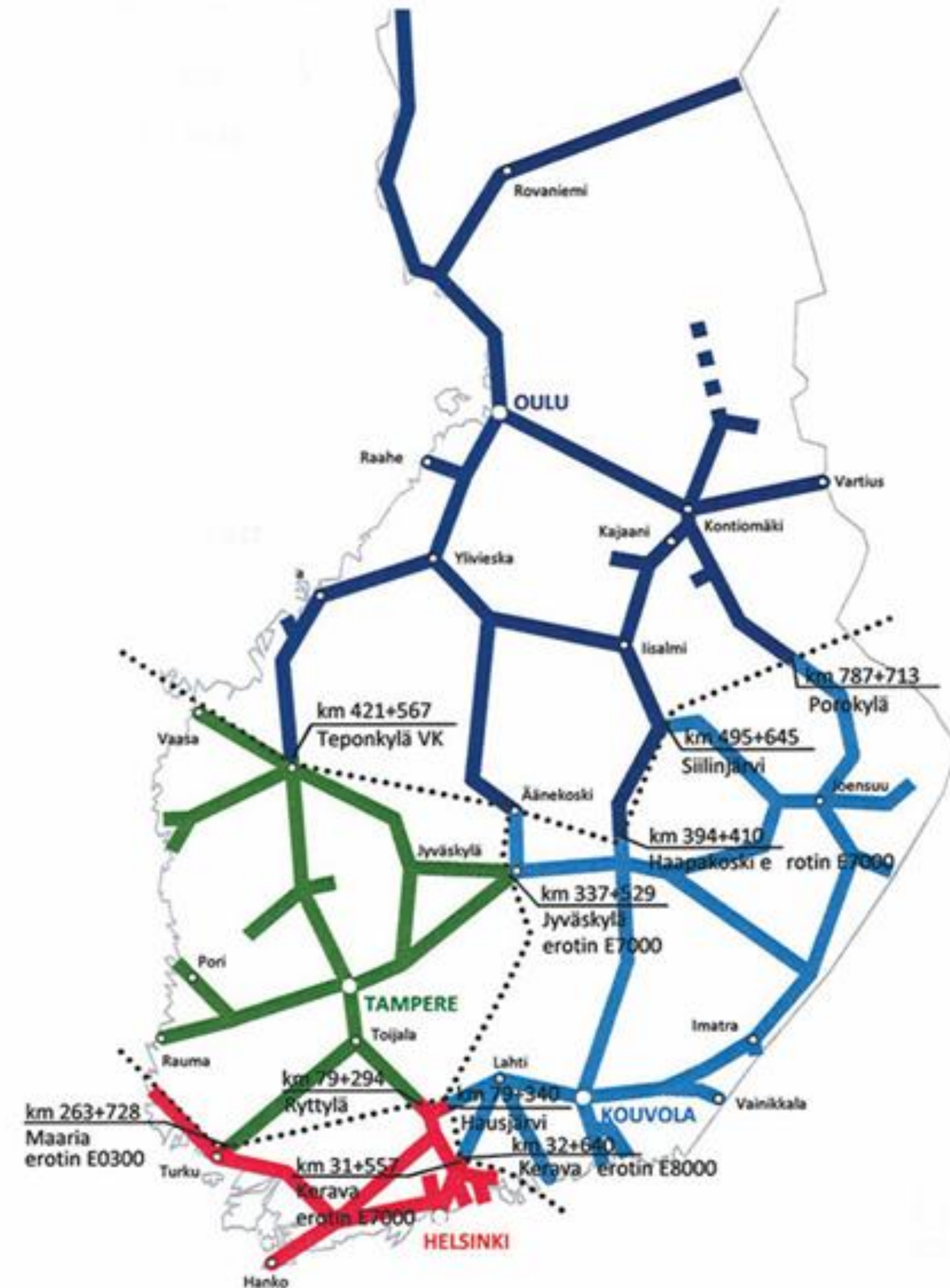
## Electric Railway - Training Material

Updated 4/2026

Source: Väyläviraston ohje Turvallinen työskentely sähköradalla

# Control Center

- Remote monitoring and operation of the electric railway are managed from control centers.
- In the RRT terminal tracks and Kouvola railway yard's area, the electric railway is controlled by the Kouvola control center (tel. +358 045 56 7 02031 03).
- In an emergency, any individual can request the control center to isolate a part of the equipment from voltage.



# Dangerous High Voltage



- **The voltage of the contact wire is 25,000 volts**, which is so high that, depending on weather conditions, it can jump as an arc over a long distance from the electrified parts of the railway.
- The arc's life-threatening temperature can reach up to 5000 °C.
  - It can cause severe internal and external burns.
  - Symptoms of electric shock may appear a day after the incident, so even after a minor electric shock, one should seek medical attention.

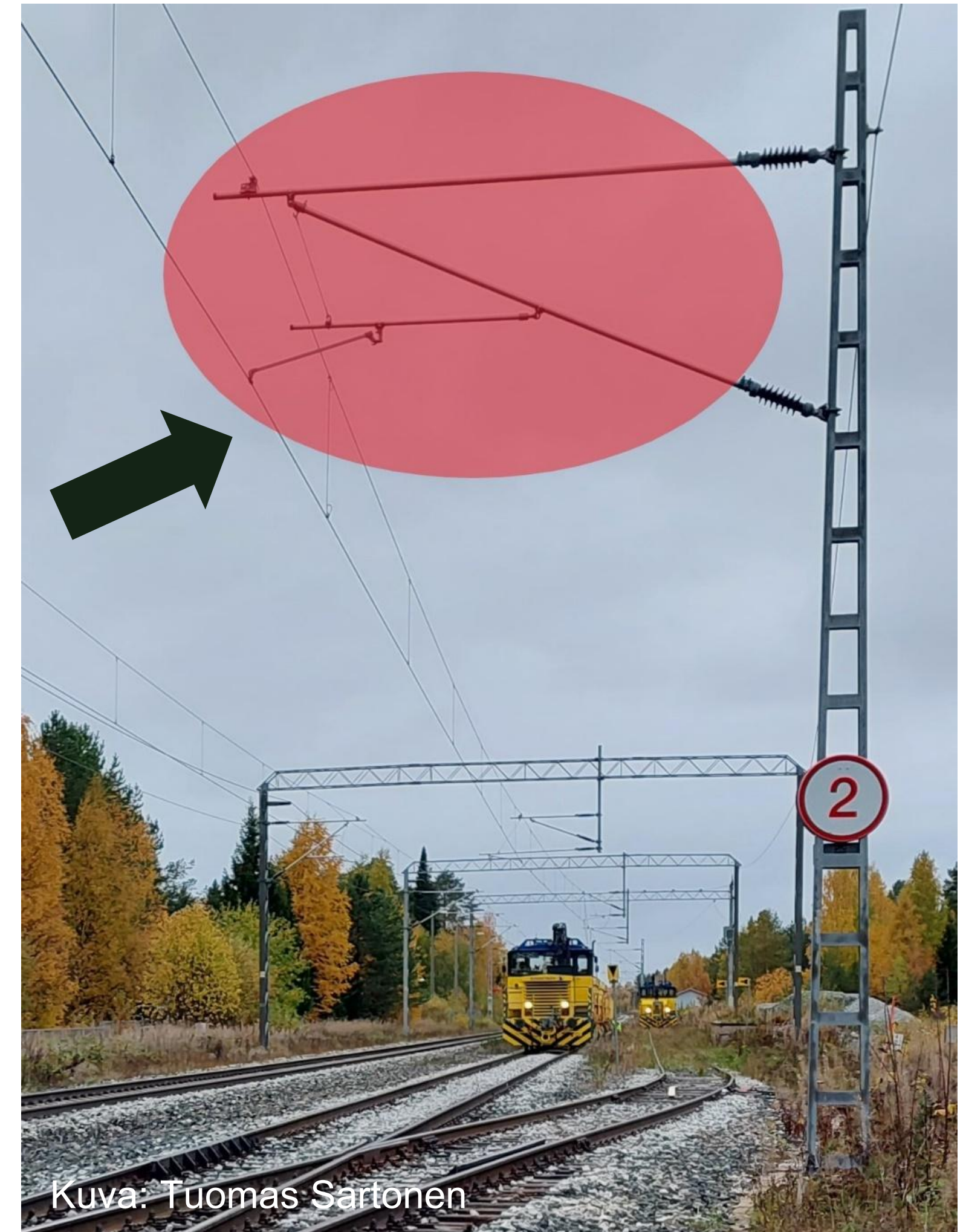
# Safety Considerations



- By following safety instructions, working near high voltage is not more dangerous than other types of work.
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- Remember the minimum allowable working distance to all electric railway structures, especially wires and cantilevers.
  - This distance must be maintained at all stages of the work.
  - No conductive object should even momentarily breach this distance.
- The minimum allowable working distances are presented on the following pages.

# Electric Railway

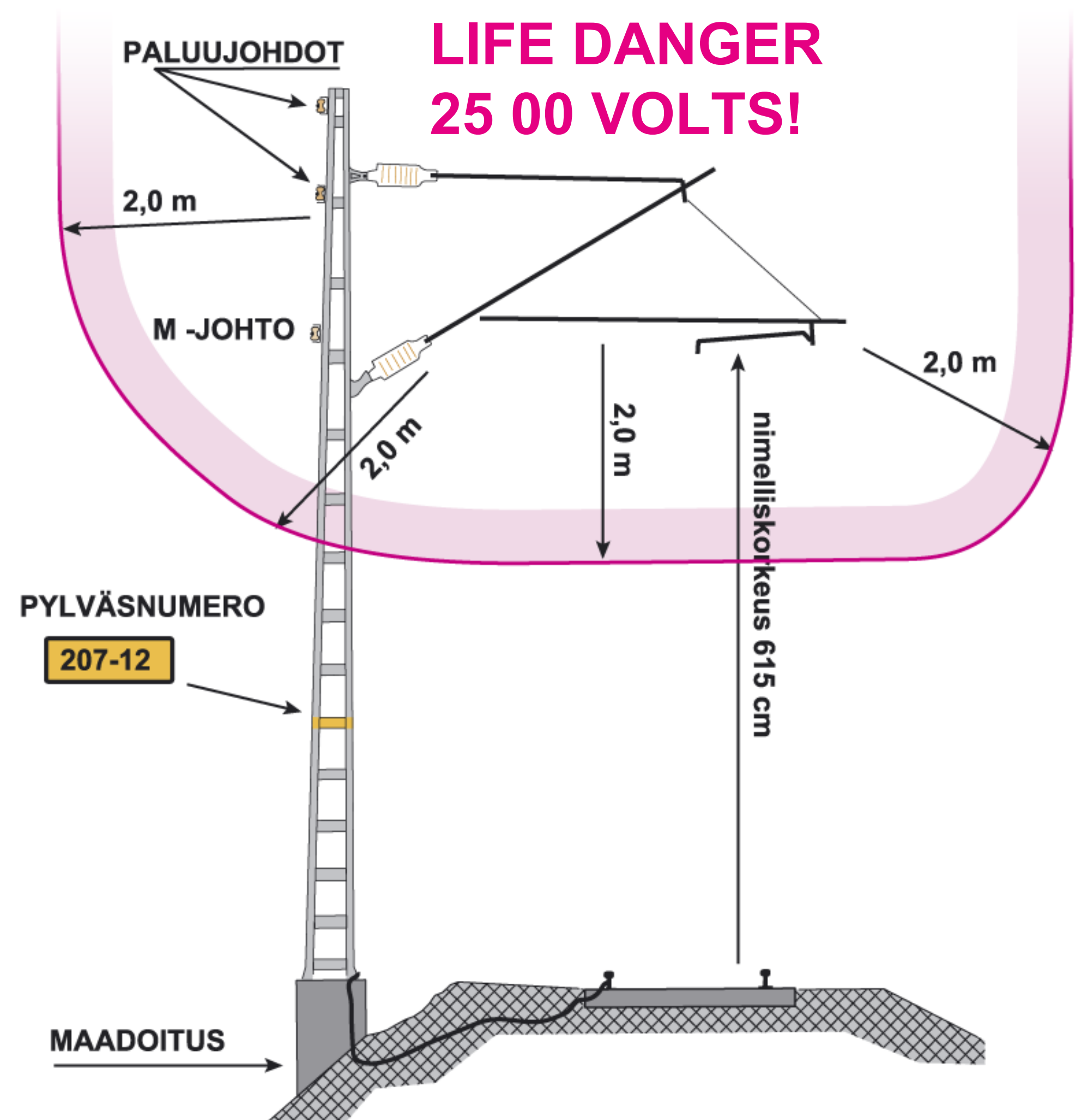
- The contact wire and the wires and cantilevers supporting it have a dangerous voltage of **25,000 volts**.
- A minimum distance of **2 meters** must be maintained from the electrified parts of the railway.
- The distance should be assessed before starting work. **The distance should not be measured.**



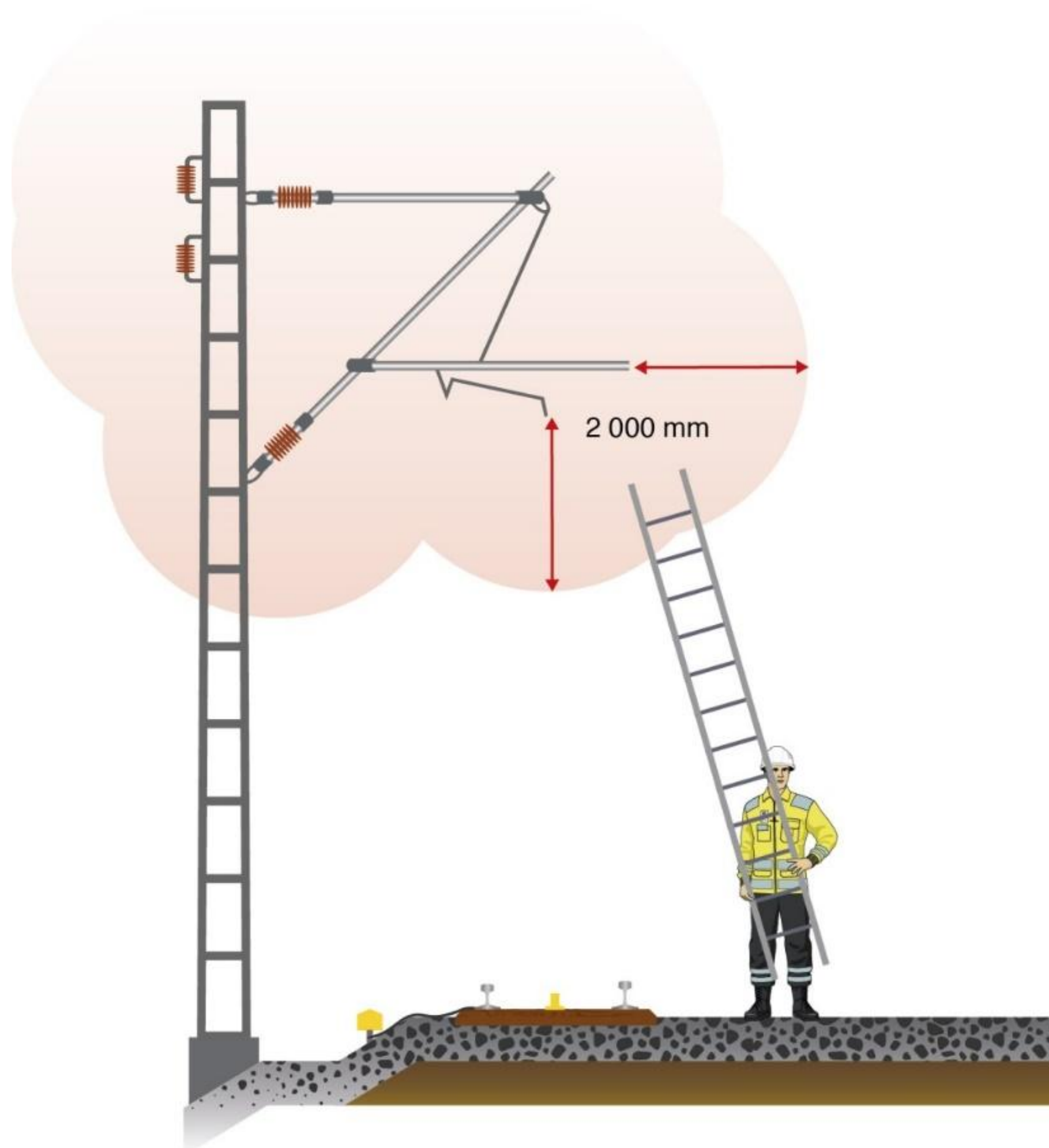
Kuva: Tuomas Sartonen

# Minimum Working Distances

- The smallest minimum working distance for a trained individual from the electrified parts of the railway is **2 meters**.
- The minimum working distance for machinery from the electrified parts of the railway is
  - **below 2 m**
  - **side 3 m**
- Working above electrified structures is prohibited without the permission of the electrical equipment's operation manager.



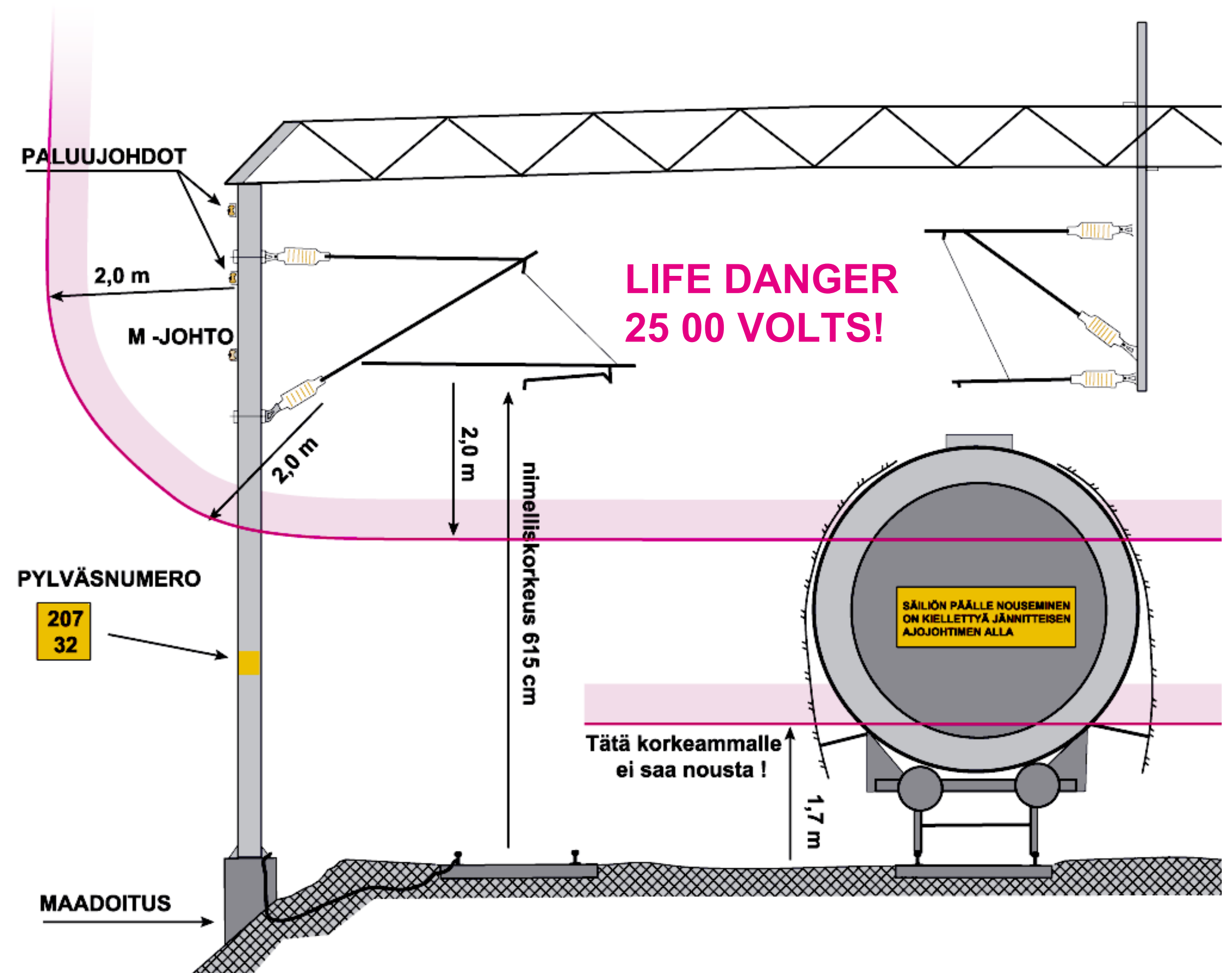
# Use of Long Objects



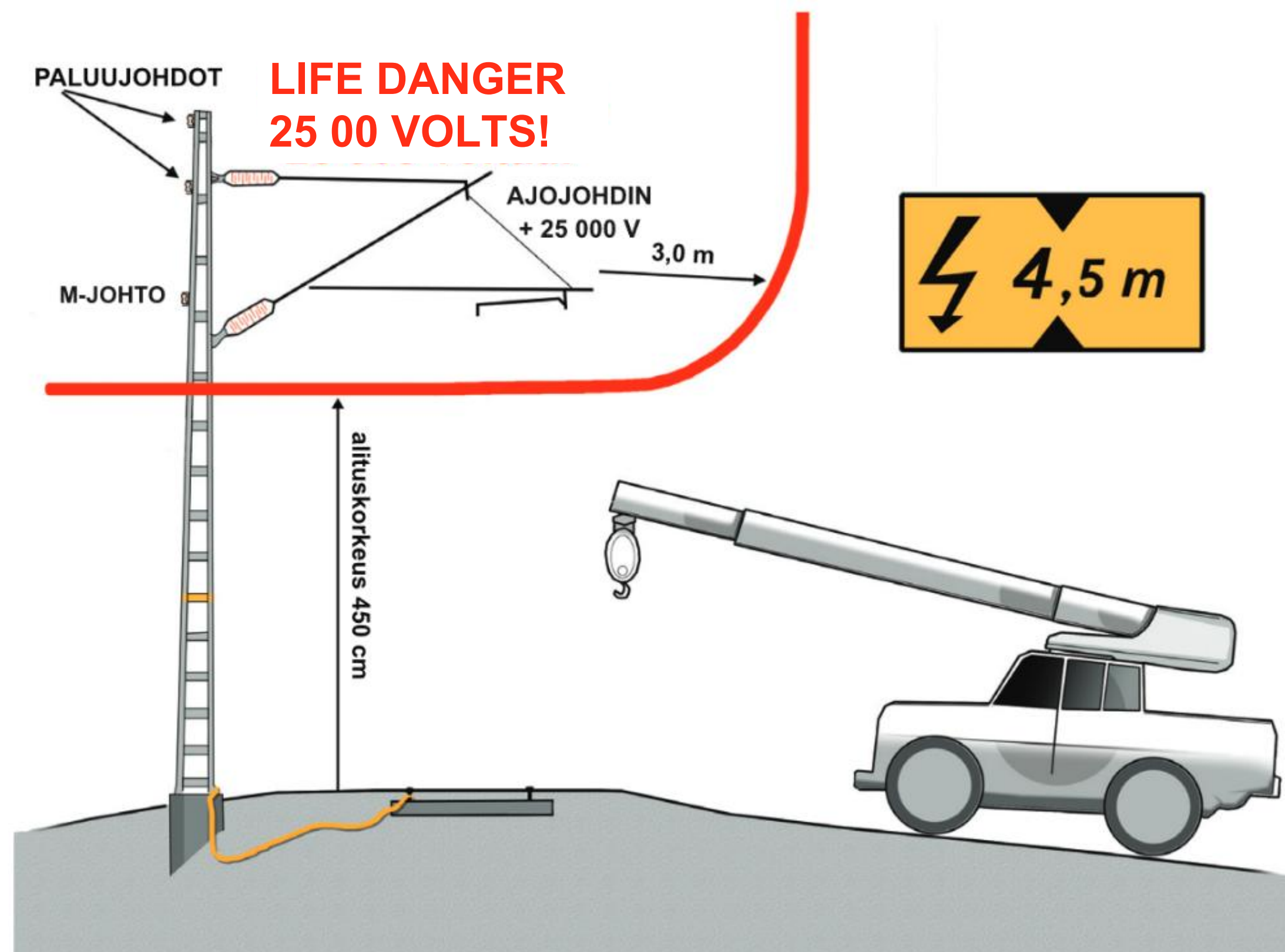
- Special caution must be exercised when using long conductive objects, such as ladders.
- At no stage during work or when moving them should tools extend closer than **2 meters** to live parts.

# High Structures

Climbing onto moving stock or structures higher than 1.7 meters below live wires is prohibited.



# Service Level Crossings



- The maximum height for vehicles in service level crossings is 4.5 meters.
- Loads extending up to 4.5 meters from the top of the rail are allowed to pass through level crossings without special arrangements.
- When unloading and loading wagons, a minimum distance of **3 meters** from live parts must be maintained at the ends of loading platforms.



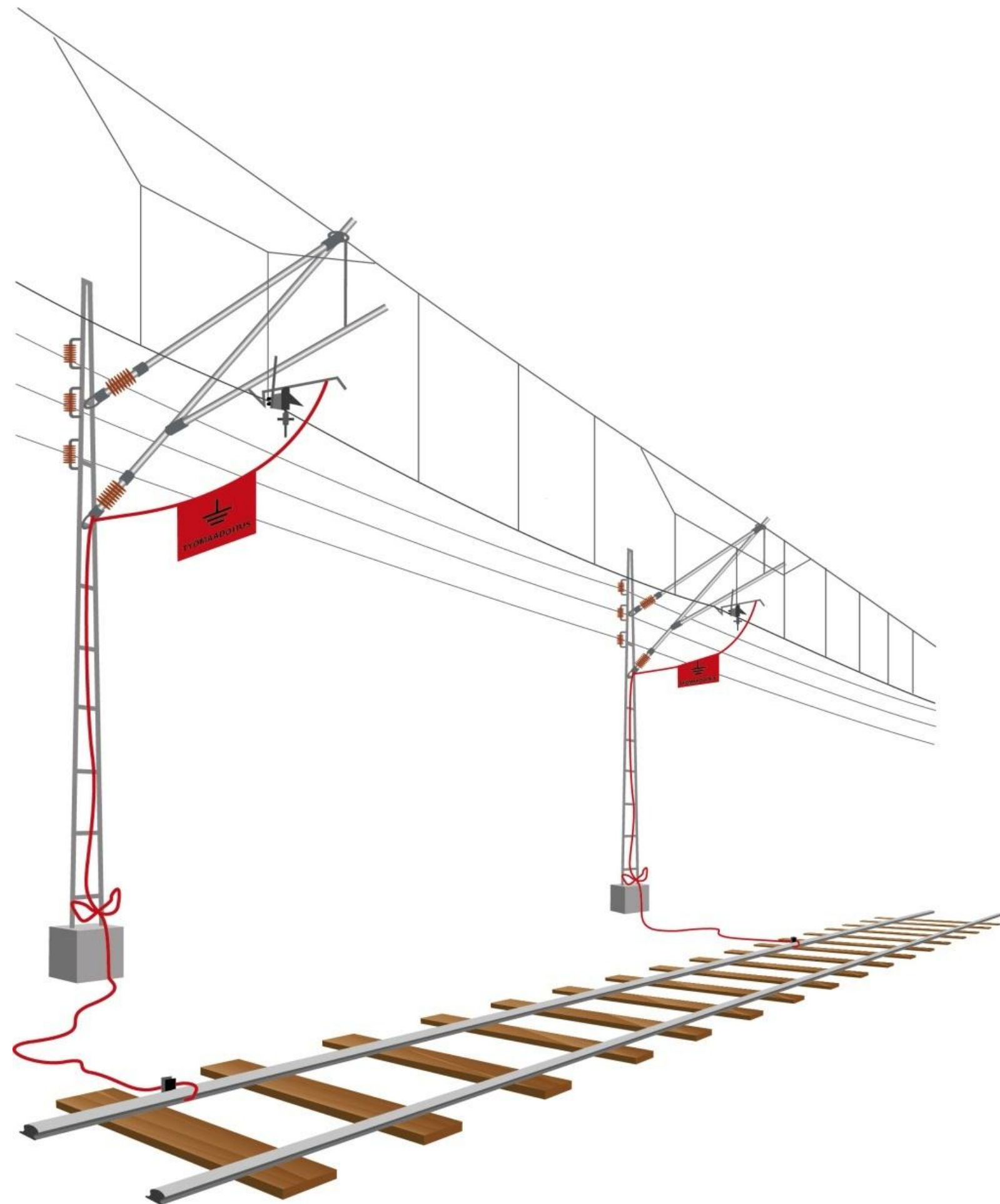
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# De-energization Procedure



- If a task cannot be performed within the allowed working distances, safety must be ensured through de-energization.
- The de-energization of the electric railway can be performed by an electrical contractor with the required qualifications to perform de-energization.
- De-energization procedures are conducted in accordance with the Finnish Transport Infrastructure Agency's guidelines, "[Electric Railway Instructions](#)" (in Finnish).



# RRT Kouvola Oy

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