204: Installation of wiring systems and enclosures  
**Worksheet 4-040: Forming a tee joint in cable tray**

**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.
* Ensure that the cable tray is not cut across the slots.
* Ensure that all edges are deburred.
* Use only pencil to mark dimensions on the cable tray.
* The work area must be restored to a satisfactory condition on completion.

**Material required**

|  |  |
| --- | --- |
| 600mm | Metal cable tray 100mm wide |
| 4 off | M6 x 12mm pan head steel set pins |
| 4 off | M6 steel nuts |
| 2 off | M4 x 10mm pan head steel set pins |
| 2 off | M4 steel nuts |

**Procedure**

1. Enter the start time on the assessment sheet.
2. Prepare the material requisition.
3. **Have the requisition checked before proceeding.**
4. Obtain the material stated from the stores.
5. Mark square and cut one end of the cable tray, taking care to meet the requirements of the technical data.
6. Measure, mark and cut the long section ‘A’ to the dimension shown.
7. Measure, mark and cut out flange on section ‘A’ so that section ‘B’, when produced, will fit centrally into the cut.
8. **Have work checked before proceeding.**
9. From the remaining tray piece, measure, mark and cut section ‘B’.
10. Mark and cut the flanges on section ‘B’ to produce an overlap of tray and flanges to the dimensions shown in the diagram.
11. Using the pins and nuts, fix the two tray sections together. Bend, drill and fix flanges together, as shown in the diagram.
12. Remove any burrs and sharp edges.
13. **Hand the work to the Lecturer for assessment.**
14. Enter the finish time on the assessment sheet.
15. Restore the work area to a satisfactory condition.

|  |
| --- |
| Task 04-040 Cable Tray Tee Joint.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: ………....………….. | | |  | |
| **3.** | Wore appropriate PPE | | **□** | **□** |
| **4.** | Acquired the correct materials and equipment | | **□** | **□** |
| **5.** | Overall length of section ‘A’ correct | | **□** | **□** |
| **6.** | Section ‘A’ flange cut-out central | | **□** | **□** |
| **7.** | Section ‘A’ flange cut-out edges smooth | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| **8.** | Used only the given length of cable tray | | **□** | **□** |
| **9.** | Used wood blocks/other suitable tray protection | | **□** | **□** |
| **10.** | Section ‘B’ end-tabs radius correct | | **□** | **□** |
| **11.** | Overall length of section ‘B’ correct | | **□** | **□** |
| **12.** | Slots on both tray section ends intact | | **□** | **□** |
| **13.** | All pins and nuts tight, and nuts on **outside** of tray | | **□** | **□** |
| **14.** | Cable bearing surface undamaged | | **□** | **□** |
| **15.** | All ends straight and square | | **□** | **□** |
| **16.** | Burrs, sharp edges and any vice marks removed | | **□** | **□** |
| **17.** | Overall appearance to a commercially acceptable standard | | **□** | **□** |
| **18.** | Work area conformed to requirements of HASAWA | | **□** | **□** |
| **19.** | Correct safety procedures observed at all times | | **□** | **□** |
| **20.** | Work area restored to a satisfactory condition on completion | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| Start Date & Time: ………………........………….. | | Finish Date & Time: ……...…...........…………… | | |
| Target Time: 2.5 hours | | Time Taken: …………………….........…………… | | |