

ESI-106

selecting and cutting of high-voltage cables

15-04-2020

Purpose

On cable ducts and/or cable trays there can be similar or unidentified cables. Therefore there is a risk of cutting the incorrect cable, which can lead to dangerous situations. To prevent dangerous situations, a selection measurement is carried out before cutting a cable or starting to work on the cable.

Nomination and assignment

The persons who are going to carry out the work have gain knowledge by training and experience in selecting and cutting of high-voltage cables.

You will be instructed by a NPcWA_{HV-OFFSHORE} via an approved contract (AC).

Carry out this assignment with two people.

You have to be at least a SP_{HV-OFFSHORE}.

Risks and measures

Risk	Measures
To injuries caused by falling objects.	Use a safety helmet.
To injuries caused by falling or rolling objects, pinching and/or sharp objects on the ground.	Use safety footwear with steel toecap and steel midsole.
For eye damage caused by ejected particles, (corrosive) liquids and/or gases.	Use protective eyewear.
By insufficient lighting.	Apply general workplace lighting and/or work with a headlamp.
To heat.	Wear airy / dry (summer) flame retardant and antistatic work clothing. Take a rest and drinking break regularly (guideline is 0.33cl of water per hour). Make sure there is always cooled water nearby.
To weather conditions.	Cease work in the event of lightning and leave the high-voltage room.
On selecting the wrong cable.	Always use the correct and most recent location drawings. Make sure the label is the same as the label on the location where the selection takes place.
Incorrect calibration of the selection device.	Always follow the operating instructions of the manufacturer. Always calibrate from place of distribution towards the workplace. If, during calibration, the pliers

ESI-106

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15-04-2020

	enclose the entire cable, then also enclose the entire cable at the workplace. If during calibration the pliers enclose a conductor, also enclose a conductor at the workplace. Make sure that the pliers always point towards the end of the cable.
Risk	Measures
On electric arc by cutting a live cable.	Use flame-retardant and antistatic work and industrial clothing. Keep a sufficient distance (> 10 meters) from the actual cutting location.
The cable-cutter does not cut the cable completely.	Use only an approved cable-cutter. Check the cable-cutter for (external) damage including the cutting edges. Select the correct cable-cutter for the correct diameter and material of the cable. Use the correct hydraulic pressure. If the cable-cutter is jammed, do not touch the unit and stay at a safe distance. Contact the NPcWA to fine-tune the follow-up action and consult the cable-cutter manual.

Personal protective and safety equipment

Personal protection equipment (PPE)

- Flame retardant and antistatic safety clothing.
- Helmet, unventilated model (working voltage 1000V), Compliant with EN50365. Helmet, colour black for SP and NPcWA, colour white for others.
- Insulated safety footwear class S3 and class 0 (working voltage 1000V).

Safety equipment (SE)

- Not applicable

Procedure

Beforehand of the work

Before you start working, check the following:

Personal protection equipment (PPE):

- Do the personal protective equipment not contain any form of wear, dents or contain cracks that adversely affect its operation?
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ESI-106

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15-04-2020

Work-permit:

- Is the work plan still valid?
- Is the above laying permit to work still valid?
- Are all the necessary signatures present?
- Does the work plan / work-permit (incl. drawings) correspond with the workplace?
- Are there any other activities that could affect this work?

Workplace:

- Check for unwanted risks by means of an LMRA.
- Check that the assignment is correct with the situation in the workplace.
- Is there enough space to work safely?
- Is the workplace sufficiently illuminated: Light intensity $\geq 500\text{lux}$; Light colour 4000 - 6000K?
- Are the weather conditions good to start with the work activities?

If the above points are met, you may start the work activity. If this is not the case, the NPcWA must be contacted immediately. If the above mentioned conditions are no longer met during the work activity, the work must be stopped if it is safe to do so and the NPcWA must be contacted directly. If the situation is not safe, a safe situation must first be created before stopping the work and contacting the NPcWA.

Preparation

Step 1 You may only start working if the following conditions are met. Is something wrong? Then don't start, but call the NPcWA immediately.

- Check for risks. Take the necessary (safety) precautions.
- Check that the current location data are available at the workplace.
- Check that the assignment is correct with the situation in the workplace.

Execution

Step 2 Selecting a cable

- Perform a Last Minute Risk Analysis (LMRA).
 - Determine where the cable lies based on the location information and/or stamps or labels. Select the cable with a cable selection device.
 - Check that the cable selection device is certified.
 - Check the cable selection device for (external) damage.
- Are there single-core cables? Then select all cores separately from each other.
- Selection of the cable:

ESI-106

selecting and cutting of high-voltage cables

15-04-2020

- Connect the cable selection device to the secured cable.
- Select the desired cable.
- Mark the selected cable.
- Remove the cable selection equipment and secure the cable.
- Check the cable selection device for (external) damage after work.
- Dry and clean the cable selection device and store it in the appropriate storage box.
- Store the cable selection device in a clean and dry environment.

Step 3

Cutting the cable

- Perform a Last Minute Risk Analysis (LMRA).
- Check that the cable-cutter is certified.
- Check for (external) damage to the cable-cutter, including the shears.
- Make sure everyone is at a safe distance from the actual cutting location.
- Always use an hydraulic cable-cutter.

Ending

Step 4

When you're ready, do the following:

- Register the required data.
- Check the cable cutter for (external) damage.
- Clean and dry the cable cutter.
- Dry and clean the cable-cutter and store it in the appropriate storage box.
- Store the cable-cutter in a clean and dry environment.
- Leave the workplace clean, tidy and safe.
- Check the protective equipment before storage.

Procedure in the event of an incident

- In the event of a near incident, the OIM and the NPcWA must be contacted immediately.
- In the event of an incident involving personal injury, first aid must be provided immediately. Immediately after that, the OIM and the NPcWA must be contacted.
- In the event of an incident without personal injury, first aid must be provided immediately. Immediately after that, the OIM and the NPcWA must be contacted.
- In all cases an incident must be reported, taking into account the privacy of the people involved.

ESI-106

selecting and cutting of high-voltage cables

15-04-2020

Procedure in the event of a deviation

- As soon as the execution of a work plan is hindered by a malfunction, the NPcWA informs the NPcEI and OIM. In case that the NPcWA is not on site, the SP in charge of the activities on site, supervisor or SP agrees with the NPcWA who then informs the NPcEI and OIM.
- After assessment of the situation, an LMRA and determination of the measures must be carried out to stop the work activity (s) in a controlled way, the failure analysis can follow.
- As soon as the cause of the malfunction has been resolved or isolated, coordination with the NPcWA and OIM is necessary before the execution of the work plan can be resumed.
- The NPcWA informs the NPcEI of the disruption, depending on the nature of the disruption and the possible follow-up.