# **Topic Skills Practice Cover Sheet**

Unit Name:	UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories				
Topic Title:	Aerial Cabling				
Skill Practice Number:		6.3			
Skill Practice Name:		Install and Terminate a Catenary Wiring System			
Student Name:					
Student ID:					
College/Campu	ıs:				
Group:					
		Results			
Planning:					
Carryout:					
Completion:					
Overall Results:					
Comments:					

UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories

**Topic 6. Aerial Cabling** 

Skills Practice 6.3: Install and Terminate a Catenary Wiring System

#### Task:

To install and terminate a circuit supported on a catenary in accordance with AS/NZS 3000 requirements.

### **Objectives:**

At the completion of this skills practice, you should be able to:

- Install a catenary support system
- Secure TPS cables to a catenary system.
- Terminate TPS cables.
- Test installed cables to verify earth resistance, insulation resistance and polarity in accordance with AS/NZS 3000.

### 1. Planning the Skills Practice

### 1.1 Equipment

- Switchboard
- Catenary wire 2 x turnbuckles
- 4 x U clamps
- 2 x hook/eye-bolt anchors
- Stranded TPS cable
- Cable ties

### 1.2 Suggested Materials

- Junction box
- Multimeter
- Insulation Resistance (IR) tester

#### 1.3 Miscellaneous Items

- PPE
- Hand tools
- Pens/pencils
- AS/NZS 3000

#### 1.4 Risk Assessment

### Risk assessment procedure:

- Identify any hazards that may exist with this skills practice below
- List the supervision level you will be working under Direct (D), General (G) or Broad (B)
- List the risk classification High Risk (H), Medium Risk (M) or Low Risk (L)
- List the control measures required for each identified hazard that you need to implement.

Hazard/s Identified	Supervision Level (D, G or B)	Risk Classification (H, M or L)	Control Measure/s



### 2. Carrying Out the Skills Practice

### 2.1 Catenary System Installation

- 2.1.1 Install the two hook/eye bolt anchors at a suitable height and distance apart, as instructed by your teacher.
- 2.1.2 Attach a turnbuckle to each anchor.
- 2.1.3 Cut a suitable length of catenary wire, as instructed by your teacher, and fasten one end to one of the turnbuckles using two U clamps to secure the wire in place
- 2.1.4 Fasten the other end of the catenary to the other turnbuckle using the other two U clamps.
- 2.1.5 Tension the catenary wire by rotating the turnbuckles.



### 2.2 Cable Installation

- 2.2.1 Mount the junction box on the wall at the end of the catenary that is furthest from the switchboard.
- 2.2.1 Run the TPS cable from the switchboard to the catenary using suitable supports.
- 2.2.2 Cable tie the cable along the length of the catenary, leaving a loop at each end.
- 2.2.3 Terminate the cable and conductors into the junction box at the far end of the catenary.
- 2.2.4 Terminate the cable and conductors at the switchboard.



### 2.3 Cable Specifications

2.3.1 In the spaces provided below, record details of the installation cable by interpreting and extracting specifications from the cable drum label.

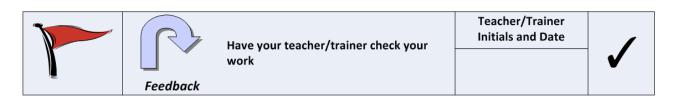
Cable Specifications						
Cable Type Size (c.s.a.)		Insulation Type	No. of Cores Stranding		Temp. Rating	Voltage Rating



### 2.4 Installation Testing

2.4.1 Test the installed wiring to verify continuity of the earthing system, insulation resistance, and correct polarity. Record your test results in the schedule below.

	Installation Test Results					
Circuit	Earth	Insulation Resistance		Correct		Details of Circuit Defects
Circuit	Resistance	A-E	N-E	Pola	arity	(if applicable)
1				□ Yes	□ No	
2				□ Yes	□ No	
3				□ Yes	□ No	



### 3. Completing the Skills Practice

### **3.1 Skills Practice Review Questions**

3.1.1 Clean your work area, return all equipment to the correct storage areas as directed by your teacher, and then complete the following review questions.

•	List these very increases for extension and provide AS/NZC 2000 Clause(a) to support you
.•	List three requirements for catenary supports. Provide AS/NZS 3000 Clause(s) to support you answer.
	What is the minimum ground clearance for a catenary installed above a walkway between si

