204: Installation of wiring systems and enclosures  
**Worksheet 1-060: Termination of cables**

**NB**: Students must not attempt this exercise before the correct use of all tools and materials has been demonstrated.

**Technical data**

* You are to make sure that your work area is clear and safe for work to proceed.
* You are to make sure that all your work conforms to the requirements of the Health and Safety at Work Act.
* It is essential that the CSA of each conductor be maintained throughout its length.
* Conductor ends are usually doubled to ensure that the terminal hole is filled.

**Material required**

|  |  |
| --- | --- |
| 1 off | Single core PVC insulated cable (7 strand) 4mm2 x 150mm |
| 1 off | Twin and cpc PVC insulated and sheathed cable 2.5mm2 x 300mm |
| 1 off | Twin and cpc PVC insulated and sheathed cable 1.5mm2 x 300mm |
| 1 off | Single core PVC insulated and sheathed cable 1.5mm2 x 300mm |
| 1 off | cpc sleeving 2mm x 300mm |

**Procedure**

1. **Sheathed cables**
2. Enter the start time on the assessment sheet.
3. Prepare the material requisition for the required materials.
4. **Have the requisition checked before proceeding.**
5. Obtain the material from the stores.
6. The procedures 6 to 12 apply to each of the 3 sheathed cables.
7. Ensure that the cable is cut to correct length.
8. Remove 100mm of sheathing from one end of the cable.
9. Fit cpc sleeving where applicable.
10. Remove sufficient insulation from the end of each cable core in order to expose the conductor and retain the length of insulation, as shown on the diagram.
11. Cut the exposed conductors to the required length.
12. Bend the end of each exposed conductor over to the required length in order to double its thickness.
13. Check that all the dimensions are correct.
14. **Hand the work to the Lecturer for marking and assessment.**
15. **Stranded cables**
16. Ensure that the cable is cut to correct length.
17. Remove 30mm of insulation from one end of the cable to expose the conductors.
18. Twist the exposed conductor strands together and bend them over to required length in order to double its thickness.
19. Check that all dimensions are correct.
20. **Hand the work to the Lecturer for marking and assessment.**
21. Enter the finish time on the assessment sheet.

|  |
| --- |
| Exercise 01-060 Termination Of Cables.png |

Assessments are based on **observed** safety procedures, and the **quality** and **accuracy** of the completed exercise.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **YES** | **NO** |
| **1.** | Material requisition correct first time | **□** | **□** |
| **2.** | Method statement completed | **□** | **□** |
| Assessed by: ………....………….. | |  | |
| **Cable 1 – 2.5mm2 twin and cpc PVC insulated and sheathed cable** | | | |
| **3.** | Sheath cut back correctly and to correct length | **□** | **□** |
| **4.** | Insulation undamaged and to correct length | **□** | **□** |
| **5.** | Conductor cores undamaged | **□** | **□** |
| **6.** | cpc correctly sheathed and to correct length | **□** | **□** |
| **7.** | Conductor cores bent over and to correct length | **□** | **□** |
| **8.** | Overall appearance to a commercially acceptable standard | **□** | **□** |
| **Cable 2 – 1.5mm2 twin and cpc PVC insulated and sheathed cable** | | | |
| **9.** | Sheath cut back correctly and to correct length | **□** | **□** |
| **10.** | Insulation undamaged and to correct length | **□** | **□** |
| **11.** | Conductor cores undamaged | **□** | **□** |
| **12.** | cpc correctly sheathed and to correct length | **□** | **□** |
| **13.** | Conductor cores bent over and to correct length | **□** | **□** |
| **14.** | Overall appearance to a commercially acceptable standard | **□** | **□** |
| **Cable 3 – 1.5mm2 single core PVC insulated and sheathed cable** | | | |
| **15.** | Sheath cut back correctly and to correct length | **□** | **□** |
| **16.** | Insulation undamaged and to correct length | **□** | **□** |
| **17.** | Conductor cores undamaged | **□** | **□** |
| **18.** | Conductor cores bent over and to correct length | **□** | **□** |
| **19.** | Overall appearance to a commercially acceptable standard. | **□** | **□** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cable 4 – 4mm2 single core (stranded) PVC insulated cable** | | | | |
| **20.** | Insulation undamaged and to correct length | | **□** | **□** |
| **21.** | Conductor cores undamaged | | **□** | **□** |
| **22.** | Strands twisted in the direction of lay | | **□** | **□** |
| **23.** | Conductor cores bent over and to correct length | | **□** | **□** |
| **24.** | Overall appearance to a commercially acceptable standard | | **□** | **□** |
| **All cables** | | | | |
| **25.** | Work area conformed to requirements of HASAWA | | **□** | **□** |
| **26.** | Correct safety procedures observed at all times | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| Start Date & Time: ………………........………….. | | Finish Date & Time: ……...…...........…………… | | |
| Target Time: 60 minutes | | Time Taken: …………………….........…………… | | |