### **Work Instruction - Operations**

## **USE OF GROUNDING STRAPS WORK INSTRUCTION**

HITACHI

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**Work description:** Purpose is to provide step by step instructions for using the grounding straps to protect the work area.

Scope: This document is applicable for the Operation and Maintenance Services on the HRH

References: Nil

PPE and precautions	Competencies or qualifications	Licenses or permits required
Insulated Gloves, Safety Boots	Technician	Technician

#### Tools and equipment required

Hot Stick, Grounding Straps

#### Responsibilities

Technician

The technician installing grounding straps shall:

- Wear adequate insulated hand-gloves
- Once received from OCC the permit to access the track, look in the direction from where trains might arrive
- Make sure third rail is not energized
- If third rail is energized, ask, and confirm with SCADA operator de-energization or activate the Blue Light Station
- Avoid any hand-contact with tracks
- Grounding straps shall be positioned in the vicinity of third rail supports

# **Grounding Straps Application**

• Grounding straps shall be positioned only on de-energized sections of third rail. It is required to connect to ground third rail. Grounding straps have to be positioned only by trained personnel.

Before positioning the grounding straps, the technician shall:

- Confirm with the OCC that the section is de-energized
- Verify by means of hot sticks that the section is de-energized

Hot sticks verification

Hot sticks are shown in the figure below:



Figure 1. Hot Sticks

- 1) Put the green stick in contact with the rail
- 2) Put the red stick in contact with the third rail
- 3) Once verified that there is no voltage, remove the red stick
- 4) Once the red stick is removed, remove the green stick

Approved By:	☐ Director, Operations and Maintenance	☐ Department Manager	☐ Manager, HSE (Operations and Maintenance)
Signature:			
Date:			

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#### Grounding Strap Application

Grounding straps consist of 3 clamps connected through a cable. Two clamps shall be connected to the running rails, one to the third rail

- 1) Connect 1 clamp to the rail
- 2) Connect 1 clamp to the other rail
- 3) Connect 1 clamp to third rail



**Figure 2. Correctly Positioned Grounding Straps** 

# **Grounding Straps Removal**

- 1) Inform the working crew of the upcoming removal of grounding straps and make sure they are at least 1 foot from third rail
- 2) Remove the clamp connected to the third rail
- 3) Remove the clamp connected to the rails
- 4) Clear the area from the straps
- 5) Inform the Train Controller when complete