204: Installation of wiring systems and enclosures  
**Worksheet 3-090: Steel trunking double set**

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

**Technical data**

* All metal edges and holes must be burr-free.
* Trunking fabrications may be secured with 6mm trunking pins and nuts or pop rivets.
* You are to make sure that all your work conforms to the requirements of the Health and Safety at Work Act.

**Material required**

|  |  |  |
| --- | --- | --- |
| 1 off | Metal cable trunking 50 x 50 x 300mm complete with lid. | |
|  | Metal cable trunking lid off-cuts for fishplates. | |
| 16 off | Pop rivets | **OR** |
| 16 off | M6 x 12mm Pan head steel trunking pins. | |
| 16 off | M6 hexagon steel full 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 from the stores.
5. Letter-stamp your initials on to the trunking for identification.
6. Square off and cut one end of the trunking and remove any burrs.
7. From the squared end of the trunking, mark out the position for the removal of the ‘V’ section.
8. Using the trunking off-cuts, mark out, cut and drill two fishplates.
9. **Have the work checked before proceeding.**
10. Cut out the ‘V’ section and bend the trunking.
11. Using the fishplates as templates, mark and drill the fishplate fixing holes.
12. Fit trunking and fishplates firmly together using pop rivets (or, alternatively, 6mm trunking pins and nuts).
13. Ensure that all burrs and sharp edges are removed.
14. **Have the work checked before proceeding.**
15. Place a mark on the trunking angle using a horizontal straight edge to give the off-set dimension shown in the diagram.
16. Mark out the second bend on the trunking at this marked point.
17. Using the trunking off-cuts, manufacture two appropriately sized fishplates to secure the second bend in the required position.
18. **Have the work checked before proceeding.**

(Procedure 3-090 continued from previous page)

1. Cut the second trunking bend and fix firmly together using pop rivets (or, alternatively, 6mm trunking pins and nuts).
2. Mark and drill the end fixing holes in the correct position.
3. Mark and cut to shape the trunking lid in order to fit the manufactured bend.
4. Check overall fit and alignment of the bend and lid, and ensure that all sharp edges and burrs are removed.
5. **Hand the work to the Lecturer for marking and assessment.**
6. Enter the finish time on the assessment sheet.

|  |
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| Exercise 03-090 Trunking Double Set.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.** | End 1 of trunking square and burr-free. | | **□** | **□** |
| **4.** | Bend 1 marked out correctly from squared end | | **□** | **□** |
| **5.** | Bend 1 marked out correctly on both sides | | **□** | **□** |
| **6.** | Fishplates acceptable size and burr-free | | **□** | **□** |
| **7.** | Work correctly identified on first presentation | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| **8.** | Bend 1 correctly fitted together and securely fixed | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| **9.** | Bend 2 marked out correctly from marked point | | **□** | **□** |
| **10.** | Fishplates acceptable size and burr-free | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| **11.** | Used only the given length of trunking and lid | | **□** | **□** |
| **12.** | Bend 2 correctly fitted together and securely fixed | | **□** | **□** |
| **13.** | All rivets tight and in acceptable positions | | **□** | **□** |
| **14.** | Overall dimensions correct (± 5mm) | | **□** | **□** |
| **15.** | Off-set dimensions correct (± 5mm) | | **□** | **□** |
| **16.** | End fixing holes correct position and size | | **□** | **□** |
| **17.** | Lid correctly made and fits trunking bend correctly | | **□** | **□** |
| **18.** | Trunking and lid ends square and undamaged | | **□** | **□** |
| **19.** | Burrs, sharp edges and any vice marks removed | | **□** | **□** |
| **20.** | Work area conformed to the Health & Safety at Work Act | | **□** | **□** |
| **21.** | Correct safety procedures observed at all times | | **□** | **□** |
| **22.** | Overall appearance to a commercially acceptable standard | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| Start Date & Time: ………………........………….. | | Finish Date & Time: ……...…...........…………… | | |
| Target Time: 4 hours | | Time Taken: …………………….........…………… | | |