204: Installation of wiring systems and enclosures  
**Worksheet 3-030: Double set steel conduit**

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

**Technical data**

* All damaged and marked surfaces must be restored to a sound condition on completion.
* In order to carry out this exercise, specialist tools are required.
* Conduit threads must be reamed before removing the dies and all swarf needs to be removed from inside the conduit to prevent cable damage.
* 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 | Heavy gauge black enamelled steel conduit 20mm diameter x 500mm long |

**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. Make a pencil mark 150mm from one end of the conduit obtained from the stores.
6. Place the measured end of the conduit in the former of the conduit-bending machine with the marked point in line with the outside edge of the former.
7. Ensure that the conduit stays in this position and form a bend in the conduit of approximately 45° to the starting position.
8. Remove the conduit from the bending machine and, with the aid of a straight edge and rule, measure and mark the position of the second bend.
9. Place the conduit in the bending machine so that this mark is in line with the outside edge of the former and form the second bend so that the two bends come into line, with the dimensions correct and parallel.
10. Check all dimensions and angles, and adjust if necessary.
11. Ensure that each end is the correct length and thread with stocks and dies to normal thread length.
12. **Hand the work to the Lecturer for marking and assessment.**
13. Enter the finish time on the assessment sheet.

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| Exercise 03-030 Double Set Steel Conduit.png |

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

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| --- | --- | --- | --- | --- |
|  |  | | **YES** | **NO** |
| **1.** | Material requisition correct first time | | **□** | **□** |
| **2.** | Method statement completed | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| **3.** | Used only the given length of conduit | | **□** | **□** |
| **4.** | Formed off-set correct dimensions (± 5mm) | | **□** | **□** |
| **5.** | Overall dimensions correct | | **□** | **□** |
| **6.** | Conduit ends cut square | | **□** | **□** |
| **7.** | Ends threaded square and correct length (± 2mm) | | **□** | **□** |
| **8.** | Burrs, sharp edges and vice marks removed | | **□** | **□** |
| **9.** | Work area conformed to the Health & Safety at Work Act | | **□** | **□** |
| **10.** | Correct safety procedures observed at all times | | **□** | **□** |
| **11.** | Overall appearance to a commercially acceptable standard | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| Start Date & Time: ………………........………….. | | Finish Date & Time: ……...…...........…………… | | |
| Target Time: 90 minutes | | Time Taken: …………………….........…………… | | |