Procedures

NPR 752 Using Automatic Track Warning Systems

Description

This document describes the procedure for using Wireless Automatic Track Warning Systems (ATWS).

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Introduction

A Wireless Automatic Track Warning System (ATWS) is an automated system that provides warning to workers of approaching rail traffic.

Wireless ATWS must not be used where a work on track authority is in place.

Equipment

The Protection Officer or ATWS Operator must wear a high visibility sleeve on the arm used to give the **ALL CLEAR** handsignal.

An ATWS consists of three main components:

- track-mounted sensors to detect rail traffic
- a transmitter unit
- a warning unit.

Installation

Outside yard limits

Protection Officer

1 Identify all possible points of entry into the worksite.

2 For each route leading to the worksite, calculate the Minimum Warning Time (MWT) in accordance with NPR 751 Calculating Minimum Warning Time.

3 Identify the sensor locations that will provide the MWT required to warn workers of approaching rail traffic.

ATWS Operator

4 Install the sensors at the required locations.

5 Calibrate each sensor unit.

6 Test each sensor with an approved test plate.

7 Synchronise the transmitter unit with the warning unit.

8 Make sure that each sensor is activated by a rail traffic movement.

Protection Officer

9 Verify that the sensor location is correct by:

- making sure there is a direct line of sight from the sensor to the worksite and visually confirming that the sensor is placed on the correct tracks, or
- travelling from the sensor location to the worksite location on the same side of the track, or
- recording the identification number of the rail traffic used to test the sensor and confirming that the same rail traffic passes the worksite.

Inside yard limits

Protection Officer

1 Make sure the worksite is specified in the Network Local Appendices.

> **Warning**
>
> Sensors must only be placed for worksites specified in the Network Local Appendices.

ATWS Operator

2 If required, install the sensors at the specified locations.

Protection Officer

3 If required, clip and lock points to reduce the number of entry points.

ATWS Operator

4 Calibrate each sensor unit.

5 Test each sensor with an approved test plate.

6 Synchronise the transmitter unit with the warning unit.

Protection Officer

7 Visually verify the sensors are placed on the correct tracks as specified in the Network Local Appendices.

Using ATWS

Protection Officer

1 Before entering the Danger Zone, make sure that:

- there is no approaching rail traffic between the sensors and the worksite
- workers will remain within sight and hearing of the warning unit at all times.

Responding to a warning

When approaching rail traffic passes a sensor, the warning unit will sound an audible warning, warning lights will flash and**1 WARNING** will be displayed on the screen.

Protection Officer

1 Only if workers and their equipment are in safe places, face the approaching rail traffic and give the **ALL CLEAR** handsignal to the Driver or Track Vehicle Operator.

ATWS Operator

2 After rail traffic has completely passed the worksite, cancel the warning on the warning unit.

> **Warning**
>
> Be alert for following rail traffic movements.

Protection Officer

3 After the warning has been cancelled, confirm that there is no approaching rail traffic between the sensor and the worksite before allowing work to resume.

Responding to a second warning

The warning unit screen will display **2 WARNINGS** if a second rail traffic movement is detected:

- before the first rail traffic movement has passed beyond the worksite
- before the first warning is cancelled.

ATWS Operator

1 When a second warning is activated, tell the Protection Officer about the warning.

2 Cancel the first warning only when the first rail traffic movement has completely passed the worksite.

3 Cancel the second warning only when the second rail traffic movement has completely passed the worksite.

Protection Officer

4 Tell the workers about the second rail traffic movement and to remain in a safe place.

5 Only if workers and their equipment are in safe places, face the approaching rail traffic and give the **ALL CLEAR** handsignal to the Driver or Track Vehicle Operator.

6 After the warning has been cancelled, confirm that there is no approaching rail traffic between the sensor and the worksite before allowing work to resume.

False activation

If a false activation occurs, the warning unit will sound an audible warning, warning lights will flash and the screen will display a warning or a fault indication.

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Warning

If a false activation occurs, workers must not enter the Danger Zone until the Protection Officer has established:

- that the ATWS equipment is working correctly
- that there is no approaching rail traffic between the sensors and the worksite.

Protection Officer

1 Make sure that workers remain in a safe place.

2 Make sure there is no approaching rail traffic between the sensors and the worksite by:

- visually confirming that the line is clear between the sensors and the worksite, or
- contacting the Signaller to confirm if there is rail traffic between the sensors and the worksite.

ATWS Operator

3 If there is no rail traffic between the sensors and the worksite, cancel all warnings on the warning unit.

Protection Officer

4 Make sure the warning has been cancelled before allowing work to resume.

Related Documents

NPR 751 Calculating Minimum Warning Time