

Worksheet 3-080: Steel trunking gusset bend

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

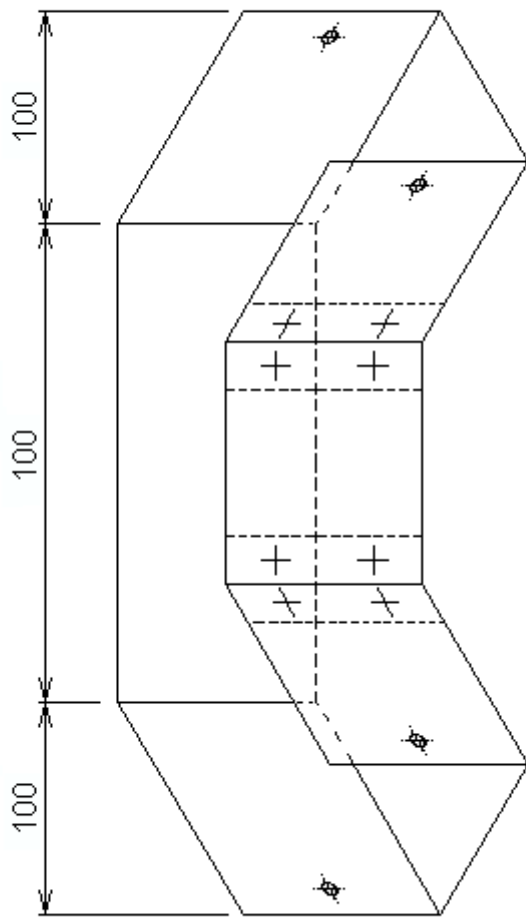
1 off	Metal cable trunking 50 x 50 x 320mm complete with lid.
	Metal cable trunking lid off-cuts for fishplates.
8 off	M6 x 12mm Pan head steel trunking pins.
8 off	M6 hexagon steel full nuts.
8 off	Pop rivets.

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 measure a distance of 100, 200 and 300mm on the back section of the trunking.
8. Scribe a line through these marks at 90° to the trunking edge.
9. Mark out the 'V' shapes on the back section of the trunking at the 100 and 200m marks, and at the correct angles.
10. Extend the two outer points of the 'V' in order to form the rectangular shapes on one side of the trunking.
11. At the 300mm mark square off and cut end of trunking.
12. **Have the work checked before proceeding.**
13. Cut along the lines in order to remove both the 'V' and the rectangular sections.
14. Ensure all burrs and sharp edges are removed.
15. **Have the work checked before proceeding.**
16. Fold the trunking to form the 90° bend.
17. Using the trunking off-cuts, manufacture two appropriately sized fishplates to secure the bends in the required position.
18. Remove any burrs and sharp edges.
19. **Have the work checked before proceeding.**

(Procedure 3-080 continued from previous page)

20. Hold the fishplates in position on the bend and secure together with pop rivets.
21. Mark and drill the end fixing holes in the correct position.
22. Mark out and cut to shape the trunking lid in order to fit the manufactured bend.
23. Fold and secure in position with appropriately sized fishplates (made from trunking off-cuts) and pop rivets.
24. Check overall fit of the bend and lid, and ensure that all burrs and sharp edges are removed.
25. **Hand the work to the Lecturer for marking and assessment.**
26. Enter the finish time on the assessment sheet.



TITLE	
Steel Trunking Gusset Bend	
Dimensions in Millimeters	Target Time 3 hrs.
Scale N.T.S.	Ex No. 3/80

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

		YES	NO
1.	Material requisition correct first time	<input type="checkbox"/>	<input type="checkbox"/>
2.	Method statement completed	<input type="checkbox"/>	<input type="checkbox"/>
	Assessed by:		
3.	End 1 of trunking square and burr-free	<input type="checkbox"/>	<input type="checkbox"/>
4.	Bend 1 marked out correctly from squared end	<input type="checkbox"/>	<input type="checkbox"/>
5.	Bend 1 marked out correctly on both back and sides	<input type="checkbox"/>	<input type="checkbox"/>
6.	Bend 2 marked out correctly from squared end	<input type="checkbox"/>	<input type="checkbox"/>
7.	Bend 2 marked out correctly on both back and sides	<input type="checkbox"/>	<input type="checkbox"/>
8.	Work correctly identified on first presentation	<input type="checkbox"/>	<input type="checkbox"/>
	Assessed by:		
9.	Both bend sections removed correctly and burr-free	<input type="checkbox"/>	<input type="checkbox"/>
	Assessed by:		
10.	Fishplates acceptable size and burr-free	<input type="checkbox"/>	<input type="checkbox"/>
	Assessed by:		
11.	Used only the given length of trunking and lid	<input type="checkbox"/>	<input type="checkbox"/>
12.	Bend securely fixed using fishplates, pins and nut	<input type="checkbox"/>	<input type="checkbox"/>
13.	Pins and nuts tight and in acceptable position	<input type="checkbox"/>	<input type="checkbox"/>
14.	Overall dimensions correct ($\pm 5\text{mm}$)	<input type="checkbox"/>	<input type="checkbox"/>
15.	Completed angle 90°	<input type="checkbox"/>	<input type="checkbox"/>
16.	End fixing holes correct position and size	<input type="checkbox"/>	<input type="checkbox"/>
17.	Lid fishplates acceptable size and burr-free	<input type="checkbox"/>	<input type="checkbox"/>
18.	Lid correctly made and fits trunking bend correctly	<input type="checkbox"/>	<input type="checkbox"/>
19.	Trunking and lid ends square and undamaged	<input type="checkbox"/>	<input type="checkbox"/>
20.	Burrs, sharp edges and any vice marks removed	<input type="checkbox"/>	<input type="checkbox"/>
21.	Work area conformed to the Health & Safety at Work Act	<input type="checkbox"/>	<input type="checkbox"/>
22.	Correct safety procedures observed at all times	<input type="checkbox"/>	<input type="checkbox"/>
23.	Overall appearance to a commercially acceptable standard	<input type="checkbox"/>	<input type="checkbox"/>

Assessed by:

Start Date & Time: Finish Date & Time:

Target Time: 3 hours Time Taken:
