Caution on the tracks **bane**danmark

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The information in this pamphlet is taken from Bandanmarks safety regulations and describes the safety rules for moving about in and around active railway tracks. In case of any discrepancies Banedanmarks safety regulations apply.

The purpose of the pamphlet is to ensure

- that you and your colleagues do not have accidents.
- that trains do not have accidents and that traffic is not interrupted.

When you have completed a course and passed a test, you will receive an identification card that gives access to the areas of Banedanmarks infrastructure, where there is normally no public access.

Additional information

Additional information on issuing identification cards and working near railway tracks can be found at www.bane.dk. You can also find all of Banedanmarks safety regulations here.

Guidelines for traveling in and around active railway tracks

- Make yourself visible you must always wear highvisibility clothing.
- Never walk along the path of the track.
- Pay constant attention to train traffic.
- Never do anything that can divert your attention away from the train traffic.
- As far as possible, use the established pathways.
- Pay attention to where you are going and look at where you are stepping.
- Keep a safe distance from the rolling stock.

1. THE MOVEMENT OF PERSONS IN AND BY TRACKS WITH TRAIN TRAFFIC

1.1. General

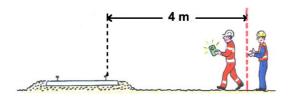
People who - at their own risk - are moving closer than 4 metres to the nearest rail must

- have a specific errand or need to go to or from a work site.
- be wearing high-visibility clothing, cf. Section 1.5.
- be issued with ID cards, cf. Section 1.2.
- be able to read and understand instructions.
- have been given specific instructions in relation to the task that needs to be completed.
- fulfil the health requirements for the relevant work function.

It is not permitted to move through tracks just to take a shortcut. This also applies to people who are wearing the correct high-visibility clothing.

1.2. Identification cards

Persons who must move about in areas where there is normally no public access and who are closer than four metres to the nearest rail must have an identification card on them that documents that the person in question may move about on active tracks.



Any access limitations will be specified on the identification card.

The identification card does not permit you to

- accompany and be responsible for a companion without an identification card.
- work at your own risk when you are closer than
 4 metres to the nearest rail.

The identification card is issued by Banedanmark after a completed instruction course and a documentation that you possess the required knowledge (a test).

To be issued an identification card, you must have normal vision and hearing.

The identification card is normally valid for four years and then you must independently ensure a renewal, if relevant.

The identification card can be revoked if you violate the safety instructions.

The identification card is only valid for areas where Banedanmark owns and manages of the infrastructure.

The police, emergency services and other authorities are not subject to the requirement of having an identification card.

When travelling and staying on areas owned by others, for example,

- DSB, Go Collective
- local lines and other private tracks,
- the Storebælts- and Øresund lines.

the employer must retrieve information about the applicable safety instructions before it is allowed to be present in these areas.

Access to the Storebælts tunnel and the Øresund tunnel requires a special safety proof.

1.3. Safety and health at work

You must always be healthy when moving on and by active tracks.

It is of course not permitted to be under the influence of alcohol or other intoxicants.

If there is a suspicion of being under the influence of alcohol or other intoxicants, you can be required to take an alcohol or drug test. If the test is positive, you will be expelled, and your identification card will be revoked.



1.4. Railway safety plan

In the case of infrastructure and construction works on Banedanmarks areas, a railway safety plan must always be prepared.

Before commencing the work, you must check with your employer or your employer's local representative.

1.5. High-visibility clothing

When moving about or working closer than 4 metres to the nearest rail, orange high-visibility clothing must be worn.

High-visibility clothing must fulfil DS/EN Standard 471 as follows:

- For movement: class 2.

- For working: class 3.

Also refer to the rules of Work Environment in Denmark for high-visibility clothing.



Your clothing must always be tight-fitting and designed in such a manner that you cannot get stuck.

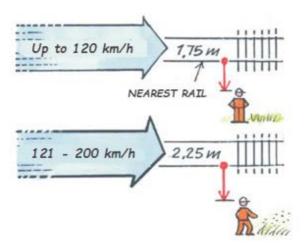
Pay special attention to belts, straps, bags, scarves and the like.

The high-visibility clothing must be clearly marked with the name of the company that you are working for.

1.6. Safety distance for people

When you are close to tracks with active train traffic, you will be exposed to wind forces when a train passes by you.

Therefore, immediately upon seeing a train coming towards you, you must step far enough away from the track to meet the safety distance specified below.



When moving and staying on platforms, there are special safety distances that must be observed.

On platforms with safety markings, all movement and stays must be behind the safety markings.

1.7. Safety distances for machinery

No part of machinery and cranes may come closer than 2 metres to the nearest rail unless the track in question is blocked for train passage.

This also applies even if it just involves a small movement with, for example, a lift or a crane.

When working near the catenary system, see Section 2.2.3.



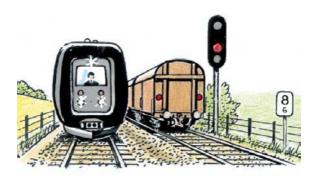
1.8. Train traffic, speed, etc.

You must always expect that trains may pass by at 200 km/h on all tracks where you do not know the maximum permitted speeds for the trains.

Modern trains are very silent, so you need to keep a constant lookout for them.

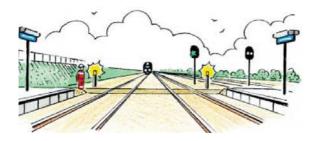
Wind, snow and rain can dampen the sound of trains even further, and in bad weather it can also be difficult to spot the train.

Trains and maintenance vehicles normally have three white lights in a square formation in front of them.



1.9. Passing of the tracks

When you pass the tracks you must, as far as possible, use the constructed tunnels and gangways or the marked crossings which are also used for ambulance and tractor driving.



When passing the tracks, always be aware that

 trains may appear from all directions. Therefore, remember to look carefully in both directions before passing a track.

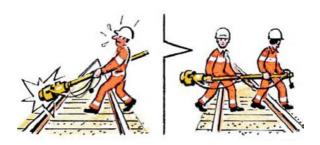


- the track must be passed perpendicularly.
- if you pass several tracks near each other, you are never allowed to stop between them. Look carefully to both sides so that you can pass all tracks at once.
- you are never allowed to stand between the rails or between tracks near to each other.

1.10. Transporting heavy materials over tracks

It is not allowed to drag heavy materials over tracks. They must be carried over the tracks to avoid a short circuit or damage to the wiring connections, cable boxes, etc.

When working on electrified line sections, see Section 2.2.5.



1.11. Transporting vehicles over tracks

Vehicles may only be moved over tracks at crossings intended for this purpose and only when the track is closed for train traffic.



1.12. Moving on track areas

When moving on track areas, then as far as possible you must use the installed paths, gates and walkways.

You are *never* permitted to walk along the track inside the safety distance zone, neither between the two rails or between two tracks. A train may surprise you from behind.

You are *never* permitted to be closer to any track than the safety distance for people specifies, see Section 1.6.

You are *never* permitted to use the signals alongside the railway lines to check if a train is coming. This is because a train may sometimes be allowed to pass a "Stop" signal.

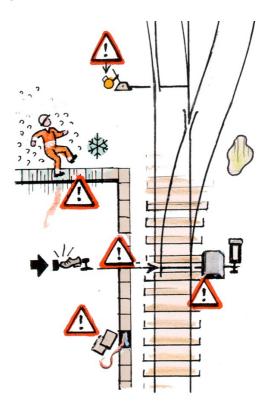
When you see a train coming towards you, you must immediately step far enough back from the track to fulfil the safety distance, see Section 16.

You must indicate to the loco driver that you have seen the train coming by raising an arm into the air.



When moving on track areas, you must - in addition to the trains - also pay special attention to the following:

- There are several objects along the track that you can trip over, such as cable ducts, cable boxes, switch handles and signs.
- Rails, sleepers, tiles, cable ducts and other surfaces can be very slippery due to rain, snow, ice, weeds, fallen leaves and oil.
- Avoid stepping on switches and braking systems.
 You can easily get a foot caught in the moving parts.

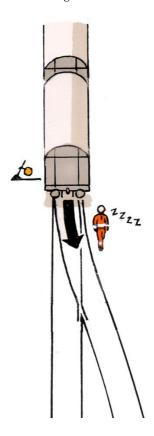


1.13. Special conditions on staging areas

You must pay special attention when in staging areas.

The trains may arrive completely silently, and they may start moving unexpectedly. You must therefore keep a safe distance from stationary wagons.

Step completely away from the tracks when shunting is taking place - it is not always possible to see which track the wagon train is being shunted on.



Never move between the buffers if you need to pass a stationary set of carriages. Use the safe way detour - go all the way around the carriages.

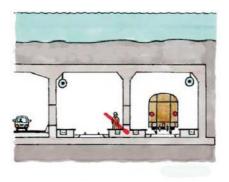
Do not pass the track when shunting is taking place - it can be hard to assess the velocity.



1.14. Moving and working in special locations Moving on tracks with poor overview conditions and/or poor escape options may only take place when the track is closed to train traffic.

Be aware that escape options are particularly limited on or near bridges, tunnels, platforms and noise barriers.

It is therefore forbidden to move on the Storebælt tunnel, Øresund tunnel or the Boulevard tunnel unless the tracks are closed to train traffic.



1.15. Loading routes and combi terminals

Railway carriages may only be loaded and unloaded based on an agreement with the railway company in question.

1.16. Service workshop and depot areas

At service workshop and depot areas, there may be special provisions for moving and staying there.

1.17. Kilometre signs

There has been installed kilometre signs on all railway lines.

The kilometre signs are placed at 200-metre intervals. The kilometre signs are important when you need to tell the signaller exactly where you are on a railway line.



Sometimes there may be older methods of showing kilometres like kilometre stones.



1.18. Dangerous situations

If the track becomes impassable, for example, due to a fallen tree or if you discover another serious kind of damage to the infrastructure you must immediately notify the Command Post or the Control Center.

If you cannot reach the Command Post or the Control Center, then call 112.

If you can see or hear a train approaching, you must run towards the train and use the "STOP" (danger) hand signal. See the drawing below.



In the dark, a red or white light should be moved in a circle.

You can locate the accident site using, for example, kilometre signs, station names (potentially between two stations) and crossing numbers.

2. CATENARY SYSTEMS

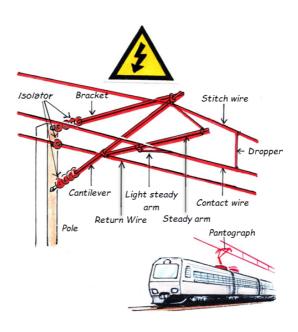
2.1. General

The masts of the catenary system is, unlike other high-voltage masts, *not provided with high-voltage warning labels in all locations*.

The catenary system's height above the rail top is normally 5.50 metres. The lowest height is 4.92 metres, for example, under bridges.

It is forbidden and can be fatally dangerous to get closer than 1.75 metres to all structures with voltage and pantographs on trains.

Voltage-carrying structures are marked in red on the schematic below:



Please note that the return wire (on the S-train line conductor) has the same voltage as the overhead catenary.

2.2. Safety distances

2.2.1. General

When measuring safety distances to voltage-carrying structures, you must *never* measure directly from the voltage-carrying structures using, for example, a folding ruler.

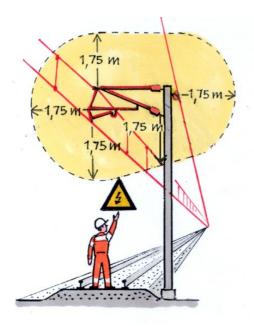
Safety distances need to be observed for all voltagecarrying structures, including pantographs on electric trains.

Safety distances may never be ignored, unless

- the catenary system technicians have ensured that the lines are without voltage and earthed for work purposes.
- there has been issued a work permit.

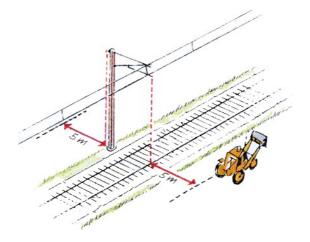
2.2.2. People and tools

The safety distance for voltage-carrying structures is 1.75 metres for people and tools.



2.2.3. Large machinery

The safety distance for voltage-carrying structures is 5 metres for large machinery such as, for example, excavators and cranes.



Large machinery must be protected to ensure that no part of it can get closer than 5 metres to voltage-carrying structures - even by accident or by making a wrong move.

The operations manager for the catenary system facilities may issue *special precautions* so that large machinery can be worked with closer than 5 metres from voltage-carrying structures.

Machines must be earthed to the return rail.

2.2.4. Small machinery

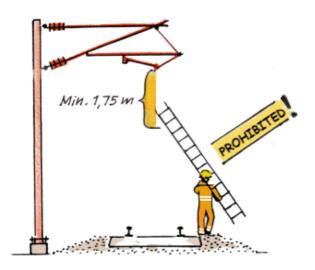
Small machinery may, without special measures, operate under voltage-carrying structures if it is certain that the machine cannot reach higher than 3 metres over the rail top.

Small machinery does not need earthing.

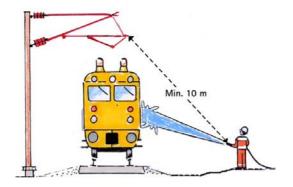
2.2.5. Ladders and long objects

When working with ladders or other long objects, for example, pipes and scaffolding parts, it must be ensured that they cannot get closer than 1.75 metres to voltage-carrying structures.

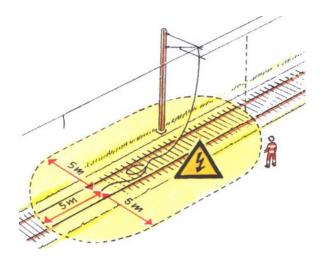
Not even by accident or carelessness.



2.2.6. Use of water hoses and high-pressure washers It is forbidden to get closer than 10 metres to voltage-carrying structures when working with water hoses or high-pressure washers unless there is a catenary isolation, and the work earthing has been carried out or there is a specific work procedure approved by the operations manager for the catenary facilities.



2.2.7. Fallen overhead catenary wire The safety distance for fallen catenary wires is 5 metres.



The safe distance applies until the catenary system technicians have ensured that the lines are without voltage and earthed for work purposes.

Notes		

Sounding the alarm

If there is an accident or dangerous situation, you must immediately alert the nearest Command Post or the Remote Control Center if you have the number for that. If you do not have the number, you must instead alert Banedanmark's train management at 33 12 57 50.

If you cannot reach any of the above, call 112.

If you sound the alarm via 112, you must as soon as possible after this notify the Command Post, the Remote Control Center or Banedanmark's train management.

State the following:

- What has happened (fire, accident, etc.)
- Where has the accident happened (state the exact place, for example, use the kilometre sign, level crossing number, station name or which stations you are between).
- How you can be contacted (your phone number).

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