

Requirement	The Statkraft Way	
Open	Instructions for using electrical equipment in confined conductive environments	

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1 PURPOSE AND SCOPE

Ensure safety when working with electrical equipment in confined conductive environments.

2 DESCRIPTION

The procedure applies in all confined conducting environments where Statkraft Energi AS (SE) has operational responsibility. A narrow conductive area with limited range of motion is an area surrounded by metallic or conductive parts that it is likely that a person, with larger parts of the body, will be able to contact and where there is limited opportunity to avoid or break such contact.

3 RESPONSIBILITY

The person responsible for the work is responsible for following this procedure.

The individual line manager / project manager is responsible for making this procedure known in his / her unit. Each employee must have the necessary training in the procedure and tools / equipment for the task.

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The Operations Manager LV shall ensure that activities regulated by the instruction are carried out properly. The Operations Manager LV is responsible for the preparation and updating of instructions.

It is only the Operations Manager LV who can grant a waiver permit.

4 PROCEDURE

4.1 Work light

Safety Extra Low Voltage (SELV) requirements for portable hand lamps in confined conductive environments are required. It must be carried out with a protection transformer with a voltage of max. 50 VAC / 120 VDC and all components must be Class III (adapted - ELV circuits) and cables double insulated. Do not ground the plant.

Alternatively, working light with battery can be used.

4.2 Tools

As far as possible, battery tools or air tools should be used. For other electrical equipment in confined conductive environments, electrical separation in the form of a protective transformer with voltage <500 V and double insulated cable shall be used. Only one equipment / tool can be connected to a secondary winding on the insulator transformer. When using several tools at the same time, a protective transformer with several secondary windings should be used. Do not ground the plant.

4.3 Welding

Protective transformer (230 VAC / 230 VAC, possibly 400 VAC / 400 VAC) must always be used when welding in confined conductive rooms. The protective transformer should be placed outside the narrow conductive space. Double insulated cable must be used from the protective transformer to the welding apparatus. The welding device must have a maximum idle voltage of 80 VDC. Welding equipment for such use is normally checked annually for damage, leakage current, etc. in the equipment. Insulating welding gloves should always be used when welding in confined conductive spaces.

4.4 Drying

When drying a waterway, the heat source should be placed outside the narrow conductive space. A protective transformer and double insulated supply cable shall be used for the heat source.

4.5 Activities not regulated by the FSE (Safety regulations related to the maintenance and operation of electrical installations):

It is assumed that risk assessment for all other activities is carried out and complied with in accordance with current procedures and job descriptions, such as fire risk, entourage, air supply, etc.

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5 DEFINITIONS

5.1 5.1 INTERNAL REFERENCES STATKRAFT ENERGI AS

- 5.1.1 5.1.1 Control document P-23 Supervision, operation and maintenance of electrical plants.
- 5.1.2 5.1.2 Governing document P-23/120 Guidelines for electrical safety.

5.2 5.2 EXTERNAL REFERENCES

- 5.2.1 FSE 2006 Safety regulations related to the maintenance and operating electrical installations
- 5.2.2 FEF 2006 Forskrift om elektriske forsyningsanlegg
- 5.2.3 NEK 400: 2018
- 5.2.4 NEK 400-7-706
- 5.2.5 NEK 400-4-41
- 5.2.6 Normguiden - NEK 400 2018